

Service Engineers Site CoSHH Assessment Manual

Site Details -	Various Sites Various Site Addresses
Project No. –	As per individual job number





Site CoSHH Assessment Manual - Contents

4	Refrigerant – R410a
6	Refrigerant – R404a
8	Refrigerant – R407a
10	Refrigerant – R407c
12	Refrigerant – R407f
14	Refrigerant – R134a
16	Refrigerant – R437a
18	Refrigerant – R417a
20	Refrigerant – R449a
22	Refrigerant – R448a
24	Refrigerant – R437a
26	Refrigerant – R422d
28	Refrigerant – R290
30	Refrigerant – R600a
32	Refrigerant – R32
34	Refrigerant – R744 (CO2)
36	Refrigerant – R22
38	Oxygen
40	Acetylene (Dissolved)
42	Nitrogen (Oxygen Free)
44	MAPP Pro Gas
46	Propane (Turbogas)
48	Class 'O' Armaflex
50	Armaflex 520 Adhesive
52	Armaflex - Cleaner

54	Armafinish 99
56	Emkarate RL32 Refrigeration Oil
58	HARP PAG 100 Lubricant
60	Gel Clear Tablets
62	Jally Strips
64	Pro-Care Concentrated Evaporator Coil Cleaner
66	Silfos 5 - Brazing Rod
68	Robinair Vacuum Pump Oil
70	Cool Safe RTU (Ready to Use)
72	Drainsafe
74	HB30 Ice Machine Cleaner
76	Pyrocool
78	Stay Clean Mini Tablets



Hazard Symbol Table and Management Notes

European Symbol	Meaning	European Symbol	Meaning	European Symbol	Meaning	European Symbol	Meaning	European Symbol	Meaning
	Warning / Irritant		Flammable	*	Harmful to the Environment / Aquatic Toxicity		Explosive		Serious Health Risk Sensitiser,
	Compressed or Liquefied Gas		Oxidiser		Toxic / Danger		Corrosive		carcinogen, mutagen or teratogen



COSHH Assessment Form									
Product	R410a Refrigerant	Prod	uct Picture		Hazard				
Manufacturer	National Refrigerants Ltd, 4 Watling Close, Sketchley Meadows Business Park Hinckley, LE10 3EZ				A				
Composition	48.5 – 50.5% w/w Difluoromethane (R32) {F+;R12} {EINECS No. 200-839-4} 49.6 – 51.5% w/w Pentafluoroethane (R125) {EINECS No. 206-557-8}				!>				
Workplace Exposure Limit	Pentafluoroethane – 8 hour TWA 1000ppm								
	How is the Product / Substance Used	Quantity	, Time Task t Freque		Persons Exposed				
system, using suitable pr systems.	Commercial / Industrial Systems and is pumped under pressure in a closed ressure gauges, high pressure hoses and connection nozzles, into refrigeration	Cylinder siz	n system v	t into aries	JGR Engineering Personnel during transport, charging,				
Only competent trained e containing refrigerant gas	engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems ses.	9kg – 50k	g betwee 30mis – 2	-	decanting and service work				
	Working Methods & Controls		Person	al Protecti	ve Equipment				

Only competent trained engineers holding C&G 2079 F-gas Certificate can work on systems containing refrigerant gases

When working with R410a, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

Keep cylinder valves clean and free from contaminants particularly oil and water

Ensure all cylinders are secured or in a stable position, using a suitable cylinder trolley or by securing cylinder to a solid structure to protect cylinders from toppling over

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines and appropriate recovery pumps and recovery cylinders (when recovering), are serviced, maintained & inspected regularly

Refrigerants only to be used in a well-ventilated areas

Never overfill cylinders or systems with refrigerant

When reclaiming R410a refrigerant, ensure that ONLY suitable reclaim cylinders are used

In case of fire and / or explosion do not breathe fumes







When handling / working with, this product operatives are to use the following equipment –

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Avoid contact with skin or eyes

Ensure adequate ventilation



								Heal	th & Safety
Accidental Releas	se / Spillage				Fire Figh	ting			
If a leak should occur from eithe avoid contact with skin and eyes If possible, try to shut off leak ar evacuate area and ensure adeq For heavy vapours, prevent from where its accumulation could be confined spaces, sewers, basen Wear self-contained breathing a area unless atmosphere is proven	If in know the present cold burns and stop release and water air ventilation are entering any place adangerous, such as nents and subsparatus when entering Use	R410a is non-flammable, however exposure to fire may cause a rise in pressure causing the cylinder to rupture / explode If involved in a fire, if possible stop flow of product & move away from cylinder & cool from a protected position if safe to do so – All known fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions If the refrigerant is involved in a fire, hazardous thermal decomposition products may form. They are: Carbon oxides, Hydrogen Fluoride, Fluorinated compounds. Exposure to decomposition products may be hazardous to health. Advise Fire Fighters / Emergency Services that there are pressurised cylinders and potential for harmful effects if the released gas is subjected to high temperatures Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be dangerous, such as confined spaces, sewers, basements							
Exposure Monitor	ing & Health Surveillance					Disposal			
Do not smoke while handling thi Do not eat or drink whilst handling No Health Surveillance required	ng this product		Refrigerant should NC All waste refrigerants into a suitable reclaim All empty cylinders M	should be disposed cylinder and passed	of using the o	correct Hazardous W ist organisation for di	aste Transfe		
	First Aid	Safe Handling & Storage							
Skin – Remove contaminated c water (not hot water) for at least May cause redness / frostbite to Eyes – Hold eyelids apart and fi minutes and obtain medical ass May cause redness / frostbite or Inhalation – Remove from expopatient warm and rest. Artificial of Get medical attention. Misuse or intentional inhalation due to cardiac effects. Other symptoms potentially rela effects, Light-headedness, dizzi unconsciousness, irregular hear heart thumping, apprehension, fingestion - Ingestion is not consideral Advice - Never give ar When symptoms persist or in all	st 15mins and obtain medical as the affected area lush eyes with plenty of water for istance or damage to the cornea osure, lie down. Move to fresh a respiration and/or oxygen may be may cause death without warning ted to misuse or inhalation are ness, confusion, incoordination, theat, with a strange sensation reeling of fainting or weakness, liesidered a potential route of exponything by mouth to an unconsciption.	or at least 15 ir. Keep be necessar ing symptom - Anaestheti , drowsiness in the chest Narcosis. osure sious person	Ensure ade Where requor cap Avoid breat Vapours are Use a check Storage R410a shout Kept cylinder against dan Secure with Transport All vehicles All cylinders transportati Vehicle shout Vehicle must	hing vapours or mise heavier than air ark valve or trap in the ald only be stored in the are upright and stable age. In a secure cage / comust display the Consessment to be held as MUST be suitably on all of have a secure set have a suitable 24	t. Avoid conta d may sprea e discharge lin manufacture e out of direct ompound with ompressed G in vehicle secured / res	orts cylinders & nev eact with the skin, eyes	s and clothin ow into the c s with valves below 45°c) a on and warning sporting con the vehicle to	ylinder. stightly closed wand safeguard g ng notices when npressed gases to prevent movel	hen not in use enerally not in use ment during
			Assessment I	Rating Details					
Level of R	isk with Control Measure	s in place) —	LOW	X	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date -	March 20)18	Review Da	ite -	March	n 2020



						Health & Safety			
COSHH Assessment Form									
Product	R404a Refrigerant	Prod	uct Pi	cture		Hazard			
Manufacturer	National Refrigerants Ltd , 4 Watling Close, Sketchley Meadows Business Park Hinckley, LE10 3EZ			ì		^			
Composition	Contains the following components – 52% w/w Trifluoroethane (R143a) {F+;R12} {EINECS No. 206-996-5} 44% w/w Pentafluoroethane (R125) {EINECS No. 206-557-8} 4% w/w Tetrafluoroethane (R134a) {EINECS No. 212-377-0}								
Workplace Exposure Limit	Trifluoroethane – TWA 1000ppm								
	How is the Product / Substance Used	Quantity		Time Task ta Frequenc		Persons Exposed			
	Commercial / Industrial Systems and is pumped under pressure in a closed ressure gauges, high pressure hoses and connection nozzles, into refrigeration	Cylinder siz	•		into	JGR Engineering Personnel during transport, charging,			
Only competent trained e containing refrigerant ga	engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems ses.	9kg – 50k	g	between 30mis – 2 h		decanting and service work			
	Working Methods & Controls			Personal	Protecti	ive Equipment			
When working with R404	engineers holding C&G 2079 F-gas Certificate can work on systems containing refula, engineers must always carry out works following all control measures and task nall relevant JGR Method Statements, Task Procedures and Risk Assessments.	igerant gases			W.S.				
• •	or damage prior to use, label & return any damaged cylinders to the supplier								
Keep cylinder valves cle	Keep cylinder valves clean and free from contaminants particularly oil and water When handling / working with, this product operatives are								

When handling / working with, this product operatives are to use the following equipment -

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Avoid contact with skin or eyes

Ensure adequate ventilation

May require half mask or forced air breathing apparatus if substance is decomposed by high temperature (i.e. brazing) or working within poorly ventilated areas

Ensure all cylinders are secured or in a stable position, using a suitable cylinder trolley or by securing cylinder to a solid structure to protect cylinders from toppling over

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines and appropriate recovery pumps and recovery cylinders (when recovering), are serviced, maintained & inspected regularly

Refrigerants only to be used in a well-ventilated areas

Never overfill cylinders or systems with refrigerant

When reclaiming R404a refrigerant, ensure that ONLY suitable reclaim cylinders are used

In case of fire and / or explosion do not breathe fumes



								Healt	th & Safety
Accidental Release /	' Spillage				Fire Figh	ting			
If a leak should occur from either a cavoid contact with skin and eyes to put possible, try to shut off leak and st evacuate area and ensure adequate. For heavy vapours, prevent from enwhere its accumulation could be dar confined spaces, sewers, basement. Wear self-contained breathing appararea unless atmosphere is proved to	prevent cold burns stop release and e air ventilation If it htering any place angerous, such as substantation If the stop release and If the stop rele	R404a is non-flammable, however exposure to fire may cause a rise in pressure causing the cylinder to rupture / explode If involved in a fire, if possible stop flow of product & move away from cylinder & cool from a protected position if safe to do so – All known fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions If the refrigerant is involved in a fire, hazardous thermal decomposition products may form. They are: Carbon oxides, Hydrogen Fluoride, Fluorinated compounds. Exposure to decomposition products may be hazardous to health. Advise Fire Fighters / Emergency Services that there are pressurised cylinders and potential for harmful effects if the released gas is subjected to high temperatures Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be dangerous, such as confined spaces, sewers, basements							do so – All litions /drogen leased gas is
Exposure Monitoring	& Health Surveillance					Disposal			
Do not eat or drink whilst handling th	o not eat or drink whilst handling this product All vinto				of using the o	environment or whe correct Hazardous W ist organisation for d r manufacturer.	aste Transfe		•
Fi	First Aid				Safe I	Handling & Storage	е		
Skin – Remove contaminated clothic water (not hot water) for at least 15 May cause redness / frostbite to the Eyes – Hold eyelids apart and flush minutes and obtain medical assistant May cause redness / frostbite or dar Inhalation – Remove from exposure patient warm and rest. Artificial resp Get medical attention. Misuse or intentional inhalation may due to cardiac effects. Other symptoms potentially related to effects, Light-headedness, dizziness unconsciousness, irregular heartbeatheart thumping, apprehension, feeling Ingestion - Ingestion is not consider General Advice - Never give anythic When symptoms persist or in all causes.	5mins and obtain medical as affected area in eyes with plenty of water for ance image to the cornea are, lie down. Move to fresh a piration and/or oxygen may by cause death without warning to misuse or inhalation are as, confusion, incoordination are, with a strange sensation ing of fainting or weakness, ared a potential route of expaning by mouth to an unconsciption.	ssistance or at least 15 air. Keep be necessary ing symptoms - Anaesthetic , drowsiness, in the chest, Narcosis. osure cious person.	Ensure ade Where requor cap Avoid breat Vapours are Use a chect Storage R404a shout Kept cylinder against dan Secure with Transport All vehicles COSHH ass All cylinders transportati Vehicle shout	hing vapours or miste heavier than air and k valve or trap in the uld only be stored in the ers upright and stable nage. In a secure cage / commust display the Commust display the Commust display the Commust display the Sessment to be held as MUST be suitably son build have a secure so set have a suitable 2k	ley to transp . Avoid conta d may sprea discharge lii manufacture e out of direc ompound wit mpressed G in vehicle secured / res blid bulkhead	orts cylinders & nev	s and clothing with valves below 45°c) and warning sporting contine the vehicle to	ng. ylinder. s tightly closed wl and safeguard ge ng notices when npressed gases to prevent moven	nen not in use enerally not in use nent during
			Assessment I	1					
Level of Risk	with Control Measure	es in place	_	LOW	Х	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date -	March 20	18	Review Da	ite -	March	2020



	COSHH Assessment Form									
Product	R407a Refrigerant	Product P	icture		Hazard					
Manufacturer	National Refrigerants Ltd , 4 Watling Close, Sketchley Meadows Business Park Hinckley, LE10 3EZ	•	9							
Composition	20% w/w Difluoromethane (R32) {F+;R12} 40% w/w Pentafluoroethane (R125) 40% w/w Tetrafluoroethane (R134a)			<						
Workplace Exposure Limit	Pentafluoroethane – 8hr TWA 1000ppm Tetrafluoroethane – 8hr TWA 1000ppm									
	How is the Product / Substance Used	Quantity	Time Task ta Frequen		Persons Exposed					
system, using suitable pr systems.	Commercial / Industrial Systems and is pumped under pressure in a closed essure gauges, high pressure hoses and connection nozzles, into refrigeration engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems ses.	Cylinder sizes range from 9kg – 50kg	Time taken to refrigerant system va between 30mis – 2 h	into iries 1 –	JGR Engineering Personnel during transport, charging, decanting and service work					

Working Methods & Controls

Only competent trained engineers holding C&G 2079 F-gas Certificate can work on systems containing refrigerant gases

When working with R407a, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

Keep cylinder valves clean and free from contaminants particularly oil and water

Ensure all cylinders are secured or in a stable position, using a suitable cylinder trolley or by securing cylinder to a solid structure to protect cylinders from toppling over

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines and appropriate recovery pumps and recovery cylinders (when recovering), are serviced, maintained & inspected regularly

Refrigerants only to be used in a well-ventilated areas

Never overfill cylinders or systems with refrigerant

When reclaiming R407a refrigerant, ensure that ONLY suitable reclaim cylinders are used

In case of fire and / or explosion do not breathe fumes

Personal Protective Equipment







When handling / working with, this product operatives are to use the following equipment –

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Avoid contact with skin or eyes

Ensure adequate ventilation



	1							Health & Safety
Accidental Release	e / Spillage				Fire Figh	ting		
If a leak should occur from either avoid contact with skin and eyes of the possible, try to shut off leak and evacuate area and ensure adequed. For heavy vapours, prevent from where its accumulation could be confined spaces, sewers, basemed wear self-contained breathing aparea unless atmosphere is proved.	to prevent cold burns d stop release and late air ventilation entering any place dangerous, such as ents paratus when entering Us	R407a is non-flammable, however exposure to fire may cause a rise in pressure causing the cylinder to rupture / explode If involved in a fire, if possible stop flow of product & move away from cylinder & cool from a protected position if safe to do so – All known fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions If the refrigerant is involved in a fire, hazardous thermal decomposition products may form. They are: Carbon oxides, Hydrogen Fluoride, Fluorinated compounds. Exposure to decomposition products may be hazardous to health. Advise Fire Fighters / Emergency Services that there are pressurised cylinders and potential for harmful effects if the released gas is subjected to high temperatures Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be dangerous, such as confined spaces, sewers, basements						coosition if safe to do so – All urrounding conditions carbon oxides, Hydrogen all effects if the released gas is
Exposure Monitorin	ng & Health Surveillance					Disposal		
Do not smoke while handling this Do not eat or drink whilst handling No Health Surveillance required w	-	should be disposed of cylinder and passed	of using the o	correct Hazardous W list organisation for di	aste Transfe	ulation could be dangerous er Note system and measured		
	First Aid			Safe Handling & Storage				
Skin – Remove contaminated clowater (not hot water) for at least May cause redness / frostbite to the Eyes – Hold eyelids apart and fluminutes and obtain medical assis May cause redness / frostbite or continuous from exposing patient warm and rest. Artificial resulting Get medical attention. Misuse or intentional inhalation modue to cardiac effects. Other symptoms potentially related effects, Light-headedness, dizzing unconsciousness, irregular heart the heart thumping, apprehension, feighter in the light of the lighter in the lighter of	the affected area sish eyes with plenty of water for the affected area sish eyes with plenty of water for the affected area sish eyes with plenty of water for the affected area sure, lie down. Move to fresh a despiration and/or oxygen may may cause death without warning the affected area or inhalation are the ess, confusion, incoordination the at, with a strange sensation the plenty of fainting or weakness, idered a potential route of expertation by mouth to an unconsciption.	or at least 15 air. Keep be necessar ing symptom - Anaestheti d, drowsiness in the chest Narcosis. osure cious person	Ensure ade Where required or cap Avoid breat Vapours are Use a check Storage R407a shout Kept cylinder against dan Secure with Transport All vehicles All cylinders transportation Vehicle mus	hing vapours or mist a heavier than air and k valve or trap in the ald only be stored in the area upright and stable hage. In a secure cage / comust display the Comust display the Comust display the consessment to be held as MUST be suitably son all have a secure so at have a suitable 2k	ley to transpose. Avoid contained may spread discharge line manufacture end out of direct oppound with mpressed Gin vehicle secured / resulting to the course of the cours	act with the skin, eyes d along the floor. The to prevent back floors sympliers cylinders at sunlight in a cool (but adequate ventilation as symbol when transtrained in the rear of the to protect the driver	s and clothing with valves below 45°c) on and warning conting contine the vehicle	ylinder. tightly closed when not in use and safeguard generally ng notices when not in use
			Assessment F			1.550		111011
Level of Ris	sk with Control Measure	es in place	-	LOW	Х	MEDIUM		HIGH
Assessor -	Trevor Foster		Date -	March 20	18	Review Da	ite -	March 2020



	COSHH Assessment Form									
Product	R407c Refrigerant	Product P	icture		Hazard					
Manufacturer	National Refrigerants Ltd , 4 Watling Close, Sketchley Meadows Business Park Hinckley, LE10 3EZ	0	·							
Composition	21 - 25% w/w Difluoromethane (R32) {F+;R12} {EINECS No. 200-839-4} 23 - 27% w/w Pentafluoroethane (R125) {EINECS No. 206-557-8} 50 - 54% w/w Tetrafluoroethane (R134a) {EINECS No. 212-377-0}			<						
Workplace Exposure Limit	Pentafluoroethane – 8hr TWA 1000ppm Tetrafluoroethane – 8hr TWA 1000ppm				<u> </u>					
	How is the Product / Substance Used	Quantity	Time Task ta Frequen		Persons Exposed					
system, using suitable pr systems.	Commercial / Industrial Systems and is pumped under pressure in a closed ressure gauges, high pressure hoses and connection nozzles, into refrigeration engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems ses.	Cylinder sizes range from 9kg – 50kg	Time taken to refrigerant system va between 30mis – 2 h	into ries	JGR Engineering Personnel during transport, charging, decanting and service work					

Working Methods & Controls

Only competent trained engineers holding C&G 2079 F-gas Certificate can work on systems containing refrigerant gases

When working with R407c, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

Keep cylinder valves clean and free from contaminants particularly oil and water

Ensure all cylinders are secured or in a stable position, using a suitable cylinder trolley or by securing cylinder to a solid structure to protect cylinders from toppling over

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines and appropriate recovery pumps and recovery cylinders (when recovering), are serviced, maintained & inspected regularly

Refrigerants only to be used in a well-ventilated areas

Never overfill cylinders or systems with refrigerant

When reclaiming R407c refrigerant, ensure that ONLY suitable reclaim cylinders are used

In case of fire and / or explosion do not breathe fumes

Personal Protective Equipment







When handling / working with, this product operatives are to use the following equipment –

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Avoid contact with skin or eyes

Ensure adequate ventilation



								Heal	th & Safety
Accidental Release	e / Spillage				Fire Figh	ting			
If a leak should occur from either avoid contact with skin and eyes of the state of	to prevent cold burns d stop release and late air ventilation entering any place dangerous, such as ents paratus when entering U	R407c is non-flammable, however exposure to fire may cause a rise in pressure causing the cylinder to rupture / explode If involved in a fire, if possible stop flow of product & move away from cylinder & cool from a protected position if safe to do so – All known fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions If the refrigerant is involved in a fire, hazardous thermal decomposition products may form. They are: Carbon oxides, Hydrogen Fluoride, Fluorinated compounds. Exposure to decomposition products may be hazardous to health. Advise Fire Fighters / Emergency Services that there are pressurised cylinders and potential for harmful effects if the released gas is subjected to high temperatures Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be dangerous, such as confined spaces, sewers, basements						o do so – All ditions ydrogen eleased gas is	
Exposure Monitorin	ng & Health Surveillance					Disposal			
•	All waste refrigera				of using the of to a special he supplier o	correct Hazardous Waist organisation for die manufacturer.	aste Transfe sposal.		•
	First Aid			Safe Handling & Storage					
Skin – Remove contaminated clo water (not hot water) for at least May cause redness / frostbite to t Eyes – Hold eyelids apart and flu minutes and obtain medical assis May cause redness / frostbite or contain the line in t	the affected area ash eyes with plenty of water stance damage to the cornea asure, lie down. Move to fresh espiration and/or oxygen may hay cause death without warn ed to misuse or inhalation are ess, confusion, incoordination beat, with a strange sensation teling of fainting or weakness idered a potential route of expything by mouth to an uncons	assistance for at least 1 air. Keep be necessa ning sympton e - Anaesthet n, drowsines n in the ches s, Narcosis. posure scious persor	s Ensure ade Where requor cap Avoid breat Vapours are Use a chect Storage ry. R407c shou Kept cylinder against dan Secure with Transport All vehicles tic, COSHH ass All cylinders transportation. Vehicle shou Vehicle mus	hing vapours or miste heavier than air and k valve or trap in the ald only be stored in the area upright and stable hage. In a secure cage / comust display the Consessment to be held as MUST be suitably son and have a secure set have a suitable 2kg.	Iley to transp t. Avoid conta d may sprea discharge lin manufacture e out of direct ompound wite mpressed G in vehicle secured / res olid bulkheace	orts cylinders & neve act with the skin, eyes	s and clothing winto the constitution with valves with valves below 45°c) and and warning sporting contine the vehicle to	ng. ylinder. tightly closed wand safeguard g ng notices when npressed gases to prevent movel	hen not in use enerally not in use ment during
			Assessment I						
Level of Ris	sk with Control Measur	es in plac	e –	LOW	Х	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date -	March 20	18	Review Da	te -	March	า 2020



	COSHH Assessment Fo	rm			
Product	R407f Refrigerant	Product P	ricture		Hazard
Manufacturer	National Refrigerants Ltd , 4 Watling Close, Sketchley Meadows Business Park Hinckley, LE10 3EZ	4	N		^
Composition	40% w/w Tetrafluoroethane (R134a) {EINECS No. 212-377-0} 30% w/w Difluoromethane (R32) {F+;R12} {EINECS No. 200-839-4} 30% w/w Pentafluoroethane (R125) {EINECS No. 206-557-8}			<	
Workplace Exposure Limit	Pentafluoroethane – 8hr TWA 1000ppm Tetrafluoroethane – 8hr TWA 1000ppm)			<u> </u>
	How is the Product / Substance Used	Quantity	Time Task ta Frequen		Persons Exposed
system, using suitable pr systems.	Commercial / Industrial Systems and is pumped under pressure in a closed ressure gauges, high pressure hoses and connection nozzles, into refrigeration engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems ses.	Cylinder sizes range from 9kg – 50kg	Time taken to refrigerant system va between 30mis – 2 h	into ries	JGR Engineering Personnel during transport, charging, decanting and service work
containing refrigerant gas	Ses.		3011115 – 21	iouis	WOIK

Working Methods & Controls

Only competent trained engineers holding C&G 2079 F-gas Certificate can work on systems containing refrigerant gases When working with R407f, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

Keep cylinder valves clean and free from contaminants particularly oil and water

Ensure all cylinders are secured or in a stable position, using a suitable cylinder trolley or by securing cylinder to a solid structure to protect cylinders from toppling over

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines and appropriate recovery pumps and recovery cylinders (when recovering), are serviced, maintained & inspected regularly

Refrigerants only to be used in a well-ventilated areas

Never overfill cylinders or systems with refrigerant

When reclaiming R407f refrigerant, ensure that ONLY suitable reclaim cylinders are used

In case of fire and / or explosion do not breathe fumes

Personal Protective Equipment







When handling / working with, this product operatives are to use the following equipment –

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Avoid contact with skin or eyes

Ensure adequate ventilation



								Heal	th & Safety
Accidental Release / Spillage					Fire Figh	ting			
If a leak should occur from either a cylinders or avoid contact with skin and eyes to prevent color of possible, try to shut off leak and stop release evacuate area and ensure adequate air ventilat. For heavy vapours, prevent from entering any pathere its accumulation could be dangerous, succonfined spaces, sewers, basements. Wear self-contained breathing apparatus when area unless atmosphere is proved to be safe.	If in known ion If the known ion I in the know	407f is non-flammable, however exposure to fire may cause a rise in pressure causing the cylinder to rupture / explode involved in a fire, if possible stop flow of product & move away from cylinder & cool from a protected position if safe to do so – All nown fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions the refrigerant is involved in a fire, hazardous thermal decomposition products may form. They are: Carbon oxides, Hydrogen luoride, Fluorinated compounds. Exposure to decomposition products may be hazardous to health. dvise Fire Fighters / Emergency Services that there are pressurised cylinders and potential for harmful effects if the released gas is ubjected to high temperatures see of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be angerous, such as confined spaces, sewers, basements							do so – All ditions ydrogen leased gas is
Exposure Monitoring & Health S				· ·		Disposal			
Do not smoke while handling this product Do not eat or drink whilst handling this product No Health Surveillance required while using this	Refrigerant should No All waste refrigerants into a suitable reclaim All empty cylinders M	should be disposed of cylinder and passed	of using the	correct Hazardous W ist organisation for d	aste Transfe		•		
First Aid			Safe l	Handling & Storag	е				
All empty cylinders inos r be returned to the supplier or manufacturer.							en not in use enerally not in use nent during		
			Assessment						
Level of Risk with Con		s in place		LOW	Х	MEDIUM		HIGH	
Assessor - Trevor	Foster		Date -	March 20	18	Review Da	ite -	March	2020



					nealth & Salety	
	COSHH Assessment Fo	rm				
Product	R134a Refrigerant	Prod	luct Picture		Hazard	
Manufacturer	National Refrigerants Ltd , 4 Watling Close, Sketchley Meadows Business Park Hinckley, LE10 3EZ				^ ^	
Composition	1,1,2 Tetrafluoroethane EINECS No. – 212-377-0		!>			
Workplace Exposure Limit	1,1,2 Tetrafluoroethane – 8hr TWA 1000ppm					
	How is the Product / Substance Used	Quantity	,	sk takes & uency	Persons Exposed	
system, using suitable pr systems.	a Commercial / Industrial Systems and is pumped under pressure in a closed ressure gauges, high pressure hoses and connection nozzles, into refrigeration engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems ses.	Cylinder siz range fro 9kg – 50k	zes refrige m syster kg betw	en to charge rant into n varies veen – - 2 hours	JGR Engineering Personnel during transport, charging, decanting and service work	
	Working Methods & Controls		Pers	onal Protect	tive Equipment	
When working with R134 methodologies detailed in Inspect cylinder valves for	engineers holding C&G 2079 F-gas Certificate can work on systems containing refula, engineers must always carry out works following all control measures and task in all relevant JGR Method Statements, Task Procedures and Risk Assessments. For damage prior to use, label & return any damaged cylinders to the supplier	igerant gases	0	,	this product operatives are	
• •	an and free from contaminants particularly oil and water	danta a aalid	to use the following	0		
structure to protect cylind Only use specified equip	ment which is suitable for this product, supply pressure & temperature and ensure	all	Safety glasseSafety Footw	es / goggles - ear – BS EN		
maintained & inspected i	g lines and appropriate recovery pumps and recovery cylinders (when recovering) regularly	, are serviced,	 Overalls / Lor Avoid contact with 	•	· ·	

Refrigerants only to be used in a well-ventilated areas

In case of fire and / or explosion do not breathe fumes

When reclaiming R134a refrigerant, ensure that **ONLY** suitable reclaim cylinders are used

Never overfill cylinders or systems with refrigerant

May require half mask or forced air breathing apparatus if substance is decomposed by high temperature (i.e. brazing) or working within poorly ventilated areas

Ensure adequate ventilation



								Heal	th & Safety
Accidental Releas	se / Spillage				Fire Figh	ting			
If a leak should occur from either avoid contact with skin and eyes If possible, try to shut off leak an evacuate area and ensure adeque. For heavy vapours, prevent from where its accumulation could be confined spaces, sewers, basem Wear self-contained breathing agarea unless atmosphere is proved.	it to prevent cold burns id stop release and uate air ventilation in entering any place dangerous, such as pparatus when entering	134a is non-flammable, however exposure to fire may cause a rise in pressure causing the cylinder to rupture / explode involved in a fire, if possible stop flow of product & move away from cylinder & cool from a protected position if safe to do so – All nown fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions the refrigerant is involved in a fire, hazardous thermal decomposition products may form. They are: Carbon oxides, Hydrogen uoride, Fluorinated compounds. Exposure to decomposition products may be hazardous to health. dvise Fire Fighters / Emergency Services that there are pressurised cylinders and potential for harmful effects if the released gas is ubjected to high temperatures see of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be angerous, such as confined spaces, sewers, basements							o do so – All ditions ydrogen leased gas is
Exposure Monitoring & Health Surveillance Disposal									
Do not smoke while handling this Do not eat or drink whilst handlin No Health Surveillance required	Refrigerant should NC All waste refrigerants into a suitable reclaim All empty cylinders M	should be disposed of cylinder and passed	of using the of to a special	correct Hazardous W ist organisation for d	aste Transfe		•		
	First Aid	Safe Handling & Storage							
All empty cylinders inos r be returned to the supplier of mandiacturer.								hen not in use enerally not in use nent during	
				Rating Details					
	isk with Control Measur	es in place	_	LOW	Х	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date -	March 20	18	Review Da	ate -	March	2020



Hoalth & Safoty

						Health & Safety		
	COSHH Assessment Fo	rm						
Product	R437a Refrigerant	Prod	uct Pi	cture		Hazard		
Manufacturer	National Refrigerants Ltd , 4 Watling Close, Sketchley Meadows Business Park Hinckley, LE10 3EZ							
Composition	77.8 - 80% w/w 1,1,1,2-Tetrafluoroethane (R134a){EINECS No. 212-377-0} 17.7 - 20% w/w Pentafluoroethane (R125) {EINECS No.206-557-8} 1.2 - 1.5% w/w Butane n- (R600) {F+;R12} {EINECS No. 203-448-7} 0.7% w/w n-Pentane (R601) {F+;R12 Xn;R65 R66 R67 N;R51-53} {EINECS No. 203-692-4}							
Workplace Exposure Limit	Tetrafluoroethane – TWA 1000ppm			,				
	How is the Product / Substance Used	Quantity	′	Time Task to Frequen		Persons Exposed		
system, using suitable presystems.	Commercial / Industrial Systems and is pumped under pressure in a closed ressure gauges, high pressure hoses and connection nozzles, into refrigeration rengineers, holding C&G 2079 F-gas Certificate, can carry out works on systems ses.	Cylinder siz range fror 9kg – 50k	m	Time taken to refrigerant system va betweer 30mis – 2 l	charge into aries	JGR Engineering Personnel during transport, charging, decanting and service work		
	Working Methods & Controls			Persona	I Protect	ive Equipment		
When working with R437 methodologies detailed i	engineers holding C&G 2079 F-gas Certificate can work on systems containing refra, engineers must always carry out works following all control measures and task an all relevant JGR Method Statements, Task Procedures and Risk Assessments.	igerant gases						

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

Keep cylinder valves clean and free from contaminants particularly oil and water

Ensure all cylinders are secured or in a stable position, using a suitable cylinder trolley or by securing cylinder to a solid structure to protect cylinders from toppling over

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines and appropriate recovery pumps and recovery cylinders (when recovering), are serviced, maintained & inspected regularly

Refrigerants only to be used in a well-ventilated areas

Never overfill cylinders or systems with refrigerant

When reclaiming R437a refrigerant, ensure that ONLY suitable reclaim cylinders are used

In case of fire and / or explosion do not breathe fumes







When handling / working with, this product operatives are to use the following equipment -

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Avoid contact with skin or eyes

Ensure adequate ventilation



								Heal	th & Safety
Accidental Release	e / Spillage				Fire Figh	ting			
If a leak should occur from either avoid contact with skin and eyes If possible, try to shut off leak and evacuate area and ensure adequer For heavy vapours, prevent from where its accumulation could be confined spaces, sewers, basem Wear self-contained breathing agarea unless atmosphere is prove	to prevent cold burns d stop release and uate air ventilation entering any place dangerous, such as eents su paparatus when entering U	involved in a nown fire exti the refrigerar luoride, Fluor dvise Fire Fig ubjected to hi lse of self-cor	437a is non-flammable, however exposure to fire may cause a rise in pressure causing the cylinder to rupture / explode involved in a fire, if possible stop flow of product & move away from cylinder & cool from a protected position if safe to do so – All nown fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions the refrigerant is involved in a fire, hazardous thermal decomposition products may form. They are: Carbon oxides, Hydrogen uoride, Fluorinated compounds. Exposure to decomposition products may be hazardous to health. dvise Fire Fighters / Emergency Services that there are pressurised cylinders and potential for harmful effects if the released gas is ubjected to high temperatures see of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be angerous, such as confined spaces, sewers, basements						
Exposure Monitoring & Health Surveillance Disposal									
Do not smoke while handling this Do not eat or drink whilst handlin No Health Surveillance required	Refrigerant should NO All waste refrigerants into a suitable reclaim All empty cylinders M	should be disposed cylinder and passed	of using the o	correct Hazardous W ist organisation for d	aste Transfe		•		
	First Aid	Safe Handling & Storage							
All empty cylinders wos i be returned to the supplier of mandiacturer.								hen not in use enerally not in use nent during	
				Rating Details					
	sk with Control Measur	res in place	_	LOW	Х	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date -	March 20	18	Review Da	ate -	March	2020



	COSHH Assessment Fo	rm			
Product	R417a Refrigerant	Prod	uct Pictu	re	Hazard
Manufacturer	National Refrigerants Ltd , 4 Watling Close, Sketchley Meadows Business Park Hinckley, LE10 3EZ				
Composition	50% w/w 1,1,1,2-Tetrafluoroethane (R134a){EINECS No. 212-377-0} 46.6% w/w Pentafluoroethane (R125) {EINECS No.206-557-8} 3.4% w/w Butane n- (R600) {F+;R12} {EINECS No. 203-448-7}			<	
Workplace Exposure	Tetrafluoroethane – TWA 1000ppm			L	V
Limit	Butane – TWA 600ppm STEL 750ppm	•			
	How is the Product / Substance Used	Quantity	, 1	Frequency	Persons Exposed
The refrigerant is used in Commercial / Industrial Systems and is pumped under pressure in a closed system, using suitable pressure gauges, high pressure hoses and connection nozzles, into refrigeration systems. Only competent trained engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems			zes m	system varies transport, characteristics transport, characteristics decanting and	
containing refrigerant gas				30mis – 2 hours	work
	Working Methods & Controls			Personal Prote	ctive Equipment

Only competent trained engineers holding C&G 2079 F-gas Certificate can work on systems containing refrigerant gases

When working with R417a, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

Keep cylinder valves clean and free from contaminants particularly oil and water

Ensure all cylinders are secured or in a stable position, using a suitable cylinder trolley or by securing cylinder to a solid structure to protect cylinders from toppling over

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines and appropriate recovery pumps and recovery cylinders (when recovering), are serviced, maintained & inspected regularly

Refrigerants only to be used in a well-ventilated areas

Never overfill cylinders or systems with refrigerant

When reclaiming R417a refrigerant, ensure that ONLY suitable reclaim cylinders are used

In case of fire and / or explosion do not breathe fumes

Personal Protective Equipment







When handling / working with, this product operatives are to use the following equipment –

- Gloves Protective gloves BS EN 388, BS EN 511Safety glasses / goggles - BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Avoid contact with skin or eyes

Ensure adequate ventilation



								Heal	th & Safety	
Accidental Relea	se / Spillage				Fire Figh	ting				
If a leak should occur from either avoid contact with skin and eye of possible, try to shut off leak and evacuate area and ensure adect of heavy vapours, prevent from where its accumulation could be confined spaces, sewers, based Wear self-contained breathing a area unless atmosphere is proving the self-contained breathing and area unless atmosphere is proving the self-contained breathing and	s to prevent cold burns nd stop release and quate air ventilation n entering any place e dangerous, such as ments apparatus when entering	If involved in a known fire ext If the refrigera Fluoride, Fluo Advise Fire Fi subjected to h Use of self-co	A417a is non-flammable, however exposure to fire may cause a rise in pressure causing the cylinder to rupture / explode involved in a fire, if possible stop flow of product & move away from cylinder & cool from a protected position if safe to do so – All nown fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions the refrigerant is involved in a fire, hazardous thermal decomposition products may form. They are: Carbon oxides, Hydrogen fluoride, Fluorinated compounds. Exposure to decomposition products may be hazardous to health. Advise Fire Fighters / Emergency Services that there are pressurised cylinders and potential for harmful effects if the released gas is subjected to high temperatures. Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be angerous, such as confined spaces, sewers, basements							
Exposure Monitor	ring & Health Surveillance	e Disposal								
Do not smoke while handling th Do not eat or drink whilst handli No Health Surveillance required	All waste refrigerants into a suitable reclaim	should be disposed of cylinder and passed	of using the o	environment or where its correct Hazardous Waste ist organisation for dispos r manufacturer.	e Transfei		•			
	First Aid			Safe Handling & Storage						
Skin - Remove contaminated clothing and flush affected area with lukewarm water (not hot water) for at least 15mins and obtain medical assistance May cause redness / frostbite to the affected area							hen not in use enerally not in use ment during			
				Rating Details						
_	isk with Control Meas	ures in plac		LOW	Х	MEDIUM		HIGH		
Assessor -	Trevor Foster		Date -	March 20	18	Review Date -	-	March	າ 2020	



	COSHH Assessment Fo	rm			
Product	R449a Refrigerant	Product Pi	cture	ı	Hazard Symbols
Manufacturer	A-Gas (UK) Ltd, Banyard Road, Portbury West Bristol BS20 7XH				
Composition Workplace Exposure Limit	17.7 - 20% Pentafluoroethane EINECS No. 206-557-8 (CAS No. 354-33-6) 19.34% 2,3,3,3-Tetrafluoroethane EINECS No. 468-710-7 (CAS No. 754-12-1) 21.96 Norflurane EINECS No. 212-377-0 (CAS No. 811-97-2) 40.73% Difluoromethane EINECS No. 200-839-4 (CAS No. 75-10-5) Norflurane – TWA 1000ppm			<	
	How is the Product / Substance Used	Quantity	Time Task ta Frequenc		Persons Exposed
system, using suitable pr systems.	Commercial / Industrial Systems and is pumped under pressure in a closed essure gauges, high pressure hoses and connection nozzles, into refrigeration engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems ses.	Cylinder sizes range from 9kg – 50kg	Time taken to refrigerant system var between 30mis – 2 h	into ries	JGR engineering personnel during transport, charging, decanting and service work

Working Methods & Controls

Only competent trained engineers holding C&G 2079 F-gas Certificate can work on systems containing refrigerant gases When working with R449a, engineers must always carry out works following all control measures and task

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Keep cylinder valves clean and free from contaminants particularly oil and water

Ensure all cylinders are secured or in a stable position, using a suitable cylinder trolley or by securing cylinder to a solid structure to protect cylinders from toppling over

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines and appropriate recovery pumps and recovery cylinders (when recovering), are serviced, maintained & inspected regularly

Refrigerants only to be used in a well-ventilated areas

Never overfill cylinders or systems with refrigerant

When reclaiming R449a refrigerant, ensure that ONLY suitable reclaim cylinders are used

In case of fire and / or explosion do not breathe fumes

Personal Protective Equipment







When handling / working with, this product operatives are to use the following equipment –

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Avoid contact with skin or eyes

Ensure adequate ventilation



								Heal	th & Safety
Accidental Release	e / Spillage				Fire Figh	ting			
If a leak should occur from either avoid contact with skin and eyes t If possible, try to shut off leak and evacuate area and ensure adequate area and ensure adequate for heavy vapours, prevent from where its accumulation could be confined spaces, sewers, basemed Wear self-contained breathing apparea unless atmosphere is proved	If kr lstop release and ate air ventilation lentering any place dangerous, such as paratus when entering lstop lst	449a is non-flammable, however exposure to fire may cause a rise in pressure causing the cylinder to rupture / explode involved in a fire, if possible stop flow of product & move away from cylinder & cool from a protected position if safe to do so – All nown fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions the refrigerant is involved in a fire, hazardous thermal decomposition products may form. They are: Carbon oxides, Hydrogen uoride, Carbonyl Difluoride. Exposure to decomposition products may be hazardous to health. dvise Fire Fighters / Emergency Services that there are pressurised cylinders and potential for harmful effects if the released gas is abjected to high temperatures see of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be angerous, such as confined spaces, sewers, basements							o do so – All ditions lydrogen eleased gas is
Exposure Monitorin	ng & Health Surveillance					Disposal			
Do not smoke while handling this Do not eat or drink whilst handling No Health Surveillance required w	Refrigerant should NC All waste refrigerants into a suitable reclaim All empty cylinders M	should be disposed cylinder and passed	of using the of to a special he supplier o	correct Hazardous Wa ist organisation for di r manufacturer.	aste Transfe sposal.		•		
	First Aid			Safe Handling & Storage					
Skin - Remove contaminated clothing and flush affected area with lukewarm water (not hot water) for at least 15mins and obtain medical assistance May cause redness / frostbite to the affected area								then not in use enerally not in use	
			Assessment I		T				
Level of Ris	sk with Control Measur	es in plac	e –	LOW	X	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date -	March 20	18	Review Da	te -	March	า 2020

Template Status – JGR-H&S-March2018



	COSHH Assessment Fo	rm			
Product	R448a Refrigerant	Prod	uct Picture		Hazard
Manufacturer	Honeywell Fluorine Products, Europe B.V., Laarderhoogtweg 18, 1101 EA Amsterdam, Netherlands	1			
Composition	Contains the following components — 26% Difluoromethane EINECS No. 200-839-4 CAS No. 75-10-5 26% Pentafluoroethane EINECS No. 206-557-8 CAS No. 354-33-6 21% Norfluoroethane EINECS No. 212-377-0 CAS No. 811-97-2 20% 2,3,3,3 Tetrafluoroethane-1-ene EINECS No 468-710-7 CAS No 811-97-2 7% Trans-1,3,3,3-Tetrafluorop-1-ene EINECS No 471-480-0 CAS No 29118-24-9				
Workplace Exposure Limit	Difluoromethane – 2.200mg/m³ / 1.000ppm Pentafluoroethane - 1.000ppm Norfluoroethane - 1.000ppm 2,3,3,3 Tetrafluoroethane-1-ene - 500ppm Trans-1,3,3,3-Tetrafluorop-1-ene - 800ppm				
	How is the Product / Substance Used	Quantity	Time Task Freque		Persons Exposed
	Commercial / Industrial Systems and is pumped under pressure in a closed ressure gauges, high pressure hoses and connection nozzles, into refrigeration	Cylinder siz range fror		nt into	JGR Engineering Personnel during transport, charging,
Only competent trained containing refrigerant ga	engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems ses.	9kg – 50k			decanting and service work
	Working Methods & Controls		Person	al Protecti	ve Equipment
Only competent trained	engineers holding C&G 2079 F-gas Certificate can work on systems containing refr	igerant gases			

When working with R448a, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

Keep cylinder valves clean and free from contaminants particularly oil and water

Ensure all cylinders are secured or in a stable position, using a suitable cylinder trolley or by securing cylinder to a solid structure to protect cylinders from toppling over

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines and appropriate recovery pumps and recovery cylinders (when recovering), are serviced, maintained & inspected regularly

Refrigerants only to be used in a well-ventilated areas and away from naked flames and other sources of ignition

Never overfill cylinders or systems with refrigerant

When reclaiming R448a refrigerant, ensure that ONLY suitable reclaim cylinders are used

In case of fire and / or explosion do not breathe fumes







When handling / working with, this product operatives are to use the following equipment –

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Avoid contact with skin or eyes

Ensure adequate ventilation



								Healt	th & Safety
Accidental Release / Spillag	je				Fire Figh	ting			
If a leak should occur from either a cylinders avoid contact with skin and eyes to prevent If possible, try to shut off leak and stop releat evacuate area and ensure adequate air ven For heavy vapours, prevent from entering any where its accumulation could be dangerous confined spaces, sewers, basements Wear self-contained breathing apparatus wharea unless atmosphere is proved to be safe	cold burns ase and atilation If the Carrow, such as Advanther entering Use	2.448a is non-flammable, however exposure to fire may cause a rise in pressure causing the cylinder to rupture / explode involved in a fire, if possible stop flow of product & move away from cylinder & cool from a protected position if safe to do so – All nown fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions the refrigerant is involved in a fire, hazardous thermal decomposition products may form. They are: Halogenated compounds carbonyl Fluoride, Hydrogen Fluoride, Carbon oxides. Exposure to decomposition products may be hazardous to health. Individual conditions of the released gas is subjected to high temperatures apparatus may be required in confined spaces or any place where its accumulation could be angerous, such as confined spaces, sewers, basements							
Exposure Monitoring & Heal	th Surveillance					Disposal			
Do not smoke while handling this product Do not eat or drink whilst handling this product No Health Surveillance required while using	Refrigerant should NC All waste refrigerants on the suitable reclaim All empty cylinders M	should be disposed of cylinder and passed	of using the of to a special	correct Hazardous W ist organisation for d	aste Transfe		J		
First Aid	First Aid				Safe I	Handling & Storag	е		
First Aid Skin – Remove contaminated clothing and flush affected area with lukewarm water (not hot water) for at least 15mins and obtain medical assistance May cause redness / frostbite to the affected area Eyes – Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes and obtain medical assistance May cause redness / frostbite or damage to the cornea Inhalation – Remove from exposure and move to fresh air. Where required, lie casualty down. Keep warm and rest. Artificial respiration and/or oxygen may be necessary. Get medical attention. Misuse or intentional inhalation may cause death without warning symptoms, due to cardiac effects. Other symptoms potentially related to misuse or inhalation are - Anaesthetic effects, Light-headedness, dizziness, confusion, incoordination, drowsiness, unconsciousness, irregular heartbeat, with a strange sensation in the chest, heart thumping, apprehension, feeling of fainting or weakness, Narcosis. Ingestion - Ingestion is not considered a potential route of exposure General Advice - Never give anything by mouth to an unconscious person. Handling Ensure adequate ventilation in Where required use cylinder to or cap Where required use cylinder to or cap Vapours are heavier than air and vapours or mand or exposure or mand/or oxygen Naviod breathing vapours or mand vapours or mand/or oxygen Naviod breathing vapours or mand vapours or mand/or oxygen Naviod breathing vapours or mand vapours or mand/or oxygen Naviod breathing vapours or mand vapours or mand/or oxygen Naviod breathing vapours or mand vapours or mand/or oxygen Naviod breathing vapours or man						act with the skin, eyed along the floor. The to prevent back floors suppliers cylinder at sunlight in a cool (I) the adequate ventilation as symbol when transtrained in the rear of	s and clothin ow into the consistency with valves below 45°c) and and warning disporting consistency the vehicle of	ng. ylinder. stightly closed when and safeguard geong notices when appressed gases to prevent mover	nen not in use enerally not in use nent during
			Assessment I						
Level of Risk with C		s in place	_	LOW	Х	MEDIUM		HIGH	
Assessor - Tree	evor Foster		Date -	March 20	18	Review Da	ate -	March	2020



						Health & Safety
	COSHH Assessment Fo	rm				
Product	R437a Refrigerant	Prod	luct Pi	cture		Hazard
Manufacturer	National Refrigerants Ltd , 4 Watling Close, Sketchley Meadows Business Park Hinckley, LE10 3EZ			1		^
Composition	77.8 - 80% w/w 1,1,1,2-Tetrafluoroethane (R134a){EINECS No. 212-377-0} 17.7 - 20% w/w Pentafluoroethane (R125) {EINECS No.206-557-8} 1.2 - 1.5% w/w Butane n- (R600) {F+;R12} {EINECS No. 203-448-7} 0.7% w/w n-Pentane (R601) {F+;R12 Xn;R65 R66 R67 N;R51-53} {EINECS No. 203-692-4}	{EINECS No.206-557-8} {EINECS No. 203-448-7}				
Workplace Exposure Limit	Tetrafluoroethane – TWA 1000ppm					
	How is the Product / Substance Used	Quantity		Time Task to Frequen		Persons Exposed
system, using suitable pr systems.	Commercial / Industrial Systems and is pumped under pressure in a closed ressure gauges, high pressure hoses and connection nozzles, into refrigeration engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems ses.	Cylinder sizes refriger range from system 9kg – 50kg between		Time taken to refrigerant system va betweer 30mis – 2 I	t into aries n –	JGR Engineering Personnel during transport, charging, decanting and service work
3 3 3	Working Methods & Controls			Persona	al Protect	ive Equipment
When working with R437 methodologies detailed i	engineers holding C&G 2079 F-gas Certificate can work on systems containing refr 'a, engineers must always carry out works following all control measures and task n all relevant JGR Method Statements, Task Procedures and Risk Assessments. or damage prior to use, label & return any damaged cylinders to the supplier	igerant gases			Mary Mary	

Keep cylinder valves clean and free from contaminants particularly oil and water

Ensure all cylinders are secured or in a stable position, using a suitable cylinder trolley or by securing cylinder to a solid structure to protect cylinders from toppling over

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines and appropriate recovery pumps and recovery cylinders (when recovering), are serviced, maintained & inspected regularly

Refrigerants only to be used in a well-ventilated areas

Never overfill cylinders or systems with refrigerant

When reclaiming R437a refrigerant, ensure that ONLY suitable reclaim cylinders are used

In case of fire and / or explosion do not breathe fumes



When handling / working with, this product operatives are to use the following equipment -

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Avoid contact with skin or eyes

Ensure adequate ventilation



								Heal	th & Safety
Accidental Releas	se / Spillage				Fire Figh	ting			
If a leak should occur from either avoid contact with skin and eyes If possible, try to shut off leak are evacuate area and ensure adeq. For heavy vapours, prevent from where its accumulation could be confined spaces, sewers, basen. Wear self-contained breathing a area unless atmosphere is proved.	s to prevent cold burns and stop release and quate air ventilation an entering any place be dangerous, such as ments apparatus when entering	R437a is non-flammable, however exposure to fire may cause a rise in pressure causing the cylinder to rupture / explode If involved in a fire, if possible stop flow of product & move away from cylinder & cool from a protected position if safe to do so – All known fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions If the refrigerant is involved in a fire, hazardous thermal decomposition products may form. They are: Carbon oxides, Hydrogen Fluoride, Fluorinated compounds. Exposure to decomposition products may be hazardous to health. Advise Fire Fighters / Emergency Services that there are pressurised cylinders and potential for harmful effects if the released gas is subjected to high temperatures Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be dangerous, such as confined spaces, sewers, basements							
Exposure Monitoring & Health Surveillance Disposal									
Do not smoke while handling thi Do not eat or drink whilst handlin No Health Surveillance required	ng this product	Refrigerant should NO All waste refrigerants into a suitable reclaim All empty cylinders M	should be disposed of cylinder and passed	of using the	correct Hazardous W ist organisation for d	aste Transfe		=	
	First Aid		Safe Handling & Storage						
Skin – Remove contaminated c water (<i>not hot water</i>) for at least May cause redness / frostbite to Eyes – Hold eyelids apart and filminutes and obtain medical ass May cause redness / frostbite or Inhalation – Remove from expopatient warm and rest. Artificial of Get medical attention. Misuse or intentional inhalation due to cardiac effects. Other symptoms potentially relateffects, Light-headedness, dizzitunconsciousness, irregular heart thumping, apprehension, filngestion - Ingestion is not considered Advice - Never give ar When symptoms persist or in all	st 15mins and obtain medical of the affected area lush eyes with plenty of water istance or damage to the cornea osure, lie down. Move to frest respiration and/or oxygen may cause death without was ted to misuse or inhalation and the answer of fainting or weakness is idered a potential route of enything by mouth to an uncorrect of the affecting of the answer of the affect of the affect of the affect of the answer of the affect of th	Storage Rept Cylindragainst dar Secure with Transport All vehicles stransportation. Penalty Secure with Transport All cylinders transportation. Vehicle mu	min a secure cage / commust display the Commust display the Commust to be held as <i>MUST</i> be suitably soon buld have a secure so st have a suitable 2k	Iley to transpose. Avoid contained may spread discharge line manufacture e out of direct compound with mpressed Gon vehicle secured / resulting to the contained of the containe	act with the skin, eyed along the floor. The to prevent back floors suppliers cylinder at sunlight in a cool (I) the adequate ventilation as symbol when transtrained in the rear of the protect the driver	s and clothing ow into the consistency of the send of the consistency of the vehicle of the send of the vehicle of the vehicle of the send of the send of the vehicle of th	ng. ylinder. s tightly closed wl and safeguard ge ng notices when npressed gases to prevent mover	hen not in use enerally not in use ment during	
				Rating Details					
Level of R	isk with Control Measu	ures in plac	e –	LOW	Х	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date -	March 20	18	Review Da	ate -	March	2020



	COSHH Assessment Fo	rm			
Product	R422d Refrigerant	Prod	uct Picture		Hazard Symbols
Manufacturer	National Refrigerants Ltd, 4 Watling Close, Sketchley Meadows Business Park Hinckley, LE10 3EZ Emergency Tel – 01865 407333				
	64 - 66% Pentafluoroethane EINECS No. 206-557-8 (CAS No. 354-33-6)		To the second second		
Composition	30.5 – 32.5% 1,1,1,2 -Tetrafluoroethane EINECS No. 212-377-0 (CAS No. 811-97-2)				!> <>>
	3.0 – 3.5% Isobutene EINECS No. 200-857-2 (CAS No. 75-28-5)				V
Workplace Exposure Limit	1,1,2 Tetrafluoroethane – 8hr TWA 1000ppm				
	How is the Product / Substance Used	Quantity	, Time Task t Frequer		Persons Exposed
The refrigerant is used in Commercial / Industrial Systems and is pumped under pressure in a closed system, using suitable pressure gauges, high pressure hoses and connection nozzles, into refrigeration systems.		Time taker Cylinder sizes refriger range from system		t into	JGR engineering personnel during transport, charging,
Only competent trained e containing refrigerant ga	engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems ses.	9kg – 50k	g between 30mis – 2		decanting and service work
		_			

Working Methods & Controls

Only competent trained engineers holding C&G 2079 F-gas Certificate can work on systems containing refrigerant gases

When working with R422d, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

Keep cylinder valves clean and free from contaminants particularly oil and water

Ensure all cylinders are secured or in a stable position, using a suitable cylinder trolley or by securing cylinder to a solid structure to protect cylinders from toppling over

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines and appropriate recovery pumps and recovery cylinders (when recovering), are serviced, maintained & inspected regularly

Refrigerants only to be used in a well-ventilated areas

Never overfill cylinders or systems with refrigerant

When reclaiming R422d refrigerant, ensure that ONLY suitable reclaim cylinders are used

In case of fire and / or explosion do not breathe fumes

Personal Protective Equipment







When handling / working with, this product operatives are to use the following equipment –

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Avoid contact with skin or eyes

Ensure adequate ventilation



								Health & Saf	fety
Accidental Release	. •				Fire Figh	ting			
If a leak should occur from either evacuate personnel / avoid conta prevent cold burns If possible, try to shut off leak and evacuate area and ensure adequ	act with skin and eyes to If ir kno d stop release and late air ventilation	nvolved in a own fire extir he refrigeran	nguishers can be used at is involved in a fire, h	w of product & move to cool cylinders, us nazardous thermal de	e away from se extinguisl ecomposition	cylinder & cool from a hing media appropriant products may form.	a protected pate to the s They are: C	o rupture / explode position if safe to do so – A urrounding conditions arbon oxides, Hydrogen	All
For heavy vapours, prevent from where its accumulation could be confined spaces, sewers, baseme	entering any place dangerous, such as ents Advantage Subara	vise Fire Fig bjected to hi	gh temperatures	rvices that there are	pressurised	cylinders and potentia	al for harmfo	ul effects if the released ga	ıs is
Wear self-contained breathing ap area unless atmosphere is proved	paratas irrieri sintsinig	Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be dangerous, such as confined spaces, sewers, basements							
Exposure Monitoring	ng & Health Surveillance					Disposal			
Do not smoke while handling this Do not eat or drink whilst handling No Health Surveillance required w	•	should be disposed of cylinder and passed	of using the of to a special	correct Hazardous Walist organisation for di	aste Transfe	ulation could be dangerouser Note system and measu			
	First Aid		Safe Handling & Storage						
water (<i>not hot water</i>) for at least May cause redness / frostbite to to the Eyes – Hold eyelids apart and fluminutes and obtain medical assist May cause redness / frostbite or control inhalation – Remove from expositions patient warm and rest. Artificial resulting Get medical attention. Misuse or intentional inhalation must due to cardiac effects. Other symptoms potentially related	Skin – Remove contaminated clothing and flush affected area with lukewarm water (<i>not hot water</i>) for at least 15mins and obtain medical assistance May cause redness / frostbite to the affected area Eyes – Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes and obtain medical assistance May cause redness / frostbite or damage to the cornea Inhalation – Remove from exposure, lie down. Move to fresh air. Keep patient warm and rest. Artificial respiration and/or oxygen may be necessary. Get medical attention. Misuse or intentional inhalation may cause death without warning symptoms, due to cardiac effects. Other symptoms potentially related to misuse or inhalation are - Anaesthetic effects, Light-headedness, dizziness, confusion, incoordination, drowsiness,				. Avoid contained may spread discharge line manufacture e out of direct compound with mpressed Gin vehicle	act with the skin, eyes d along the floor. ne to prevent back floors/suppliers cylinders at sunlight in a cool (but hadequate ventilation as symbol when trans	s and clothing with valves below 45°c) and warning con	ylinder. tightly closed when not in and safeguard generally ang notices when not in use appressed gases	use
General Advice - Never give any	All cylinders <i>MUST</i> be suitably secured / restrained in the rear of the vehicle to prevent movement during transportation All cylinders <i>MUST</i> be suitably secured / restrained in the rear of the vehicle to prevent movement during transportation Vehicle should have a secure solid bulkhead to protect the driver Vehicle must have a suitable 2kg Dry Powder Fire Extinguisher carried on vehicles to combat vehicle fires								
			Assessment F	Rating Details					
Level of Ris	sk with Control Measure	es in place		LOW	Х	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date -	March 20	18	Review Da	te -	March 2020	



						nealth & Safety
	COSHH Assessment Fo	rm				
Product	R290 – Refrigerant Grade Propane (Hydrocarbon Refrigerant Aerosol)	Prod	uct Pi	cture		Hazard
Manufacturer	National Refrigerants Ltd , 4 Watling Close, Sketchley Meadows Business Park Hinckley, LE10 3EZ					\wedge
Composition	Propane (R290) 100% EINECS No. 200-827-2 CAS Nr 74-98-6		NEVADA R290			
Workplace Exposure Limit	Propane (R290) 8hr TWA 2500ppm	December 1				
	How is the Product / Substance Used	Quantity Time Task t Freque				Persons Exposed
system, using suitable pr systems. Only competent trained of containing refrigerant ga	Commercial / Industrial Systems and is pumped under pressure in a closed ressure gauges, high pressure hoses and connection nozzles, into refrigeration engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems sees and only those holding C&G 6187 Hydrocarbons Certificate, can work on ocarbons refrigerant gases	Stored in 50 bottles	0ml	Time taken to refrigerant system val between 30mis – 1 h	charge into ries	JGR Engineering Personnel during transport, charging, decanting and service work
, , ,	Working Methods & Controls			Personal	l Protecti	ve Equipment
When working with R290	engineers holding C&G 2079 F-gas Certificate can work on systems containing refr d, engineers must always carry out works following all control measures and task m GR Method Statements, Task Procedures and Risk Assessments.	-			" [Sim	

Open cylinder valves slowly to prevent shock pressure and beware of static charges, which may build up sufficiently to ignite fuel gas.

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

Keep cylinder valves clean and free from contaminants particularly oil and water

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines are serviced, maintained & inspected regularly

Only to be used in a well-ventilated areas

As with all High Pressure gases / liquids, avoid risk of High Pressure being directed at skin / eyes.

2kg Dry Powder Fire Extinguisher to be on hand at all times when gas is being use.







When handling / working with, this product operatives are to use the following equipment -

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Ensure adequate ventilation

Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be dangerous, such as confined spaces, sewers,



							Heal	Ith & Safety
Accidental Rele	ease / Spillage				Fire Fig	hting		
If safe to do so – Try to stop release and eva adequate air ventilation Extinguish all flames and e	acuate area and ensure	explode If involved in a fire, if p	oossible sto	op flow of product & r	nove away fr	use a rise in pressure causing om cylinder & cool from a protectinguishing media appropriate	cted position if sa	ife to do so –
Prevent from entering any place could be dangerous, such as coasphyxiate in high concentration prevent from entering into soil,	e where its accumulation onfined spaces, as it can ns.	Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous / explosive re-ignition may of the refrigerant is involved in a fire, hazardous thermal decomposition products may form. They are: Carbon oxides Fluoride, Fluorinated compounds. Exposure to decomposition products may be hazardous to health. Advise Fire Fighters / Emergency Services that there are pressurised cylinders and potential for harmful effects if the						occur. s, Hydrogen
and/or groundwater Wear self-contained breathing a area unless atmosphere is prov	apparatus when entering	is subjected to high temperatures Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be dangerous, such as confined spaces, sewers, basements Disposal						ı could be
Do not smoke while handling th Do not eat or drink whilst handli No Health Surveillance required	is product ing this product	flammable ar Cylinders sho	nd explosiv ould be em	ve. optied & returned to a	of any non-o	empty cylinders; empty cylinders vaste collection point. Do not pu ion could be dangerous, such as	ncture even whe	n empty.
F	First Aid				Safe Han	dling & Storage		
After contact with skin, wash im irritation or blistering occurs, ob Eyes – Immediately irrigate with	to the skin in the case of freeze burnediately with plenty of water. If	urns. Ensure : Never a Storage R290 sh	 Keep away from heat and ignition sources (including static discharges) and <i>never</i> smoke while handling product Ensure adequate ventilation in all work areas <i>Never</i> attempt to drag, slide or lift cylinder by its valve or cap Storage R290 should only be stored in manufacturers/suppliers cylinder with valves tightly closed when not in use 					
medical attention. Inhalation – Remove patient from Administer oxygen if necessary has ceased or shows signs of from apply external cardiac massage. Ingestion – Unlikely route of exprovided the patient is conscious give 200 -300 ml (half a pint) was	om exposure, keep warm and at . Apply artificial reparation if breading. In the event of cardiac arrest. Obtain immediate medical atterations. Do not induce vomiting. Us, wash out mouth with water ar	and safe secure Segrega Transport All vehic COSHH All cyline transpoil Vehicle	Segregated from oxidant gases and other oxidants in store Transport All vehicles must display the Compressed Gas symbol when transporting compressed gases COSHH assessment to be held in vehicle All cylinders MUST be suitably secured / restrained in the rear of the vehicle to prevent movement during transportation					
medical attention.	- Vehicle must with a suitable i lie Extinguisher carried on vehicles to combat vehicle mes							
1	Not will Occur at Ma		ssment	Rating Details	v	MEDIUM	1110::	
_	Risk with Control Measures			LOW	X	MEDIUM	HIGH	
Assessor -	Trevor Foster	Date -		March 20	18	Review Date -	Marcl	h 2020

Template Status – JGR-H&S-March2018



	COSHH Assessment For	rm			
Product	R600A – Refrigerant Grade Isobutane (Hydrocarbon Refrigerant Aerosol)	Pro	duct Picture		Hazard
Manufacturer	National Refrigerants Ltd , 4 Watling Close, Sketchley Meadows Business Park Hinckley, LE10 3EZ	100	\wedge		
Composition	Isobutane (R600A) 100% EINECS No. 200-857-2 CAS Nr 75-28-5		BOOQ WINTERSON WINTERSON WINTE		
Workplace Exposure Limit	Isobutane - LTEL: 600ppm; STEL: 750ppm (EH40/2002)	OLX	BUTTOCHANT UNITED TO BE MOMENT BE MO		
	How is the Product / Substance Used	Quanti	ty Time Task		Persons Exposed
system, using suitable prosystems. Only competent trained econtaining refrigerant ga	Commercial / Industrial Systems and is pumped under pressure in a closed ressure gauges, high pressure hoses and connection nozzles, into refrigeration engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems sees and only those holding C&G 6187 Hydrocarbons Certificate, can work on ocarbons refrigerant gases	Stored in 5 bottles	Time taken refrigera	to charge nt into varies en –	JGR Engineering Personnel during transport, charging, decanting and service work
	Working Methods & Controls		Persor	al Protectiv	e Equipment

gases

When working with R600A, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Open cylinder valves slowly to prevent shock pressure and beware of static charges, which may build up sufficiently to ignite fuel gas.

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

Keep cylinder valves clean and free from contaminants particularly oil and water

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines are serviced, maintained & inspected regularly

Only to be used in a well-ventilated areas

As with all High Pressure gases / liquids, avoid risk of High Pressure being directed at skin / eyes.

2kg Dry Powder Fire Extinguisher to be on hand at all times when gas is being use.







When handling / working with, this product operatives are to use the following equipment -

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Ensure adequate ventilation

Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be dangerous, such as confined spaces, sewers,



					Health & Safety								
Accidental Rele	ease / Spillage			Fire Fig	ıhting								
If safe to do so – Try to stop release and evadequate air ventilation Extinguish all flames and 6	acuate area and ensure	R600A is extremely flammakexplode If involved in a fire, if possible st All known fire extinguishers can	op flow of product & r	nove away fr	om cylinder & cool from a prote	cted position if saf	fe to do so –						
Prevent from entering any place could be dangerous, such as coasphyxiate in high concentration Prevent from entering into soil, and/or groundwater Wear self-contained breathing a	onfined spaces, as it can ns. ditches, sewers, waterways apparatus when entering	Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous / explosive re-ignition may occur. If the refrigerant is involved in a fire, hazardous thermal decomposition products may form. They are: Carbon oxides, Hydrogr Fluoride, Fluorinated compounds. Exposure to decomposition products may be hazardous to health. Advise Fire Fighters / Emergency Services that there are pressurised cylinders and potential for harmful effects if the release is subjected to high temperatures Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be											
area unless atmosphere is prov	/ed to be safe	dangerous, such as confined sp	aces, sewers, basem	ents									
Exposure Monitor	ing & Health Surveillance				Disposal								
Do not smoke while handling the Do not eat or drink whilst handle No Health Surveillance required	ing this product	flammable and explosi Cylinders should be er	Use the cylinder until empty. Do not dispose of any non-empty cylinders; empty cylinders have residual vapour that is flammable and explosive. Cylinders should be emptied & returned to a hazardous waste collection point. Do not puncture even when empty. Do not discharge gas into any place where its accumulation could be dangerous, such as confined spaces										
F	First Aid			Safe Han	dling & Storage								
After contact with skin, wash im irritation or blistering occurs, ob Eyes – Immediately irrigate with holding the eyelids apart for at Immedical attention. Inhalation – Remove patient for Administer oxygen if necessary has ceased or shows signs of for apply external cardiac massage Ingestion – Unlikely route of external cardiac massage Ingestion – Unlikely ro	to the skin in the case of freeze in mediately with plenty of water. If stain medical attention. In eyewash solution or clean wateleast 15 minutes. Obtain immediate om exposure, keep warm and at a Apply artificial reparation if breadiling. In the event of cardiac arrest. Obtain immediate medical atterposure. Do not induce vomiting. In, wash out mouth with water ar	burns. f Never attempt to Storage PR600A should only and safeguard ge and safeguard ge set ention. Transport All vehicles must a COSHH assessmushed transportation All cylinders MUS transportation Vehicle should ha	 Keep away from heat and ignition sources (including static discharges) and <i>never</i> smoke while handling product Ensure adequate ventilation in all work areas Never attempt to drag, slide or lift cylinder by its valve or cap Storage R600A should only be stored in manufacturers/suppliers cylinder with valves tightly closed when not in use Kept cylinders upright and stable in a cool (below 50°c), well-ventilated area away from heat sources and oxidants and safeguard generally against damage Secure within a secure cage / compound with adequate ventilation and warning notices when not in use Segregated from oxidant gases and other oxidants in store Transport All vehicles must display the Compressed Gas symbol when transporting compressed gases COSHH assessment to be held in vehicle All cylinders MUST be suitably secured / restrained in the rear of the vehicle to prevent movement during transportation 										
medical autiniUH.				juisner carrie	d on vehicles to combat vehicle	TIFES							
	N'-1 141		Rating Details	1 1	MEDULA	1							
	Risk with Control Measure		LOW	X	MEDIUM	HIGH							
Assessor -	Trevor Foster	Date -	March 20)18	Review Date -	March	1 2020						



	COSHH Assessment Fo	rm			
Product	R32 Refrigerant	Produ	uct Picture		Hazard
Manufacturer	A-Gas (UK) Ltd, Banyard Road, Portbury, West Bristol, BS20 7XH Emergency Contact – 01275 376600		\$		\wedge
Composition	R32 Difluoromethane CAS No. 75-10-5 EINECS No. 200-839-4				
Workplace Exposure Limit	Difluoromethane – Temporary Emergency Exposure Limit (TEEL) TEEL-1 3,000ppm TEEL-2 6,600ppm TEEL-3 39,000ppm				
	How is the Product / Substance Used	Quantity	Time Task Freque		Persons Exposed
system, using suitable processes Conditioning systems.	Commercial / Industrial Systems and is pumped under pressure in a closed ressure gauges, high pressure hoses and connection nozzles, into Air engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems ses.	Cylinder siz range froi 9kg – 50k	m system v	nt into varies en –	JGR Engineering Personnel during transport, charging, decanting and service work
	Working Methods & Controls		Person	al Protecti	ve Equipment

Only competent trained engineers holding C&G 2079 F-gas Certificate can work on systems containing refrigerant gases

When working with R32, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Refrigerant only to be used in a well-ventilated areas and eliminate all sources of ignition within 3m of the system and associated service equipment

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

Keep cylinder valves clean and free from contaminants particularly oil and water

Ensure all cylinders are secured or in a stable position, using a suitable cylinder trolley or by securing cylinder to a solid structure to protect cylinders from toppling over

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines and appropriate recovery pumps and recovery cylinders (when recovering), are serviced, maintained & inspected regularly

Never overfill cylinders or systems with refrigerant

When reclaiming R32 refrigerant, ensure that ONLY suitable reclaim cylinders are used







When handling / working with, this product operatives are to use the following equipment -

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety goggles BS EN 166
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Avoid contact with skin or eyes

Ensure adequate ventilation - May require half mask or forced air breathing apparatus if substance is decomposed by high temperature (i.e. brazing) or working within poorly ventilated areas



								Heal	th & Safety
Accidental Release					Fire Fight	ing			
If a leak should occur from either avoid contact with skin and eyes If possible, try to shut off leak and evacuate area and ensure adequ. For heavy vapours, prevent from where its accumulation could be confined spaces, sewers, basem Wear self-contained breathing agentering area unless atmosphere	r a cylinders or plant to prevent cold burns. d stop release and that air ventilation entering any place dangerous, such as paratus when e is proved to be safe to prevent cold burns. Move use e Exposition for the Expositio	R32 is flammable and can easily ignited by heat, sparks or flames if involved in a fire <i>DO NOT</i> extinguish the fire unless the supply can be safely shut off as an explosive re-ignition may occur. Move away from cylinder & cool from a protected position if safe to do so – All known fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions. <i>DO NOT</i> use Water Jet Exposing the cylinder to fire may cause a rise in pressure in the cylinder, causing the cylinder to rupture / explode If the refrigerant is involved in a fire, hazardous thermal decomposition products may form. They are: Carbon Monoxide, Carbon Dioxide and Hydrogen Fluoride. Exposure to decomposition products may be hazardous to health. Advise Fire Fighters / Emergency Services that there are pressurised cylinders and potential for harmful effects if the released gas is subjected to high temperatures. Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be dangerous, such as confined spaces, sewers, basements							
Exposure Monitoring & Health Surveillance Disposal									
Do not smoke while handling this Do not eat or drink whilst handlin No Health Surveillance required	Refrigerant should NOT be discharged to atmosphere / environment or where its accumulation could be dangerous All waste refrigerants should be disposed of using the correct Hazardous Waste Transfer Note system and measured into a suitable reclaim cylinder and passed to a specialist organisation for disposal. All empty cylinders MUST be returned to the supplier or manufacturer.								
	First Aid				Safe I	Handling & Storag	е		
Skin – Remove contaminated cloukewarm water (not hot water) assistance DO NOT apply hot water or radia Eyes – Hold eyelids apart and fluwater for at least 15 minutes and DO NOT allow patient to rub the Inhalation – Remove from exposite Keep patient warm and rest. Artifinecessary by trained persons. Go Other symptoms potentially relate effects, Light-headedness, dizzin unconsciousness, irregular heart heart thumping, apprehension, for Ingestion - Ingestion is not consi	for at least 15mins and obtain rant heat ush eyes with plenty of eye was l obtain medical assistance eyes, tightly shut eyes sure, if safe to do so, and move ficial respiration and/or oxygen et medical attention. ed to misuse or inhalation are - ness, confusion, incoordination, theat, with a strange sensation eleling of fainting or weakness, N	 Ensure ade Where required Avoid breath Vapours are Storage R32 should Kept cylinder sources and Secure with Transport All vehicles COSHH ass All cylinders transportation Vehicle sho 	nsfer R32 from one of quate ventilation in a cired, use cylinder trothing vapours or mister heavier than air and only be stored in maters upright and stabled out of direct sunlight in external secure of must display the Cosessment to be held as MUST be suitably son uld have a secure so thave a suitable 2km	all work area alley to transport of transport of the contact of may spread anufacturers are away from the cool (lage / comport of the comport of the cool of the c	ports cylinders. Neve with the skin, eyes a d along the floor. Suppliers cylinders wheat, hot surfaces, so below 40°c) and safe and with adequate we as symbol when transtrained in the rear of to protect the driver	nd clothing. with valves tigsparks and conguard generentilation & wasporting conthe the vehicle to	ghtly closed when open flames and rally against dam varning notices warnings of the control of t	n not in use other heat age. /hen not in use ment during	
			Assessment F	Rating Details					
Level of Ris	sk with Control Measure	s in place -		LOW	X	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date - March 2018 Review Date - Ma						



	COSHH Assessment Fo	rm		
Product	R744 – Carbon Dioxide	Product Pi	cture	Hazard
Manufacturer	A-Gas (UK) Ltd, Banyard Road, Portbury West, Bristol, BS20 7XH Emergency Telephone No. 0800 111 333			
Composition	Carbon Dioxide 100% EINECS No. 204-696-9 CAS No. 124-38-9			
Workplace Exposure Limit	Carbon Dioxide - LTEL: 5000ppm; STEL: 15000ppm (EH40/2005)		1	
	How is the Product / Substance Used	Quantity	Time Task takes & Frequency	Persons Exposed
system, using suitable pr systems. Only competent trained of	Commercial / Industrial Systems and is pumped under pressure in a closed essure gauges, high pressure hoses and connection nozzles, into refrigeration engineers, holding C&G 6187-31 Service & Maintenance of Co2 Refrigeration ubo2 Smart Condensing Unit Training Course, can work on systems containing	Stored in 11kg cylinders	Time taken to charge refrigerant into system varies between – 30mis – 1 hours	JGR Engineering Personnel during transport, charging, decanting and service work

Oxygen detectors should be used when gases may be released

Only competent trained engineers, holding C&G 6187-31 Service & Maintenance of Co2 Refrigeration Systems Certificate or Cubo2 Smart Condensing Unit Training Course, can work on systems containing R744 refrigerant gases

Working Methods & Controls

When working with R744, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments

Inspect cylinder valves / valve guards for damage prior to use, label & return any damaged cylinders to the supplier

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines are serviced, maintained & inspected regularly

Protect containers from physical damage; do not drag, roll, slide or drop. Do not remove or deface labels provided by the supplier for the identification of the container contents

Only to be used in a well-ventilated areas – Where required use suitable local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Secure cylinders in an upright position at all times and ensure cylinder has been secured against either a wall or bench or placed in a container stand and is ready for use

As with all High Pressure gases, avoid risk of high pressure being directed at the skin and eyes.

Never attempt to transfer gases from one container to another

Personal Protective Equipment







When handling / working with R744, operatives are to use the following equipment –

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Ensure adequate ventilation

Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be dangerous, such as confined spaces, sewers,



Accidenta	l Release / Spillage				F	re Fighting			
adequate air ventilation Prevent from entering any place	ease and evacuate area and ensite where its accumulation could be and confined spaces, as it can a		R744 is non-flame rupture / explode a protected position media appropriate	 If involved in a fire if safe to do so – All 	if possible s known fire e	top flow of product a	nd move aw	ay from cylinder	and cool from
in high concentrations.	and commed opaces, as it can a	priyalato	Advise Fire Fighters			are pressurised cyli	nders on site	Э.	
Wear self-contained breathing a atmosphere is proved to be safe	apparatus when entering area unl e	SS	Use of self-containe could be dangerous			quired in confined sp	aces or any	place where its	accumulation
Exposure Monitorin	ng & Health Surveillance				Di	sposal			
Do not smoke while handling th Do not eat or drink whilst handli No Health Surveillance required	ng this product	Disc Disc All e	n be discharged in to the charge of large quantith charge of gas should be empty cylinders MUST	ies should be avoide be avoided into any probe returned to the s	ed. blace where i upplier or ma	ts accumulation coul anufacturer.	ld be danger	ous, such as cor	ofined spaces
Fi	rst Aid	036	e trie cylinder dritti emp	nty and do not punct	<u> </u>				
Dbtain medical attention, if sym Eyes – Irrigate with large amount water, holding the eye Remove contact lenses, if present medical attention. If I mediately available, flush an analysis of the symptoms may include loss of mot be aware of asphyxiation - For safe to do so or wearing self-convarm and at rest. Apply artifician the event of cardiac arrest ap Dbtain immediate medical attentions of CO2 caus needache.	minated clothing, if able. Inty of water for at least 15 minute ptoms persist Ints of eyewash solution or clean relids apart for at least 15 minute rent and easy to do. Obtain medical assistance is not additional 15 minutes. It ions may cause asphyxiation. Into bility/consciousness. Victim m. Remove patient from exposure, if Intained breathing apparatus. Kee I reparation if breathing has ceas reply external cardiac massage. Intion se increased respiration and reposure. This product is a gas at	 Never attempt to drag, slide or roll cylinders on its side. Where required use cylinder trolley to transports cylinders and never attempt to lift cylinder by its values. Close container valve after each use and when empty, even if still connected to equipment Depressurisation of liquid CO2 below approximately 5 bar can create solid CO2 which may block protection pipework and create dry-ice within containers. Storage R744 should only be stored in manufacturers/suppliers cylinder with valves tightly closed when not in use Kept cylinders upright and stable in a cool (below 50°c), well-ventilated area and safeguard generally against the secure within a secure cage / compound with adequate ventilation and warning notices when not in use Transport All vehicles must display the Compressed Gas symbol when transporting compressed gases COSHH assessment to be held in vehicle All cylinders MUST be suitably secured / restrained in the rear of the vehicle to prevent movement during transportation 						valve or cap ctive devices se gainst damaç e	
			Assessment I						
Level of R	isk with Control Measures	in place	-	LOW	Х	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date -	March 20	18	Review Da	ate -	March	n 2020

Template Status – JGR-H&S-March2018



COSHH Assessment Form						
Product	R22 Refrigerant – NO LONGER ABLE TO ADD TO SYSTEMS	Product Picture			Hazard	
Manufacturer	National Refrigerants Ltd , 4 Watling Close, Sketchley Meadows Business Park Hinckley, LE10 3EZ					
Composition	R22 Chlorodifluoromethane 100% EINECS No. – 200-871-9					
Workplace Exposure Limit	R22 Chlorodifluoromethane – 8Hr TWA 1000ppm					
How is the Product / Substance Used		Quantity	Time Task Freque		Persons Exposed	
The refrigerant is used in Commercial / Industrial Systems and is pumped under pressure in a closed system, using suitable pressure gauges, high pressure hoses and connection nozzles, into refrigeration systems. Only competent trained engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems containing refrigerant gases.		Cylinder siz range fror 9kg – 50k	m system varies		JGR Engineering Personnel during transport, charging, decanting and service work	
Working Methods & Controls			Personal Protective Equipment			
				·		

Only competent trained engineers holding C&G 2079 F-gas Certificate can work on systems containing refrigerant gases

When working with R22, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements. Task Procedures and Risk Assessments.

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

Keep cylinder valves clean and free from contaminants particularly oil and water

Ensure all cylinders are secured or in a stable position, using a suitable cylinder trolley or by securing cylinder to a solid structure to protect cylinders from toppling over

Only use specified equipment which is suitable for this product, supply pressure & temperature and ensure all equipment, such charging lines and appropriate recovery pumps and recovery cylinders (when recovering), are serviced, maintained & inspected regularly

Refrigerants only to be used in a well-ventilated areas

Never overfill cylinders or systems with refrigerant

When reclaiming R22 refrigerant, ensure that ONLY suitable reclaim cylinders are used

In case of fire and / or explosion do not breathe fumes







When handling / working with, this product operatives are to use the following equipment –

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing

Avoid contact with skin or eyes

Ensure adequate ventilation



								Heal	th & Safety
Accidental Release / Spillage					Fire Figh	ting			
If a leak should occur from either a cylinders of avoid contact with skin and eyes to prevent of If possible, try to shut off leak and stop releas evacuate area and ensure adequate air ventil. For heavy vapours, prevent from entering any where its accumulation could be dangerous, strongined spaces, sewers, basements. Wear self-contained breathing apparatus where area unless atmosphere is proved to be safe.	old burns If inverse and If the Another Inverse Invers	R22 is non-flammable, however exposure to fire may cause a rise in pressure causing the cylinder to rupture / explode If involved in a fire, if possible stop flow of product & move away from cylinder & cool from a protected position if safe to do so – All known fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions If the refrigerant is involved in a fire, hazardous thermal decomposition products may form. They are: Carbon oxides, Hydrogen Fluoride, Fluorinated compounds. Exposure to decomposition products may be hazardous to health. Advise Fire Fighters / Emergency Services that there are pressurised cylinders and potential for harmful effects if the released gas is subjected to high temperatures Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be dangerous, such as confined spaces, sewers, basements							ditions ydrogen eleased gas is
Exposure Monitoring & Health	Surveillance					Disposal			
Do not smoke while handling this product Do not eat or drink whilst handling this product No Health Surveillance required while using the		i	Refrigerant should NC All waste refrigerants and a suitable reclaim All empty cylinders M	should be disposed cylinder and passed	of using the of to a special he supplier o	correct Hazardous Wa ist organisation for di r manufacturer.	aste Transfe sposal.		
First Aid			Safe I	Handling & Storage)				
Skin – Remove contaminated clothing and fluwater (<i>not hot water</i>) for at least 15mins and May cause redness / frostbite to the affected at Eyes – Hold eyelids apart and flush eyes with minutes and obtain medical assistance May cause redness / frostbite or damage to the Inhalation – Remove from exposure, lie down patient warm and rest. Artificial respiration and Get medical attention. Misuse or intentional inhalation may cause dedue to cardiac effects. Other symptoms potentially related to misuse effects, Light-headedness, dizziness, confusion unconsciousness, irregular heartbeat, with a sheart thumping, apprehension, feeling of faint Ingestion - Ingestion is not considered a pote General Advice - Never give anything by mo When symptoms persist or in all cause of dour	I obtain medical assarea In plenty of water for the cornea In. Move to fresh air d/or oxygen may be eath without warning or inhalation are- ton, incoordination, strange sensation in thing or weakness, Nential route of exponents	r at least 15 r. Keep e necessary g symptoms Anaesthetic drowsiness, n the chest, Narcosis. sure ous person.	Handling Ensure adequate ventilation in all work areas Where required use cylinder trolley to transports cylinders & never attempt to drag or lift cylinder or cap Avoid breathing vapours or mist. Avoid contact with the skin, eyes and clothing. Vapours are heavier than air and may spread along the floor. Use a check valve or trap in the discharge line to prevent back flow into the cylinder. Storage R22 should only be stored in manufacturers/suppliers cylinders with valves tightly closed when not against damage. Kept cylinders upright and stable out of direct sunlight in a cool (below 45°c) and safeguard generagainst damage. Secure within a secure cage / compound with adequate ventilation and warning notices when not transport All vehicles must display the Compressed Gas symbol when transporting compressed gases COSHH assessment to be held in vehicle All cylinders MUST be suitably secured / restrained in the rear of the vehicle to prevent movement transportation					n not in use enerally not in use ment during	
			Assessment F	Rating Details					
Level of Risk with Co	ontrol Measures	s in place	-	LOW	X	MEDIUM		HIGH	
Assessor - Trev	or Foster		Date -	March 20)18	Review Da	te -	March	n 2020



					Health & Safety
	COSHH Assessment Fo	rm			
Product	Oxygen (for oxy-acetylene brazing)	Prod	uct Pict	ure	Hazard
Manufacturer	Energas Ltd, Westmorland Street, Hull HU2 0HX				
Composition	Oxygen EINECS No. 231-956-9 100%				
Workplace Exposure Limit					
	How is the Product / Substance Used	Quantity		Time Task takes & Frequency	Persons Exposed
components to form serv Only competent trained e containing refrigerant gas	rovide heat source in oxy-acetylene brazing used to join copper tubing and/or ice pipework and/or equipment engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems ses and only those holding BRA level 3 / CITB Brazing Certificate, can work on lerant gases and carry out oxy-acetylene brazing works	Cylinder size	10ltrs	Time taken to carry out pressure / leak testing of systems using this product varies between – 30mis – 2 hours	JGR Engineering
	Working Methods & Controls	Personal Protective Equipment			
high concentration in the Only competent trained of	LY RAPID BURING – Ignition may occur from low temperature ignition source the presence of any fuel substances. Engineers holding C&G 2079 F-gas Certificate can work on systems containing refuse.	rigerant gases		Z INV	
and only those holding B carry out oxy-acetylene b	RA level 3 / CITB Brazing Certificate, can work on systems containing refrigerant orazing works	gases and			

methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments. Ensure cylinders are secured on a suitable cylinder trolley prior to being used

Open cylinder valves slowly to prevent shock pressure and beware of static charges, which may build up sufficiently to ignite fuel gas

When working with oxy-acetylene, engineers must always carry out works following all control measures and task

Only use suitable specified equipment which is suitable for this product, supply pressure & temperature and ensure all oxy-acetylene equipment, such as hoses, torches & gauges, are serviced, maintained & inspected regularly

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

As with all High Pressure gases / liquids, avoid risk of High Pressure being directed at skin / eyes

2kg Dry Powder Fire Extinguisher to be on hand at all times when gas is being use

Only use in a well-ventilated areas

When handling / working with, this product operatives are to use the following equipment -

- Gloves Protective gloves BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN 345
- Overalls / Long sleeved clothing

Ensure adequate ventilation

May require half mask or forced air-breathing apparatus if substance is decomposed by high temperature (i.e. brazing) within poorly ventilated areas



			<u>, </u>					Heal	th & Safety
Acc	idental Release / Spillage	•		Fire Fighting					
If possible, try to shut off leak adequate air ventilation	and stop release and evac	cuate area and	U Ayg	en gas supports con		•	-	-	
Extinguish all flames and ignit	ion sources			lved in a fire, if possib					
Prevent from entering any pla as confined spaces, sewers, b		could be dange	erous, such media	position if safe to do so – All known fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions Use of self-contained breathing apparatus may be required in confined spaces					
Wear self-contained breathing is proved to be safe	g apparatus when entering	area unless atr	mosphere	e Fire Brigade / Eme	•			•	
Exposure Monito	oring & Health Surveilland	ce				Disposal			
No known adverse environme	ntal effects.		Do not discharge	into any place where	its accumu	lation could be dang	gerous, suc	h as confined s	paces
Do not smoke while handling	product		When waste gase	s are discharged, ga	s should be	flared off SLOWLY	to atmosp	here in a well-ve	entilated area.
No Health Surveillance require	ed		Empty cylinders m	nust be returned to th	ne supplier o	or manufacturer			
First A	First Aid Safe Handling & Storage								
Eyes – Not considered a pote Inhalation – Continuous inhal higher than 75% may cause n respiratory difficulties and con Remove victim to an uncontar doctor / medical services, if re	Handling Not considered a potential route of exposure Interior — Continuous inhalation of concentrations are than 75% may cause nausea, dizziness, ratory difficulties and convulsions Nove victim to an uncontaminated area and call a por / medical services, if required Nation — Ingestion is not considered a potential Handling Neep away from heat and ignition sources (including static discharges) and never smoke while handling productions are tree from oil and grease Neep away from heat and ignition sources (including static discharges) and never smoke while handling productions are free from oil and grease Neep away from heat and ignition sources (including static discharges) and never smoke while handling productions are free from oil and grease Neep away from heat and ignition sources (including static discharges) and never smoke while handling productions are free from oil and grease Neep away from heat and ignition sources (including static discharges) and never smoke while handling productions are free from oil and grease Neep away from heat and ignition sources (including static discharges) and never smoke while handling productions are free from oil and grease Neep away from heat and ignition sources (including static discharges) and never smoke while handling productions are free from oil and grease Neep away from heat and ignition sources (including static discharges) and never smoke while handling productions are free from oil and grease Neep away from heat and ignition sources (including static discharges) and never smoke while handling productions are free from oil and grease Neep away from heat and ignition sources (including static discharges) and never smoke while handling productions are free from oil and grease are secured as well as a supplied and supplied						s valve or cap se kidants and		
				Rating Details					
Level of R	isk with Control Measu	ures in place	-	LOW	Х	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date -	te - March 2018 Review Date - I					n 2020



	COSHH Assessment Fo	rm				
Product	Acetylene (Dissolved) (for oxy-acetylene brazing)	Prod	uct Pic	ture		Hazard
Manufacturer	Energas Ltd, Westmorland Street, Hull HU2 0HX		4			A
Composition	Acetylene 100% CAS No. 000074-86-2 EINECS No. – 200-816-9				<	
Workplace Exposure Limit	None - No known toxicological effects from this product				E	xtremely Flammable
	How is the Product / Substance Used	Quantity	,	Time Task take Frequency		Persons Exposed
	vide heat source in oxy-acetylene brazing used to join copper tubing and/or ice pipework and/or equipment.			Time taken to o	,	JGR Engineering
containing refrigerant gas	engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems ses and only those holding BRA level 3 / CITB Brazing Certificate, can work on the learning that is a carry out oxy-acetylene brazing works	Cylinder size	10ltrs	which this produ used varies betw 30mins – 2 ho	ween	Personnel
	Working Mothods & Controls	•		Personal F	Protocti	vo Equipment

Working Methods & Controls

WARNING – Can form explosive mixtures with air. Acetylene is dissolved in the more harmful 'Acetone' which may be released if the cylinder is used to soon after storing / transporting horizontally

To prevent acetone carry over, cylinders should be upright for at least 8hours after being horizontal

Only competent trained engineers holding C&G 2079 F-gas Certificate can work on systems containing refrigerant gases and only those holding BRA level 3 / CITB Brazing Certificate, can work on systems containing refrigerant gases and carry out oxy-acetylene brazing works

When working with oxy-acetylene, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Ensure cylinders are secured on a suitable cylinder trolley prior to being used

Open cylinder valves slowly to prevent shock pressure and beware of static charges, which may build up sufficiently to ignite fuel gas

Only use suitable specified equipment which is suitable for this product, supply pressure & temperature and ensure all oxy-acetylene equipment, such as hoses, torches & gauges, are serviced, maintained & inspected regularly

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

As with all High Pressure gases / liquids, avoid risk of High Pressure being directed at skin / eyes

2kg Dry Powder Fire Extinguisher to be on hand at all times when gas is being use

Personal Protective Equipment







When handling / working with, this product operatives are to use the following equipment –

- Gloves Protective gloves BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN 345
- Overalls / Long sleeved clothing

Ensure adequate ventilation

If clothing becomes impregnated with acetylene, avoid all ignition sources & remove clothes and allow to ventilate for at least 1 hour

May require half mask or forced air-breathing apparatus if substance is decomposed by high temperature (i.e. brazing) within poorly ventilated areas



								Heal	th & Safety
Accidental Releas	se / Spillage				Fire Figh	ting			
If possible, try to shut off leak evacuate area and ensure ad-		cetylene is cplode	extremely flammable	le and exposure to	fire may c	ause a rise in pres	sure causii	ng the cylinder	to rupture /
Extinguish all flames and ignit Wear self-contained breathing	Λ		a fire, if possible stop re extinguishers can b						
entering area unless atmosph		o not exting	uish a leaking gas flai	me unless absolute	y necessary	/. Spontaneous / ex	plosive re-i	gnition may occ	ur.
Prevent from entering any pla		complete co	ombustion may form (Carbon Monoxide					
accumulation could be dange spaces, sewers, basements	710		ighters / Emergency S gas is subjected to hig		are pressuris	sed Acetylene cylin	ders and po	tential for harmf	ul effects if
Further guidance can be foun MSDS			ontained breathing appuich as confined space			fined spaces or any	place wher	re its accumulati	on could be
Exposure Monitor	ring & Health Surveillance					Disposal			
Do not smoke while handling	product		Do not discharge into as confined spaces	any place where i	ts accumula	tion could form an e	explosive m	ixture or be dan	gerous, such
No Health Surveillance require	ed		Waste gases should	be flared through a	suitable bu	rner with s flash ba	ck arrestor		
,			Empty cylinders mus	t be returned to the	supplier or	manufacturer			
First A	id	Safe Handling & Storage							
Skin - Not considered a poter	ntial route of exposure Ha	andling							
Eyes - Not considered a pote	ential route of exposure		ay from heat and ignit		ing static dis	scharges) and <i>neve</i>	er smoke wh	nile handling pro	duct
Inhalation – In low concentra narcotic effects, symptoms ma headaches nausea and loss of	ay include dizziness, of coordination.	Where recorde	dequate ventilation in equired use cylinder tr	olley to transports o		•	_		
In high concentrations may ca	ause asphyxiation.		e should only be store nders upright and state						
Symptoms may include loss of	of mobility /		d generally against da		50 c), well-	verillialeu area awa	ly ITOTTI Heat	sources and ox	iuariis ariu
consciousness. Victim may no asphyxiation.	ot be aware of	Secure w	vithin a secure cage / ted from oxidant gase	compound with ade		ation and warning r	notices whe	n not in use	
Remove victim to fresh air we breathing apparatus.	aring a self-contained Tra	ansport	es must display the C			ransporting compre	essed gases	3	
Keep victim warm and rested. artificial respiration if breathing		COSHH	assessment to be helders MUST be suitably	d in vehicle					nsportation
Ingestion - Ingestion is not co	_	Vehicle s	should have a secure nust have a suitable 2	solid bulkhead to pr	otect the dri	ver		•	
route of exposure	-	v enilcie i		Rating Details	LAUTIGUISTI	er carried on veriici	es to comba	at verilde illes	
Lavet of D	ink with Cantral Massure				V	MEDIUM		lllon.	
	isk with Control Measure	es in piac		LOW	X	MEDIUM		HIGH	0000
Assessor -	Trevor Foster		Date -	March 20	18	Review Da	ate -	March	1 2020



	COSHH Assessment Fo	rm			
Product	Nitrogen (Oxygen Free)	Prod	uct Picture		Hazard
Manufacturer	Energas Ltd, Westmorland Street, Hull HU2 0HX	ū	J W		
Composition	Nitrogen EINECS No. 231-783-9 100%	ĺ			
Workplace Exposure Limit	None - No known toxicological effects from this product				
	How is the Product / Substance Used	Quantity	7	e Task takes & Frequency	Persons Exposed
Nitrogen (Oxygen Free) is a compressed gas (100% Nitrogen) which is non-flammable, non-toxic and safe for the environment Used as an inert medium to pressurise service pipework to undertake high pressure testing, also used at low pressure at low discharge rates to bleed through pipework past joints during brazing, to exclude oxygen and there by prevent scale forming Only competent trained engineers, holding C&G 2079 F-gas Certificate, can use Nitrogen (Oxygen Free) on systems containing refrigerant gases.			Cylinder size 19kg Time taken out pressur testing of susing this puries between 30mis – 2		JGR Engineering Personnel
	Working Methods & Controls		-	Personal Protect	tive Equipment
gases. When working with Nitrog task methodologies detail	engineers holding C&G 2079 F-gas Certificate can work on systems containing refigen (Oxygen Free), engineers must always carry out works following all control melled in all relevant JGR Method Statements, Task Procedures and Risk Assessment	easures and			
•	or damage prior to use, label & return any damaged cylinders to the supplier an and free from contaminants particularly oil and water.		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		this management as a C
Ensure all cylinders are s structure to protect cylind	secured or in a stable position, using a suitable cylinder trolley or by securing cylinder	When handling / working with, this product operative to use the following equipment — Gloves - Protective gloves – BS EN 511 Safety glasses / goggles - BS EN 166-349B			t – es – BS EN 511
Open valves slowly to pre Only use in a well-ventila				ootwear – BS EN	

As with all High Pressure gases / liquids, avoid risk of High Pressure being directed at skin / eyes



								Heal	th & Safety
Ac	cidental Release / Spillag	je				Fire Fighting			
There are no known adverse			the	rogen is non-flammal cylinder to rupture/		er exposure to fire	may cause	a rise in press	ure causing
Prevent from entering any pla as confined spaces, as it can	asphyxiate in high concer	ntrations.	pos	volved in a fire, if possibilition if safe to do so – A	I known fire	extinguishers can be			
Try to stop release and evac	uate area and ensure adec	quate air ventilat		media appropriate to the surrounding conditions					
Wear self-contained breathin	g apparatus when entering	g area unless atr	mosphere Use	e of self-contained brea	thing appar	atus may be requir	ed in confine	ed spaces	
is proved to be safe			Adv	vise Fire Brigade / Eme	rgency Ser	vices of Pressurise	d Containers	5	
Exposure Monit	oring & Health Surveillar	ice				Disposal			
No known adverse environm	ental effects.		Do not discharg	e into any place where	its accumu	ation could be dan	gerous, sucl	n as confined sp	oaces
Do not smoke while handling	product		When waste gas	ses are discharged, ga	s should be	flared off SLOWL	Y to atmosph	nere in a well-ve	entilated area
No Health Surveillance requi	red		Empty cylinders must be returned to the supplier or manufacturer						
First Aid Safe Handling & Storage									
Skin – Not considered a pote Eyes – Not considered a pote Inhalation – In high concent asphyxiation. Symptoms may include loss consciousness. Victim may not be aware of a victim to fresh air wearing a s apparatus. Keep victim warm and restect artificial respiration if breathir Ingestion - Ingestion is not concute of exposure	ential route of exposure rations may cause of mobility / asphyxiation. Remove self-contained breathing I. Call a doctor. Applying stops.	Provide si Do not dra Where red Storage Nitrogen s Cylinders S Transport All vehicle COSHH a All cylindes Vehicle sh	Nitrogen should only be stored in manufacturers / suppliers cylinders with valves tightly closed when not in use Cylinders to be – o Kept upright and stable in a cool, well-ventilated area away from heat sources and safeguard generally a damage o Secured within a secure cage / compound with adequate ventilation and warning notices					ise rally against	
		_		nt Rating Details					
Level of I	Risk with Control Meas	sures in place	-	LOW	Х	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date -	March 20	18	Review Da	ate -	March	ı 2020



	COSHH Assessment Fo	rm		
Product	MAPP Pro Gas	Product Pi	cture	Hazard
Manufacturer	National Refrigerants Ltd, 4 Watling Close, S			∧
Composition	Propene EINECS No. 204-062-1 75-100% Sobutane EINECS No 200-857-2 10-25%	•		
Workplace Exposure Limit	Suffocation (asphyxiation) hazard – if allowed to accumulate to a concentration that reduces oxygen below safe breathing levels. Exposure of the skin and eyes to liquefied gas can cause freeze burns as it evaporates rapidly. LC50/mouse/ 2 h : 680 mg/l LC50/rat/ 4 h: 658 mg/l			!
	How is the Product / Substance Used	Quantity	Time Task takes & Frequency	Persons Exposed
brazing used to join copp Only competent trained e containing refrigerant gas	are used in conjunction with MAPP Gas hand torch, to provide heat source in the restriction of the service pipework and/or equipment and/or components to form service pipework and/or equipment and the service pipework and/or equipment and service pipework and/or equipment and service pipework and/or equipment and/or equip	Cylinder size 453grams	Time taken to carry out brazing works i which this product i used varies betwee 30mins – 2 hours	n JGR Engineering is Personnel

Working Methods & Controls

Only competent trained engineers holding C&G 2079 F-gas Certificate can work on systems containing refrigerant gases and only those holding BRA level 3 / CITB Brazing Certificate, can work on systems containing refrigerant gases and carry out MAPP Gas brazing works.

When working with MAPP Gas, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Open cylinder valves slowly to prevent shock pressure and beware of static charges, which may build up sufficiently to ignite fuel gas.

Only use suitable specified equipment which is suitable for this product, supply pressure & temperature and ensure all MAPP Gas equipment, such as cylinder and torches are serviced, maintained & inspected regularly.

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

As with all High Pressure gases / liquids, avoid risk of High Pressure being directed at skin / eyes.

2kg Dry Powder Fire Extinguisher to be on hand at all times when gas is being use.

Personal Protective Equipment







When handling / working with, this product operatives are to use the following equipment –

- Gloves Protective gloves BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN 345
- Overalls / Long sleeved clothing

Ensure adequate ventilation

Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be dangerous, such as confined spaces, sewers,



								Heal	th & Safety
Accidental Release	e / Spillage				Fire Fight	ing			
 If safe to do so – Try to stop release and even ensure adequate air vention. Extinguish all flames and sources. 	lation eliminate all ignition	rupture / e If involved i known fire	n a fire, if possible stop flow extinguishers can be used to	of product & move cool cylinders, use	away from cy extinguishir	rlinder & cool from a png media appropriat	protected po te to the sur	osition if safe to c rounding condit	do so — All tions
Prevent from entering any plac accumulation could be danger spaces, as it can asphyxiate in	ous, such as confined	Advise Fire	nguish a leaking gas flamo e Fighters / Emergency Se sed gas is subjected to hic	rvices that there ar	-	-	_	-	
Wear self-contained breathing entering area unless atmosphe safe	apparatus when	Use of self	-contained breathing appa , such as confined spaces	ratus may be requi		ed spaces or any p	lace where	its accumulation	n could be
Exposure Monitorin	g & Health Surveillance				Di	sposal			
Should not be released into the Do not smoke while handling properties. No Health Surveillance requires	product	ot .	Do not discharge gas into any place where its accumulation could be dangerous, such as conlined spaces					when empty.	
First A	id			Sa	fe Handling	& Storage			
Skin – Take off all contaminate and wash with soap and water If irritation develops and persis immerse area in luke warm was get medical assistance. Eyes – Hold eyelids apart and water for at least 15 minutes. If present and easy to do and get Inhalation – Remove from expression and/or oxygen may physician or poison control cerulagestion - Ingestion is not coroute of exposure	sts. If frostbite occurs ater (<i>not hot water</i>) and I flush eyes with plenty of Remove contact lenses, is the medical assistance. The contact lenses is the medical assistance. The contact lenses is the medical assistance. The contact lenses is the necessary. Call a contre immediately	# Ke # Err Ne Storag M/ # Ke Sa Se Transg All CC All Ve	 Ensure adequate ventilation in all work areas Never attempt to drag, slide or lift cylinder by its valve or cap Storage MAPP Pro Gas should only be stored in manufacturers / suppliers cylinders with valves tightly closed when not safeguard generally against damage Secure within a secure cage / compound with adequate ventilation and warning notices when not in use Segregated from oxidant gases and other oxidants in store Transport All vehicles must display the Compressed Gas symbol when transporting compressed gases COSHH assessment to be held in vehicle All cylinders MUST be suitably secured / restrained in the rear of the vehicle to prevent movement during trantile vehicle should have a secure solid bulkhead to protect the driver 						n not in use oxidants and
			Assessment I	Rating Details					
Level of R	isk with Control Meas	sures in p	olace –	LOW	Х	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date -	March 20	18	Review Da	ate -	March	n 2020



	COSHH Assessment Fo	rm		
Product	Propane (Turbogas)	Product Pi	cture	Hazard
Manufacturer	Energas Ltd, Westmorland Street, Hull HU2 0HX			∧
Composition	Propene EINECS No. 200-827-9 100%	PROPANE		
Workplace Exposure Limit	Propane TVL – TWA 2500 ppm	Without 14 to 400		!
	How is the Product / Substance Used	Quantity	Time Task takes & Frequency	Persons Exposed
used to join copper tubin Only competent trained containing refrigerant ga	nders are used in conjunction with hand torch, to provide heat source in brazing g and/or components to form service pipework and/or equipment engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems sees and only those holding BRA level 3 / CITB Brazing Certificate, can work on gerant gases and carry out Propane (Turbogas) brazing works	Cylinder size 453grams	Time taken to carry out brazing works in which this product is used varies between 30mins – 2 hours	JGR Engineering Personnel

Working Methods & Controls

Only competent trained engineers holding C&G 2079 F-gas Certificate can work on systems containing refrigerant gases and only those holding BRA level 3 / CITB Brazing Certificate, can work on systems containing refrigerant gases and carry out MAPP Gas brazing works.

When working with Propane (Turbogas), engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Open cylinder valves slowly to prevent shock pressure and beware of static charges, which may build up sufficiently to ignite fuel gas.

Only use suitable specified equipment which is suitable for this product, supply pressure & temperature and ensure all Propane (Turbogas) equipment, such as cylinder and torches are serviced, maintained & inspected regularly.

Inspect cylinder valves for damage prior to use, label & return any damaged cylinders to the supplier

As with all High Pressure gases / liquids, avoid risk of High Pressure being directed at skin / eyes.

2kg Dry Powder Fire Extinguisher to be on hand at all times when gas is being use.

Personal Protective Equipment







When handling / working with, this product operatives are to use the following equipment –

- Gloves Protective gloves BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN 345
- Overalls / Long sleeved clothing

Ensure adequate ventilation

Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be dangerous, such as confined spaces, sewers,



								Heal	th & Safety
Accidental Relea	se / Spillage				Fire Figh	ting			
If safe to do so – Try to stop release and e ensure adequate air vent Extinguish all flames and	evacuate area and	rupture /	(Turbogas) is extremely (explode d in a fire, if possible stop flo	ow of product & move	away from	cylinder & cool from	a protected p	position if safe to	do so – All
sources			e extinguishers can be used	•	•	•		•	
Prevent from entering any pla	ice where its		ktinguish a leaking gas flar		,	•		,	
accumulation could be dange spaces, as it can asphyxiate	n high concentrations.	if the rele	ire Fighters / Emergency S eased gas is subjected to h	nigh temperatures	•	•			
Wear self-contained breathing entering area unless atmosph	9		elf-contained breathing appus, such as confined space			ined spaces or any	place where	e its accumulati	on could be
Exposure Monitori	ng & Health Surveillance				Di	sposal			
Should not be released into the			Use the cylinder until em is flammable and explos		e of any non	-empty cylinders; e	mpty cylinde	ers have residua	al vapour that
Do not smoke while handling No Health Surveillance require	•		Cylinders should be emp	otied & returned to a	a hazardous	waste collection po	oint. Do not p	puncture even v	vhen empty.
No nealth Surveillance requir	ed wrille using this product		Do not discharge gas into any place where its accumulation could be dangerous, such as confined spaces						
First A	Aid	Safe Handling & Storage							
Skin – Take off all contamina and wash with soap and wate If irritation develops and pers immerse area in luke warm water for at least 15 minutes. present and easy to do and gard Inhalation – Remove from expression and/or oxygen maphysician or poison control control of the state of exposure	ists. If frostbite occurs rater (<i>not hot water</i>) and d flush eyes with plenty of Remove contact lenses, if et medical assistance. Exposure, lie down. Move to rand at rest. Artificial y be necessary. Call a rentre immediately	Handling Keep away from heat and ignition sources (including static discharges) and never smoke while handling product Ensure adequate ventilation in all work areas Never attempt to drag, slide or lift cylinder by its valve or cap Storage Propane (Turbogas) should only be stored in manufacturers/suppliers cylinder with valves tightly closed when not Kept cylinders upright and stable in a cool (below 50°c), well-ventilated area away from heat sources and oxidants safeguard generally against damage Secure within a secure cage / compound with adequate ventilation and warning notices when not in use Segregated from oxidant gases and other oxidants in store Transport All vehicles must display the Compressed Gas symbol when transporting compressed gases COSHH assessment to be held in vehicle All cylinders MUST be suitably secured / restrained in the rear of the vehicle to prevent movement during transport Vehicle should have a secure solid bulkhead to protect the driver							nen not in use oxidants and
			Assessment I	Rating Details					
Level of F	Risk with Control Measu	ıres in p	olace –	LOW	Х	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date -	March 20	18	Review Da	ate -	March	2020

Template Status – JGR-H&S-March2018 Page 47 of 79



	COSHH Assessment Fo	rm					
Product	Class O Armaflex	Prod	luct Picture		Hazard		
Manufacturer	Armacell UK Ltd, Mars Street, Oldham, Lancashire, OL9 6LY						
Composition	Based on synthetic rubber with additives for fire performance, flexibility and UV stabilisation				No Hazard Identified on Armacell MSDS		
Workplace Exposure Limit	None			•			
	How is the Product / Substance Used	Quantity		Time Task takes & Frequency		Persons Exposed	
protection against conder A highly efficient method conservation and conden zero which means an env Can be used by JGR eng	flexible, closed cell, elastomeric, nitrile rubber insulation that offers reliable insation and effectively prevents energy loss. of insulating refrigeration & air conditioning pipe work for frost protection, energy isation control. Armaflex is dust free, fibre free and CFC free with an ODP of vironmentally friendly product. gineering personnel, however only competent trained engineers, holding C&G an carry out works on systems containing refrigerant gases.	Each section	2m long du	nis produc sed throug ration of t whilst usin urmaflex p	ghout the the works ng other	JGR Engineering Personnel	
	Working Methods & Controls Personal Protective Equipment						

Can be used by JGR engineering personnel, however only competent trained engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems containing refrigerant gases.

gases

When working with Class O Armaflex , engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

In case of fire do not breathe fumes







When working with Class O Armaflex, operative are to use the following equipment –

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing



								пеан	h & Safet
Accidental Rele	ease / Spillage	е				Fire Fighti	ng		
Initial Action – Non Hazardous						r Spray or Dry Pow			
Clean-up Procedure - Solid non-hazardous	material			with all organic ma	aterials, the	under normal condit e will be carbon dio uantities of other ga	xide / carbo	on monoxide and	water
Exposure Monitoring & Health Surveill	ance				Dispo	sal			
None required due to its non-hazardous state	Р	Product can	be disposed of as no	rmal industrial was	te				
No long term exposure hazards identified			ormation - Degrades global warming, or c				e gases wh	nich will damage	the ozone
First Aid					Safe Ha	indling & Storage			
Skin – Not Harmful									
Eyes – Under normal circumstances any dust material is cut would not be airborne	created when	n the	Handling ConditionThere are no s	ons pecial precautions	required				
If any dust particles become lodged in the eye flush eyes with eye wash solution or plenty of 15 minutes and obtain medical assistance, if r	clean water fo		Storage Condition						
Inhalation - Under normal circumstances any material is cut would not be airborne	dust created	when the		in clean, dry rooms mperature (0 °C - 3		nal conditions with r	espect to hu	umidity (50 - 70	%) and
Ingestion - If swallowed, DO NOT induce von quantities there should be no adverse effects. been swallowed, observe patient's condition for medical attention in the unlikely event that the	If large quanti or up to 48hrs.	ities have . Seek	Transport Conditi There are no s	ons pecial precautions	required				
			Assessment F	Rating Details					
Level of Risk with Cont	rol Measure	s in place	-	LOW	Х	MEDIUM		HIGH	
Assessor - Trevor	Foster		Date -	March 20	18	Review Da	te -	March	2020

Template Status – JGR-H&S-March2018 Page 49 of 79



COSHH Assessment Form											
Product	Armaflex 520 Adhesive	Prod	luct Picture		Hazard						
Manufacturer	Armacell UK Ltd, Mars Street, Oldham, Lancashire, OL9 6LY										
Composition	Contains the following components – Hydrocarbons C6-C7 isoalkanes – EC no. 926-605-8 Percentage 30 – 50%	Arma									
Workplace Exposure Limit	Ethyl Acetate – CAS no. 141-78-6 EC no. 205-500-4 Percentage 10 – 30% Acetone – CAS no. 67-64-1 EC no. 200-662-2 Percentage 10 – 30% Butanone – CAS no. 78-93-3 EC no. 201-159-0 Percentage 3 – 5% Propan-2-ol – CAS no. 67-63-0 EC no. 200-661-7 Percentage 1 – 5% 4-tert-butylphenol – CAS no. 98-54-4 EC no. 202-679-0 Percentage 0.1 – 1% Colophony – CAS no. 8050-09-7 EC no. 232-475-7 Percentage 0.5 – 1%	Carm	Armaflex 520 acc								
	How is the Product / Substance Used	Quanti	V	sk takes & quency	Persons Exposed						
used in Commercial / Ind Product can be used by a	s used as an adhesive on Class O armaflex is used to insulate copper pipework fustrial Air Conditioning & Refrigeration Systems. all JGR engineering personnel, however only competent trained engineers, Certificate, can carry out works on systems containing refrigerant gases.	Container siz between 0.5lt	e varies rs – 1ltr used thro duration whilst u	duct can be bughout the of the works using other exproducts	JGR Engineering Personnel						

Working Methods & Controls

Can be used by JGR engineering personnel, however only competent trained engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems containing refrigerant gases.

When working with Armaflex 520 Adhesive, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Ensure adequate ventilation in all work areas, as this product may cause drowsiness or dizziness

Shake and stir well before use.

Clean all surfaces and the surface of the Armaflex with Armaflex Cleaner

Apply thinly to the places to be bonded with a brush or spatula.

Where required press together with force during the contact adhesion time.

Armaflex 520 Adhesive is highly flammable in liquid and vapour form

Personal Protective Equipment







When working with Armaflex 520 Adhesive, operative are to use the following equipment –

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing



Do not eat or drink whilst handling this product No Health Surveillance required while using this product First Aid Safe Handling & Storage Handling • Keep away from heat and ignition sources, including sparks and never smoke while handling product • Ensure adequate ventilation in all work areas and avoid breathing in vapours Take off all contaminated clothing and wash with soap and warm water. If irritation develops and persists obtain medical Wash hands with soap and warm water before breaks and after working with product Wash hands with soap and warm water before breaks and after working with product								Heal	th & Safet
It involved in a fire, it possible stop flow of product & move away from container & cool from a protected position it safe to so — All known fire extinguishers can be used cool cylinders, use extinguishing media appropriate to the surrounding conditions — Avoid run off into drains, sewers and watercourses. Cher Actions — Avoid run off into drains, sewers and watercourses.	Accidental Release / Spillage)			Fire	Fighting			
Do not smoke while handling this product Do not eat or drink whilst handling this product No Health Surveillance required while using this product First Aid Safe Handling & Storage Handling • Keep away from heat and ignition sources, including sparks and never smoke while handling product environment. Skin – Frequent or prolonged contact may irritate the skin and/or cause dermatitis Take off all contaminated clothing and wash with soap and warm water. If irritation develops and persists obtain medical assistance, if required. Eyes – Can cause serious damage if splashed in eyes Hold eyelids apart and flush eyes with eye wash solution or plenty of clean water for at least 15 minutes. Remove contact lenses; if present and easy to do, and obtain medical advice linsalition – Remove from exposure to place with fresh air and lie down. Obtain medical assistance, if required Ingestion - If swallowed, DO NOT induce vomiting and obtain medical assistance. Do not discharge into the drains, surface waters, ground waters, soil or sub soil. Ecology Information – Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Safe Handling • Keep away from heat and ignition sources, including sparks and never smoke while handling product • Ensure adequate ventilation in all work areas and avoid breathing in vapours • Repeated exposure may cause skin dryness, cracking • May produce an allergic reaction • Wash hands with soap and warm water before breaks and after working with product. Storage • Quantity of Armaflex 520 Adhesive should be kept to a minimum • Product should only be stored in manufacturers / suppliers containers with lid tightly closed when not in use Kept containers and stable in a cool (below 50°c), well-ventilated area away from heat sources Segregated and avoid contact with oxidising agents and strong acids, as it can react violently • Do not store with explosive substances or spontaneously combusting substances Transport • COSHH assessment to be held	and ensure the use of PPE for clean up Clean-up Procedure – Absorb spill with inert of the dry sand or earth) then place in a sealed contact of the Actions – Avoid run off into drains, sew	material (e.g. iner	If involved in a fire, if possib so – All known fire extinguis conditions – Do not use f . In the event of fire carbon Use of self-contained brea	ole stop flow of productions can be used to a signification of the stop of the	ct & move avecool cylinde er jet onoxide gas ay be require	way from container & rs, use extinguishing es could be given or could in confined space	g media app off	propriate to the	surrounding
Do not eat or drink whilst handling this product No Health Surveillance required while using this product First Aid Safe Handling & Storage Handling Keep away from heat and ignition sources, including sparks and never smoke while handling product Ensure adequate ventilation in all work areas and avoid breathing in vapours Repeated exposure may cause skin dryness, cracking May produce an allergic reaction Wash hands with soap and warm water. If irritation develops and persists obtain medical assistance, if required. Eyes - Can cause serious damage if splashed in eyes Hold eyelids apart and flush eyes with eye wash solution or plenty of clean water for at least 15 minutes. Remove contact lenses, if present and easy to do, and obtain medical advice Inhalation - Remove from exposure to place with fresh air and lie down. Obtain medical assistance, if required Ingestion - If swallowed, DO NOT induce vomiting and obtain medical assistance. Ecology Information - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Safe Handling **Ecep away from heat and ignition sources, including sparks and never smoke while handling product Ensure adequate ventilation in all work areas and avoid breathing in vapours Repeated exposure may cause selects. **Exep away from heat and ignition sources, including sparks and never smoke while handling product **Ensure adequate ventilation in all work areas and avoid breathing in vapours **Repeated exposure may cause selects. **Exep away from heat and ignition sources, including sparks and never smoke while handling product **Ensure adequate ventilation in all work areas and avoid breathing in vapours **Capated avaposure may cause selects. **Capated exposure may cause selects. **Exep away from heat and ignition sources, including sparks and never smoke while handling product **Ensure adequate ventilation in all work areas and avoid breathing in vapours **Capated avaposure may cause skin dryness, cracking **May produce an allerg	Exposure Monitoring & Health Sur	veillance			<u> </u>	isposal			
Skin – Frequent or prolonged contact may irritate the skin and/or cause dermatitis Take off all contaminated clothing and wash with soap and warm water. If irritation develops and persists obtain medical assistance, if required. Eyes – Can cause serious damage if splashed in eyes Hold eyelids apart and flush eyes with eye wash solution or plenty of clean water for at least 15 minutes. Remove contact lenses, if present and easy to do, and obtain medical advice Inhalation – Remove from exposure to place with fresh air and lie down. Obtain medical assistance, if required. Ingestion - If swallowed, DO NOT induce vomiting and obtain medical assistance. Handling • Keep away from heat and ignition sources, including sparks and never smoke while handling product • Ensure adequate ventilation in all work areas and avoid breathing in vapours • Repeated exposure may cause skin dryness, cracking • May produce an allergic reaction • Wash hands with soap and warm water before breaks and after working with product. Storage • Quantity of Armaflex 520 Adhesive should be kept to a minimum • Product should only be stored in manufacturers / suppliers containers with lid tightly closed when not in use Product should only be stored in manufacturers / suppliers containers with lid tightly closed when not in use Product should only be stored in manufacturers / suppliers containers with lid tightly closed when not in use Product should only be stored in manufacturers / suppliers containers with lid tightly closed when not in use Product should only be stored in manufacturers / suppliers containers with lid tightly closed when not in use Product should only be stored in manufacturers / suppliers containers with lid tightly closed when not in use Product should only be stored in manufacturers / suppliers containers with lid tightly closed when not in use Product should be kept to a minimum • Containers must shale in a cool (below 50°0), well-ventilated area away from heat sources • Segregated and avoid contact with oxidising	• ,		Ecology Information		-			ffects in the aqu	uatic
Skin – Frequent or prolonged contact may irritate the skin and/or cause dermatitis Take off all contaminated clothing and wash with soap and warm water. If irritation develops and persists obtain medical assistance, if required. Eyes – Can cause serious damage if splashed in eyes Hold eyelids apart and flush eyes with eye wash solution or plenty of clean water for at least 15 minutes. Remove contact lenses, if present and easy to do, and obtain medical advice Inhalation – Remove from exposure to place with fresh air and lie down. Obtain medical assistance, if required Ingestion - If swallowed, DO NOT induce vomiting and obtain medical assistance. **Keep away from heat and ignition sources, including sparks and never smoke while handling product **Ensure adequate ventilation in all work areas and avoid breathing in vapours **Repeated exposure may cause skin dryness, cracking May produce an allergic reaction **Wash hands with soap and warm water before breaks and after working with product. **Storage** **Quantity of Armaflex 520 Adhesive should be kept to a minimum **Product should only be stored in manufacturers / suppliers containers with lid tightly closed when not in use Kept containers and stable in a cool (below 50°c), well-ventilated area away from heat sources **Segregated and avoid contact with oxidising agents and strong acids, as it can react violently **Do not store with explosive substances or spontaneously combusting substances **Transport** **COSHH assessment to be held in vehicle **All containers MUST be suitably secured / restrained in the rear of the vehicle to prevent movement during transportation **Vehicle should have a secure solid bulkhead to protect the driver **Vehicle must with a suitable Fire Extinguisher carried on vehicles to combat vehicle fires **Assessment Rating Details** **Level of Risk with Control Measures in place — LOW X MEDIUM HIGH	First Aid				Safe Hand	lling & Storage			
Level of Risk with Control Measures in place – LOW X MEDIUM HIGH	and/or cause dermatitis Take off all contaminated clothing and wash w warm water. If irritation develops and persists of assistance, if required. Eyes – Can cause serious damage if splashed Hold eyelids apart and flush eyes with eye was plenty of clean water for at least 15 minutes. R lenses, if present and easy to do, and obtain minutes in the lation – Remove from exposure to place will be down. Obtain medical assistance, if required lingestion - If swallowed, DO NOT induce vom	ith soap and obtain medical I in eyes sh solution or emove contact nedical advice with fresh air and	 Keep away from head Ensure adequate very Repeated exposure May produce an alled Wash hands with some Wash hands with some Wash hands with some Reproduct should only Rept containers and Rept Containers and Rept Containers and Rept Containers with expension Rept Cosh Hassessmen All containers MUS transportation Vehicle should have 	entilation in all work may cause skin draggic reaction pap and warm wate to 520 Adhesive show the stored in manual stable in a cool (but contact with oxical contact w	areas and a yness, crack r before brea uld be kept facturers / si elow 50°c), v dising agents or spontance cle ed / restraine	avoid breathing in vising aks and after working to a minimum uppliers containers well-ventilated area is and strong acids, eously combusting ed in the rear of the	apours ng with prod with lid tight away from as it can rea substances vehicle to p	uct. Ily closed when heat sources act violently	not in use
	Lovel of Biok with Contr	ol Moscows :		1	v	MEDILINA		Шон	
			•				nto -		2020



COSHH Assessment Form									
Product	Armaflex Cleaner	Proc	luct Picture			Hazard			
Manufacturer	Armacell UK Ltd, Mars Street, Oldham, Lancashire, OL9 6LY								
Composition	Contains the following components – Ethyl-acetate – CAS no - 141-78-6 EC no. 205-500-4 Percentage – 70 - 90% Butanone – CAS no – 78-93-3 EC no. 201-159-0 Percentage – 10 - 30% Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane – EC no. 926-605-8 Percentage – 5 - 10%		Clearer For Cleare		(!				
Workplace Exposure Limit	Exposure limit UK – Ethyl-acetate – STEL - 400ml/m³ TWA - 200ml/m³ Butanone – STEL - 300ml/m³ TWA - 200ml/m³ Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane – STEL - 300ml/m³ TWA - 200ml/m³		armace!!						
	How is the Product / Substance Used	Quanti	ty	Fime Tasl Frequ		Persons Exposed			
Armaflex cleaner is used Armaflex adhesives or A brushes and tools. Can be used by JGR eng 2079 F-gas Certificate, c	Container s 0.5lt - 1	size – u Itr du	This produ used throu	ict can be ghout the the works ng other	JGR Engineering Personnel				
	Working Methods & Controls Personal Protective Equipment								

Can be used by JGR engineering personnel, however only competent trained engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems containing refrigerant gases. gases

When working with Armaflex Cleaner, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Ensure adequate ventilation in all work areas, as this product may cause drowsiness or dizziness

Shake and stir well before use.

Ensure all surfaces are free from debris and apply thinly to the places to be cleaned with a brush or spatula.

Armaflex Cleaner is highly flammable







When working with Armaflex Cleaner, operative are to use the following equipment –

- Gloves Protective gloves BS EN 388, BS EN 511
- Safety glasses / goggles BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long sleeved clothing



								Heal	th & Safety	
Accidental Rele	ease / Spillage				Fire Fi	ghting				
Initial Action – Remove all po Consider evacuation of the imruse of PPE for clean up Clean-up Procedure – Absorb dry sand or earth) then place in Other Actions – Avoid run off watercourses.	mediate area and ensure the pospill with inert material (e.g. n a sealed container	If involve — All kno condition In the ev	ex Cleaner is highly and in a fire, if possible so own fire extinguishers cans — Do not use high event of fire carbon dioxidelli-contained breathing gerous, such as confin	top flow of product 8 an be used to cool c a powered water je xide / carbon mono ng apparatus may b	ylinders, use et xide gases o e required in	extinguishing med could be given off a confined spaces of	a appropria	te to the surrou	nding	
Exposure Monitori	ing & Health Surveillance					Disposal				
Do not smoke while handling the Do not eat or drink whilst hand No Health Surveillance require	lling this product		Do not discharge into Ecology Informatio environment.					effects in the a	quatic	
·	First Aid				Safe I	Handling & Storag	e			
Skin – May be irritant to sensit may irritate the skin & cause do Remove contaminated clothing attention if irritation develops of Eyes – Splashes or spray mist Remove contact lenses, irrigat least 15 minutes, holding the element of the sepecially when used in restrict Remove to fresh air. Keep the Mouth and seek medical attention Ingestion - If accidentally swan obtain medical attention	ermatitis g. Wash with soap and water. or persists. It may cause irritation the copiously with clean, fresh veyelids apart and seek medical these e.g. nausea, headache & voted areas patient warm and at rest. Give	Get medic vater for a advice. omiting	 Keep away from heat and ignition sources, including sparks and <i>never</i> smoke while handling product. Ensure adequate ventilation in all work areas and avoid breathing in vapours Repeated exposure may cause skin dryness, cracking Wash hands with soap and warm water before breaks and after working with product. Storage Quantity of Armaflex Cleaner should be kept to a minimum Product should only be stored in manufacturers / suppliers containers with lid tightly closed when not in use Kept containers and stable in a cool (below 50°c), well-ventilated area away from direct sunlight and heat sources Transport COSHH assessment to be held in vehicle All containers <i>MUST</i> be suitably secured / restrained in the rear of the vehicle to prevent movement during transportation 							
Loyal of D	iak with Cantral Massure	. in mic -		Rating Details	V	MEDIUM		IIICII	<u> </u>	
	isk with Control Measures	s in piac		LOW	X	MEDIUM	1 -	HIGH	0000	
Assessor -	Trevor Foster		Date -	March 20	18	Review Da	ate -	March	า 2020	



					nealth & Salety
	COSHH Assessment Fo	rm			
Product	Armafinish 99	Pro	duct Pictu	ire	Hazard
Manufacturer	Armacell UK Ltd, Mars Street, Oldham, Lancashire, OL9 6LY				
	Contains the following components –				¥
Composition	Tris(methylphenyl) phosphate – CAS No -1330-78-5 >5% - <100%				
	1,2 Benzisothiazol-3(2H)-one – CAS 2634-33-5 < 0.5%				
Workplace Exposure Limit	None				
	How is the Product / Substance Used	Quanti	ity	Time Task takes & Frequency	Persons Exposed
insulation materials againmaintains the flexibility, r	based coating applied to provide protection of Armaflex flexible thermal nst sunlight, UV radiation and chemical attack. The coating, when fully cured, esistance to water vapour and fire performance of the Armaflex material.	Container 1ltr - 2.5		This product can be used throughout the duration of the works	JGR Engineering Personnel
	gineering personnel, however only competent trained engineers, holding C&G an carry out works on systems containing refrigerant gases.			whilst using other Armaflex products	i craoriner
	Working Methods & Controls	•		Personal Protective	Equipment
	gineering personnel, however only competent trained engineers, holding C&G 207 works on systems containing refrigerant gases.	9 F-gas		S (MIN)	

When working with Armafinish 99, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Ensure adequate ventilation in all work areas, as this product may cause drowsiness or dizziness

Clean all surfaces and the surface of the Armaflex with Armaflex Cleaner

Apply thinly with a brush and leave to dry

Once dry, additional coats of Armafinish 99 can be applied to provide further protection







When working with Armafinish 99, operative are to use the following equipment -

- Gloves Protective gloves BS EN 374
- Safety glasses BS EN 166-349B
- Overalls / Long Sleeved Top



								Healt	h & Safety
Acc	idental Release / Spillage					Fire Fighting			
Initial Action - Clear immedi	ate area and ensure the use of	PPE for cl	Extinguishing Media – Water Spray, Foam, Carbon Dioxide or Dry Powder						
then place in a sealed contain	rb spill with inert material (e.g. oner f into drains, sewers and water	•	organ small If invo	rds – Material is stal ic materials, there w quantities of other g lved in a fire, the follo gen, Phosphorus oxid	rill be carbor ases, deper owing gasses	n dioxide / carbon m ndent upon the heat	onoxide and of the fire	d water evolved	together with
Exposure Monitorii	ng & Health Surveillance				Di	sposal			
Do not smoke while handling Do not eat or drink whilst han No Health Surveillance requir	dling this product		y toxic to aquatic life discharge into the si						
	First Aid				Safe Ha	indling & Storage			
and/or cause dermatitis Take off all contaminated clot water. If irritation develops an required. Eyes – Can cause serious da Hold eyelids apart and flush e clean water for at least 15 mir and easy to do, and obtain me	eyes with eye wash solution or proutes. Remove contact lenses, edical advice	 Avoid contact with the skin, eyes and clothing – Wash hands thoroughly with soap and water, aft handling product Storage Armafinish 99 should only be stored in manufacturers / suppliers containers with lid / cap tightly of when not in use Store in a cool, well-ventilated area. Keep container tightly closed. Kept container upright and stable and store in a cool dry ventilated area away from sources of ignificant and humidity Keep away from oxidising agents Transport CoSHH assessment to be held in vehicle 							otly closed of ignition,
Lavel of F	liek with Central Massures	in place		Rating Details LOW	х	MEDIUM		HIGH	
Assessor -	Trevor Foster	пі ріасе	Date -	March 20	l	Review Da	nte -	March	2020
7,000001	1104011 03101		Date	I Warding	10	NOTICW DO		iviaion	2020

Template Status – JGR-H&S-March2018 Page 55 of 79



	COSHH Assessment Form									
Product	Emkarate RL32 Refrigeration Oil	Proc	duct Pictu	re		Hazard				
Manufacturer	CPI Fluid Engineering (A Division of Lubrizol Corp)		EFRIGERATION							
Composition	Based on synthetic rubber with additives for fire performance, flexibility and UV stabilisation		HICANT			ard Identified on CPI Ingineering MSDS				
Workplace Exposure Limit	N/A		EMKARATE R. 12h stem							
	How is the Product / Substance Used	Quanti	ty	Time Tas Frequ	k takes & lency	Persons Exposed				
	etic polyester (POE) lubricant formulated specifically for use in refrigeration and sors using HFC refrigerants.	1 and 5 litre co	antainara	This produ		JGR Engineering				
Only competent trained e containing refrigerant oils	engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems s.	i and 5 little co	Jillailleis		the works	Personnel				
	Working Methods & Controls Personal Protective Equipment									

Only competent trained engineers holding C&G 2079 F-gas Certificate can work on systems containing refrigerant gases

When working with Emkarate RL 32 Refrigeration Oil, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Ensure correct PPE (Personal Protective Equipment) is as detailed in this assessment

Ensure only use specified tools and equipment which is suitable for working on refrigeration and air-conditioning systems are used and are serviced, maintained & inspected regularly

Refrigerant Oils only to be used in a well-ventilated areas

Never overfill systems with refrigerant oil







When working with Emkarate RL32 Refrigeration Oil, operative are to use the following equipment –

- Gloves Protective gloves BS EN 511
- Safety glasses BS EN 166-349B
- Safety Footwear BS EN 345
- Overalls / Long Sleeved Top



							Heal	th & Safety	
Accidental Re	elease / Spillage			Fire	Fighting				
Initial Action – Consider evac and ensure the use of PPE for		If involved in a fire, if possil do so – All known fire extin surrounding conditions –	guishers can be used	to cool cylin	ders, use extinguish	ning media	appropriate to the		
Clean-up Procedure - Absor	b spill with inert material (e.g.	In the event of fire carbon	dioxide / carbon me	onoxide gas	es could be given o	ff			
dry sand or earth) then place i		Use of self-contained bre could be dangerous, such				es or any pl	ace where its a	ccumulation	
Exposure Monitorin	g & Health Surveillance			Di	sposal				
Do not smoke while handling t	his product	Product should NOT be	discharged to envir	onment or w	here its accumulati	on could be	dangerous		
Do not eat or drink whilst hand	dling this product	All waste oils should be				ansfer Note	system and me	easured into a	
No Health Surveillance require	ed while using this product	suitable container and p	eassed to a specialis	t organisation	on for disposal.				
F	irst Aid		Safe Handling & Storage						
skin contact. On contact remove contamina with soap and warm water. Se discomfort occurs Eyes – Any material that containmediately. Hold eyelids apart and flush eyof clean water for at least 15 n present and easy to do, and o	person to fresh air if adverse	 Keep away from product Ensure adequate Repeated exposulting Avoid contact with breaks and after to be contact. Storage Quantity of Emkating Product should on use Kept container up moisture Segregate and avairansport COSHH assessman All containers MU 	 Reep away from heat and ignition sources, such as heat, sparks and flames and never smoke while reproduct Ensure adequate ventilation in all work areas Repeated exposure may cause skin dryness, cracking Avoid contact with the skin, eyes and clothing – Wash hands thoroughly with soap and warm water, be breaks and after working with product. Storage Quantity of Emkarate RL32 Refrigeration Oil should be kept to a minimum Product should only be stored in manufacturers / suppliers containers with lid / cap tightly closed when use Kept container upright and stable and store in a cool dry ventilated area away from sources of extreme moisture Segregate and avoid contact with oxidising agents and strong acids Transport COSHH assessment to be held in vehicle 						
medical assistance.	TO THOUSE VOITHING AND OBTAI	 Vehicle should have 	ave a secure solid b a suitable Fire Exti			combat veh	icle fires		
		Assessment	Rating Details						
Level of R	isk with Control Measures	in place -	LOW	Х	MEDIUM		HIGH		
Assessor -	Trevor Foster	Date -	March 20	18	Review Da	ite -	March	n 2020	



How is the Product / Substance Used HARP PAG 100 Co² Refrigeration lubricant is synthetic lubricant formulated specifically for use in efrigeration systems. Only competent trained engineers, holding all relevant qualifications to work on Co² and HFC refrigeration systems such as C&G 2079 F-gas Certificate, can carry out works on systems containing refrigerant oils. Working Methods & Controls Personal Protective Equipment When working with HARP PAG 100 Co² Refrigeration Lubricant, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments. Ensure correct PPE (Personal Protective Equipment) is as detailed in this assessment Ensure only use specified tools and equipment which is suitable for working on refrigeration and air-conditioning systems are used and are serviced, maintained & inspected regularly Personal Protective Equipment When working with HARP PAG 100 Co² Refrigeration Lubricant, engineers must always carry out works following all cubricant, operative are to use the following equipment before the following equipment are used and are serviced, maintained & inspected regularly Persons Exposed This product can be used throughout the duration of the works This product can be used throughout the duration of the works Personal Protective Equipment When working with HARP PAG 100 Co² Refrigeration Lubricant, operative are to use the following equipment - Gloves - Protective gloves Safety goggles / glasses - BS EN 166 Overalls / Long Sleeved Top		COSHH Assessment Fo	rm							
Composition Polyalkylene Glycol with fluorescent UV Dye Workplace Exposure Limit How is the Product / Substance Used Quantity Time Task takes & Frequency ARP PAG 100 Co² Refrigeration lubricant is synthetic lubricant formulated specifically for use in effigeration systems. Only competent trained engineers, holding all relevant qualifications to work on Co² and HFC refrigeration systems such as C&G 2079 F-gas Certificate, can carry out works on systems containing refrigerant oils. Working Methods & Controls Personal Protective Equipment When working with HARP PAG 100 Co² Refrigeration Lubricant, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk issessments. Ensure correct PPE (Personal Protective Equipment) is as detailed in this assessment Ensure correct PPE (Personal Protective Equipment) is as detailed in this assessment Ensure correct PPE (Personal Protective Equipment) is as detailed for working on refrigeration and air-conditioning systems re used and are serviced, maintained & inspected regularly Persons Exposer This product can be used throughout the duration of the works Personal Protective Equipment When working with HARP PAG 100 Co² Refrigeration Lubricant, operative are to use the following equipment— Gloves - Protective gloves Safety goggles / glasses - BS EN 166 Overalls / Long Sleeved Top	Product	HARP PAG 100 Refrigeration lubricant	Proc	duct Pictu	re	Hazard				
Morkplace Exposure Limit N/A	Manufacturer	HARP International Ltd, Gellihirion Ind Est, Pontypridd, CF37 5SX				^				
How is the Product / Substance Used How is the Product / Substance Used ARP PAG 100 Co² Refrigeration lubricant is synthetic lubricant formulated specifically for use in efrigeration systems. Frequency This product can be used throughout the duration of the works Working Methods & Controls Working Methods & Controls Personal Protective Equipment When working with HARP PAG 100 Co² Refrigeration Lubricant, engineers must always carry out works following all relevant qualifications to work on Co² and HFC refrigeration systems such as C&G 2079 F-gas Certificate, can carry out works on systems containing refrigerant oils When working with HARP PAG 100 Co² Refrigeration Lubricant, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk issessments. Finsure correct PPE (Personal Protective Equipment) is as detailed in this assessment Finsure only use specified tools and equipment which is suitable for working on refrigeration and air-conditioning systems are used and are serviced, maintained & inspected regularly How is the Product / Substance Specifically for use in efficiently for use in each following all three containers Output This product can be used throughout the duration of the works This product can be used throughout the duration of the works Personal Protective Equipment When working with HARP PAG 100 Co² Refrigeration Lubricant, operative are to use the following equipment— Gloves - Protective gloves Safety goggles / glasses - BS EN 166 Solves - Protective Groves Safety goggles / glasses - BS EN 166 Overalls / Long Sleeved Top	Composition	Polyalkylene Glycol with fluorescent UV Dye								
HARP PAG 100 Co² Refrigeration lubricant is synthetic lubricant formulated specifically for use in efrigeration systems. Only competent trained engineers, holding all relevant qualifications to work on Co² and HFC refrigeration cystems such as C&G 2079 F-gas Certificate, can carry out works on systems containing refrigerant oils. Working Methods & Controls Personal Protective Equipment Only competent trained engineers, holding all relevant qualifications to work on Co² and HFC refrigeration systems such as C&G 2079 F-gas Certificate, can carry out works on systems containing refrigerant oils Only competent trained engineers, holding all relevant qualifications to work on Co² and HFC refrigeration systems such as C&G 2079 F-gas Certificate, can carry out works on systems containing refrigerant oils When working with HARP PAG 100 Co² Refrigeration Lubricant, engineers must always carry out works following all sassessments. Ensure correct PPE (Personal Protective Equipment) is as detailed in this assessment Ensure only use specified tools and equipment which is suitable for working on refrigeration and air-conditioning systems are used and are serviced, maintained & inspected regularly Personal Protective Equipment This product can be used throughout the duration of the works This product can be used throughout the duration of the works This product can be used throughout the duration of the works This product can be used throughout the duration of the works This product can be used throughout the duration of the works This product can be used throughout the duration of the works This product can be used throughout the duration of the works This product can be used throughout the duration of the works This product can be used throughout the duration of the works This product can be used throughout the duration of the works This product can be used throughout the duration of the works This product can be used throughout the duration of the works This product can be used throughout the duration	Workplace Exposure Limit N/A									
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Only competent trained engineers, holding all relevant qualifications to work on Co² and HFC refrigeration systems such as C&G 2079 F-gas Certificate, can carry out works on systems containing refrigerant oils. Working Methods & Controls Personal Protective Equipment Only competent trained engineers, holding all relevant qualifications to work on Co² and HFC refrigeration systems such as C&G 2079 F-gas Certificate, can carry out works on systems containing refrigerant oils When working with HARP PAG 100 Co² Refrigeration Lubricant, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments. Ensure correct PPE (Personal Protective Equipment) is as detailed in this assessment Ensure only use specified tools and equipment which is suitable for working on refrigeration and air-conditioning systems are used and are serviced, maintained & inspected regularly Doubt Co² and HFC refrigeration systems such all trained all relevant JGR Method Statements, Task Procedures and Risk assessment Containers Drainers Dersonal Protective Equipment When working with HARP PAG 100 Co² Refrigeration Lubricant, operative are to use the following equipment— Gloves - Protective gloves Safety goggles / glasses - BS EN 166 Overalls / Long Sleeved Top		rigeration lubricant is synthetic lubricant formulated specifically for use in				JGR Engineering				
Only competent trained engineers, holding all relevant qualifications to work on Co² and HFC refrigeration systems such as C&G 2079 F-gas Certificate, can carry out works on systems containing refrigerant oils When working with HARP PAG 100 Co² Refrigeration Lubricant, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments. Ensure correct PPE (Personal Protective Equipment) is as detailed in this assessment Ensure only use specified tools and equipment which is suitable for working on refrigeration and air-conditioning systems are used and are serviced, maintained & inspected regularly When working with HARP PAG 100 Co² Refrigeration Lubricant, operative are to use the following equipment - Gloves - Protective gloves Safety goggles / glasses - BS EN 166 Overalls / Long Sleeved Top			contain	ers		Personnel				
When working with HARP PAG 100 Co² Refrigeration Lubricant, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk assessments. Ensure correct PPE (Personal Protective Equipment) is as detailed in this assessment Ensure only use specified tools and equipment which is suitable for working on refrigeration and air-conditioning systems are used and are serviced, maintained & inspected regularly When working with HARP PAG 100 Co² Refrigeration Lubricant, operative are to use the following equipment - Gloves - Protective gloves Safety goggles / glasses - BS EN 166 Overalls / Long Sleeved Top		Working Methods & Controls			Personal Protective	Equipment				
Ensure only use specified tools and equipment which is suitable for working on refrigeration and air-conditioning systems are used and are serviced, maintained & inspected regularly Safety goggles / glasses - BS EN 166 Overalls / Long Sleeved Top	as C&G 2079 F-gas Cer When working with HAR control measures and ta Assessments.	ificate, can carry out works on systems containing refrigerant oils PPAG 100 Co ² Refrigeration Lubricant, engineers must always carry out works fol sk methodologies detailed in all relevant JGR Method Statements, Task Procedure	llowing all	Lubrican	t, operative are to use the					
re used and are serviced, maintained & inspected regularly Overalls / Long Sleeved Top	DOLLED CORROCT DDF /Dol									
Refrigerant Oils only to be used in well-ventilated areas Safety Footwear – BS EN 345	•		conditioning systems Safety goggles / glasses - BS EN 166							
	nsure only use specifie		oning systems			EN 100				



								Heal	th & Safety
Accidenta	al Release / Spillage				F	ire Fighting			
Initial Action - Consider eva	e at any one time (approx. 500n cuation of the immediate area	•	if safe to do so - All	if possible stop flow of known fire extinguis anditions – Do not u	hers can be	used to cool cylinder	s, use extin	guishing media	
ensure the use of PPE for cle	•		In the event of fire	smoke, fumes, carb	on monoxid	le gases and aldehy	ydes could l	be given off	
Clean-up Procedure – Abso absorbent materials, dry sand	rb spill with inert material (e.g. d earth) then place in a sealed of	container		ed breathing appara d be dangerous, suc					re its
Exposure Monito	oring & Health Surveillance					Disposal			
Do not smoke while handling	this product		Product should NC	P be discharged to	environmen	t or where its accur	mulation co	uld be dangerou	JS
Do not eat or drink whilst han No Health Surveillance requir	-			ld be disposed of us tainer and passed to				Note system a	nd measured
	First Aid		Safe Handling & Storage						
contact. On contact remove contamina and clean affected area with attention if irritation or discommediately. Eyes – Any material that contimmediately. Hold eyelids apart and flush eclean water for at least 15 min and easy to do, and obtain minutes of the content of the con	tacts the eye should be washed eyes with eye wash solution or p nutes. Remove contact lenses, edical advice d person to fresh air if adverse	e reuse, edical d out blenty of if present effects r others.	 Keep away from heat and ignition sources, such as heat, sparks and flames and <i>never</i> smoke while handling product Ensure adequate ventilation in all work areas Repeated exposure may cause skin dryness, cracking and/or irritation to the eye and respiratory transported and contact with the skin, eyes and clothing – Wash hands thoroughly with soap and warm water before breaks and after working with product. Storage Quantity of HARP PAG 100 Co² Refrigeration Lubricant should be kept to a minimum Product should only be stored in manufacturers / suppliers' containers with lid / cap tightly closed who not in use Kept container upright and stable and store in a cool dry ventilated area away from sources of extra heat Segregate and avoid contact with strong oxidising agents 						
				Rating Details		14EDU :	T	11101:	
	Risk with Control Measures	s in place		LOW	X	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date -	March 20	18	Review Da	ate -	March	h 2020



						ricultii a Galoty
	COSHH Assessment F	orm				
Product	Gel Clear Tablets	Pro	duct Pictu	re		Hazard
Manufacturer	Gel-Clear Ltd, Mill Gap Building, 145 Bolton Rd, Darwen, Lancs. BB3 1DF T 08443303643 www.gel-clear.co.uk Emergency Contact No 111	MENTS		110,000		
Composition	Contains the following components – Urea – EC No. – 200-315-5 CAS No. 57-13-6 Percentage – 50 – 80% Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides – EC No. 269-919-4 CAS No. 68391-01-5 Percentage 15 – 30% Ethanol – EC No. – 200-578-6 CAS No. 64-17-5 Percentage – 1 – 5% Amines C12-18-alkyldimethyl– EC No. – 269-923-6 CAS No. 68391-04-8 Percentage – <1%				Can cau	Danger – Iful if swallowed se skin irritation or eye damage
Workplace Exposure Limit	Ethanol – WEL TWA (mg/m³) – 1920 mg/m³ WEL TWA (ppm) – 1000 ppm					
	How is the Product / Substance Used	Quanti	ty	Time Tas Frequ		Persons Exposed
and slime in refrigeration. The tablets slowly dissol	ve and release into the condensate waste water. The tablets leave a protective an and case plumbing remaining effective for long periods, even once the	Pack of either Tablet 1 tablet used a	S	This produused throuduration of	ighout the	JGR Engineering Personnel
Can be used by JGR en	gineering personnel, with relevant knowledge, training and experience.					
	Working Methods & Controls			Personal	Protective E	Equipment
methodologies detailed i	Clear Tablets, engineers must always carry out works following all control measunall relevant JGR Method Statements, Task Procedures and Risk Assessments of the risks of contact with dirty condensate drain water.		1		un's	

Operatives to be aware of the risks of contact with dirty condensate drain water.

Ensure good ventilation of the work area prior to using product.

Ensure all drains are flowing with no blockages.

Place tablet in condensate drain pan, ensuring it is in contact with the water – Placing the tablet further from the drain outlet will increase the tablets lifespan and keep the pan cleaner for longer.

One tablet is normally installed during a deep clean. The tablet will then slowly dissolve completely, coating everything it comes into contact with while the tablet is dissolving, remaining effective long after the tablet has disappeared







When working with Gel Clear Tablets , operative are to use the following equipment -

- Gloves Protective gloves BS EN 511
- Safety glasses BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long Sleeved Top



	Health & Safety									
Accidenta	al Release / Spillag	ge				Fire Fightin	g			
Initial Action - Ventilate spillage area.	. Avoid contact with	skin, eyes a	and clothing.	Extinguishing Mo	edia – Use e	xtinguishing media a	ppropriate to	o the surroundir	ng conditions	
Clean-up Procedure – Collect spillage section of this CoSHH Assessment	e and dispose of in	accordance	with Disposal	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.						
Exposure Monitoring & Health S	Surveillance				Dispo	sal				
		Product shou	uld naturally dissolve	when in use and r	not require a	ny further actions disp	oosal			
No Exposure Monitoring & Health Surv		Unused prod		returned to the sup	oplier or disp	osed of as hazardous	s waste or ta	aken to a specia	al waste	
required		Packaging sl	ckaging should be disposed / recycled as detailed on the packaging							
						o aquatic organisms into the sewers or th			e effects on	
First Aid Safe Handling & Storage										
Skin – Take off contaminated clothing and wash with plenty of soap and water. If skin irritation occurs, seek medical advice / attention Eyes – Can cause serious eye damage Bathe affected eye with running water for 15mins. Remove contact lenses, if present and easy to do, continue to rinse eye and obtain Medical assistance as soon as possible, for specialist examination. Inhalation - Remove person to fresh air and keep comfortable for breathing. Obtain medical assistance if you feel unwell. Ingestion - Harmful, if swallowed. Rinse mouth. Obtain medical assistance if you feel unwell. Call doctor or poison centre if you feel unwell while handling this product First Aid Safe Handling Ensure good ventilation of the work station. Do not get in eyes, on skin, or on clothing. Wear perportective equipment. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands and other exposed areas thoroughly after handling this product. Storage Gel Clear Tablets should only be stored in manufacturers / suppliers containers with lid / cap ties when not in use Kept container upright and stable and store in a cool dry, well-ventilated area away from source extreme heat, moisture Transport Transport There are no special precautions required							ightly closed			
Level of Risk with	Control Measure	es in place		Rating Details	Х	MEDIUM		HIGH		
Assessor - T	revor Foster		Date -	March 20)18	Review Dat	:e -	Septemb	er 2020	

Template Status – JGR-H&S-March2018 Page 61 of 79



	COSHH Assessment Fo	rm						
Product	Jally Strips	Proc	duct Pictu	re		Hazard		
Manufacturer	Advanced Engineering Ltd, Guardian House, Stroudly Road, Basingstoke, RG24 8NL		- Chypnesis					
Composition	Contains the following components – Amides Coco N-(Hydroxethyl) – EC No. – 268-770-2 CAS 68140-00-1 Percentage 10 - 30% Didecyldimethylammonium Chloride – EC No – 230-525-2 CAS 7173-51-5 Percentage 1 – 10% Ethanol – EC No – 200-578-6 CAS 64-17-5 Percentage 1 – 10% 3-IODO-2-Propynyl Butylcarbamate – EC No – 259-627-5 t Percentage < 1%	Conc Design reliate Since	stally Strips denests tray microbial control used for denesting the strips denested tray microbial control used for denested tray microbial denested tray denested tra					
Workplace Exposure Limit	Ethanol 8hr TWA 1920mg/m³							
	How is the Product / Substance Used	Quanti	ty	Time Tas Frequ		Persons Exposed		
Jally Strips are a condensate tray treatment providing up to twelve months protection from slime build up caused by bacteria, fungi, algae and other micro-organisms. Jally Strips are designed specifically for use on large cooling systems. When used correctly, Jally Strips are safe to use in food preparation and storage areas. Can be used by JGR engineering personnel, with relevant knowledge, training and experience.			Pack of 6 Tablets / Strips This product can b used throughout th duration of the work to be used.		ughout the	JGR Engineering Personnel		
	Working Methods & Controls			Persona	I Protective	Equipment		

When working with Jally Strips tablets / strips, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Prior to use ensure that the drains are flowing and clear of blockages.

Place the strip in the tray at the highest end and adjacent to the coil ensuring it's in contact with the water so that the resulting treatment will cover the entire tray.

For trays with a central drain hole, place a strip at the highest point on either side of the drain (1 strip per one metre of condensate).

To ensure continued protection against slime and mould build-up, Jally Strips should be inspected annually - additional strips can be placed in the tray alongside partially used strips.

Personal Protective Equipment







When working with Smell Buster Tablets, operatives are to use the following equipment -

- Gloves Impervious gloves
- Chemical Safety glasses BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long Sleeved Top



							Heal	th & Safety		
Accidental F	Release / Spillage			Fire	Fighting					
Uncontaminated product may directed.	be recovered and used as	If involved in a fire, if pextinguishers can be								
Product contaminated with ha with on the basis of the hazar	nzardous material should be dea		· ·							
Protective clothing may be rea and eyes	quired to prevent contact with s		In case of fire do not breathe fumes - Use of self-contained breathing apparatus and protective clothing may be required to prevent contact with skin and eyes							
Exposure Monitoring	& Health Surveillance		Disposal							
Do not smoke while handling	this product	Disposal operations - Ti	ransfor to a suitable o	ontainer and	l arrango for collect	ion by spec	ialisad disposal	company		
Do not eat or drink whilst hand	dling this product	Disposal of packaging -			_	ion by spec	ialiseu uisposai	company.		
No Health Surveillance requir	ed while using this product	Disposal of packaging -	Dispose of as norma	i iiiuusiiiai w						
	First Aid				Safe Handling &	Storage				
Remove all contaminated clot after administering first aid. We burns or symptoms of poisoning the symptoms of	on, pain and redness and cornelenty of eye wash or water for a ly. If relevant, remove contact leading is OK, place in the recovery so down. If breathing becomes bable. Transfer to hospital as so reness and redness to the moute vomiting. Wash out mouth with the conscious and breathing is OK,	redical attention if required asfer to hospital if there are as burns may occur. 5 minutes, lifting lower cases. Transfer to hospital cown safety whilst doing position. If conscious, ubbly, have the casualty on as possible. th and throat and could th water and give 1 cup of athing and apply artificial	 Ensure adequate ventilation in all work areas Avoid contact with the skin, eyes and clothing – Wash hands thoroughly with so water, after handling product Storage Jally Strips should only be stored in manufacturers / suppliers containers with litightly closed when not in use Store in a cool, well-ventilated area. Keep container tightly closed. Kept container upright and stable and store in a cool dry ventilated area away fources of ignition, heat and humidity Keep away from oxidising agents Transport CoSHH assessment to be held in vehicle All containers MUST be suitably secured / restrained in the rear of the vehicle to movement during transportation Vehicle must have a suitable 2kg Dry Powder Fire Extinguisher carried on vehicle 							
			t Rating Details							
Level of R	Risk with Control Measures	in place -	LOW	Х	MEDIUM		HIGH			
Assessor -	Trevor Foster	Date -	March 20	18	Review Da	ate -	March	า 2020		

Template Status – JGR-H&S-March2018 Page 63 of 79



						Health & Safety
	COSHH Assessment Fo	rm				
Product	Pro-Care Concentrated Evaporator Coil Cleaner	Proc	luct Pictu	re		Hazard
Manufacturer	DiversiTech UK Ltd, Glaisdale Drive East, Nottingham, NG8 4LY				r	
Composition	Contains the following components – Sodium Silicate – EC No. – 215-687-4 CAS 1344-0908 - Percentage 1 - 3% Alkylaryl Polyether Alcohol – Percentage 0 – 5% Alkyl Dimethylbenzyl ammonium chloride – Percentage 0 – 5%	Pro-Care Pro-Ca				
Workplace Exposure Limit	This product does not have a workplace exposure limit.	1			Corrosive	
	How is the Product / Substance Used	Quanti	ty		k takes & uency	Persons Exposed
cleaner combined with a germs	Evaporator Coil Cleaner is used as an efficient and highly effective indoor coil powerful disinfectant, which effectively kills MRSA, Legionella and many other gineering personnel, with relevant knowledge, training and experience.	Froduct diluted - Mix 8 parts water with 1 part Pro-Care - Pro-Care		ughout the	JGR Engineering Personnel	
	Working Methods & Controls			Persona	I Protective	Equipment
	Care Concentrated Evaporator Coil Cleaner, engineers must always carry out worksk methodologies detailed in all relevant JGR Method Statements, Task Procedure					

Mix 8 parts water with 1 part Pro-Care - Pro-Care should be diluted in a plastic container or low pressure sprayer Applied liberally to coil surface

Allow 5-10 minutes for solution to react and dissolve contaminants and provide initial coil protection.

Pro-Care is self-rinsing on evaporator coils but rinsing with clean water is recommended for condenser coils.

DEODORISING - Apply a light spray of mixed Pro-Care into the air or onto air conditioner filters to remove odours.

When working with Pro-Care Concentrated Evaporator Coil Cleaner, operatives are to use the following equipment –

- Gloves Impervious gloves
- Chemical Safety glasses BS EN 166-349B / Full Face Shield
- Safety Footwear BS EN ISO 20345
- Overalls / Long Sleeved Top



								Heal	th & Safety
Accidental Release /	Spillage				Fire Fighti	ng			
Initial Action – Contain and rec possible	cover liquia, where pos		so - All known fire			oduct & move away cool cylinders, use e			
Clean-up Procedure – Absorb		y produce carbor	n monoxide, carbo	n dioxide, hydroger	chloride or	other unidentified w	aste if this	product is involv	ed in a fire
earth, sand or other non-combustransfer to containers.	app		equired in confined			e released during a faccumulation could			
Exposure Monitor	ring & Health Surveillan	llance Disposal							
Ensure there is sufficient ventila ventilation is generally preferred the contaminant at its source, pr general work area.	because it can control the	rol the emissions of of it into the Disposal operations – Treat empty containers as hazardous waste Disposal of packaging – Treat empty containers as hazardous waste. Dispose of in a waste management facility.							management
	First Aid	Safe Handling & Storage							
the skin. Flush the affected area longer if substance still on skin. Eyes – Risk of serious damage Bathe affected eye with running as soon as possible, for speciali Inhalation – Harmful if swallows Wash out mouth with water. Do drink every 10 minutes. If uncon artificial respiration if necessary, the recovery position. Obtain Me	ng and footwear immedia with running water for a Obtain Medical assistant to eyes. water for 15mins. Obtain ist examination. ed not induce vomiting. Givescious, check for breathing. If unconscious and breadical assistance as soonly. Remove casualty from hing is OK, place in the reave the casualty sit and phing give artificial respirate.	Safe Handling & Storage Handling • Ensure adequate ventilation in all work areas • Avoid breathing vapours or mist. Avoid contact with the skin, eyes and clothing – Wash hands thoroughly with soap and water, after handling product Storage • Pro-Care Concentrated Evaporator Coil Cleaner should only be stored in manufacturers / suppliers containers with lid / cap tightly closed when not in use • Kept container upright and stable and store in a cool dry ventilated area away from sources of extreme heat, moisture Transport • COSHH assessment to be held in vehicle • All containers MUST be suitably secured / restrained in the rear of the vehicle to prevent movement during transportation • Vehicle should have a secure solid bulkhead to protect the driver							
			Assessment	Rating Details					
Level of Ris	sk with Control Meas	ures in place -		LOW	X	MEDIUM		HIGH	
Assessor -	Trevor Foster		Date -	March 20)18	Review Da	te -	March	n 2020



	COSHH Assessment Fo	rm			
Product	Silfos 5 Rods	Proc	luct Picture		Hazard
Manufacturer	Lucas-Milhaupt, Inc, 5656 S. Pennsylvania Ave, Cudahy, WI 53110, USA				
Composition	Contains the following components – Copper CAS No 7440-50-8 (87 – 91%) Phosphorus CAS No 7723-14-0 (5.8 – 6.2%) Silver CAS No. – 7440-22-4 (4.8 – 5.2%)	S	A.Ros 15		
Workplace Exposure Limit	Copper – 0.1mg/m3 twa (fume) and 1mg/m3 twa (dusts & mists) Phosphorus – No applicable limits Silver - 0.1 mg/m3 twa and 1mg/m3 twa (metal)				
	How is the Product / Substance Used	Quanti	TV	ask takes & quency	Persons Exposed
Commercial / Industrial A	within the brazing process as a filler-material to make copper to copper joints on Air Conditioning & Refrigeration Systems. Igineering personnel, however only competent trained engineers, holding C&G an carry out works on systems containing refrigerant gases.	30 rods in a Number of ro varies depen number of join joined	ds used ding on hts to be	2 – 5mins to e one joint of joints will m job to job	JGR Engineering Personnel
	Working Methods & Controls		Perso	nal Protective	Fauinment

Working Methods & Controls

Personal Protective Equipment

Can be used by JGR engineering personnel, however only competent trained engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems containing refrigerant gases.

When working with Silfos 5 Rods, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Ensure adequate general ventilation at all times – Fumes from brazing rods are very low order of toxicity and with reasonable ventilation exposure limits are unlikely to be exceeded. However, the inhalation of any fumes should be avoided to prevent irritation to eyes, nose, throat and respiratory tract

Avoid overheating of joints

Wash hands after handling brazing rods & before eating and drinking

Reactions between perspiration and phosphorous content of brazing rod can increase irritation







When working with Silfos 5 Rods, operative are to use the following equipment –

- Gloves Protective gloves
- Safety glasses BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long Sleeved Top
- Respirator In areas with insufficient ventilation



Accidenta	al Release / Spillage				ı	Fire Fighting				
Initial Action – Non Hazardou Clean-up Procedure – Solid r Powder Form - Clean up spill	non-hazardous material	Silfos 5 Rods are flammable and can easily ignited by heat, sparks or flames Cool from a protected position if safe to do so – Dry Powder or Foam fire extinguishers should be use area - Do Not use Water extinguisher								
with HEPA filter Product Form - Not considere as detailed in disposal section	ed as a risk, ensure disposal c	f product,				pe required in confin ined spaces, sewers			ere its	
Exposure Monitorin	ng & Health Surveillance		Disposal							
Do not smoke while handling t Do not eat or drink whilst hand No Health Surveillance require	lling this product		s recommended tha			crap and given over	r for refining	9		
	First Aid		Safe Handling & Storage							
Skin – Skin contact with this p forms, may cause irritation and plenty of soap and water. Obtain persists. Eyes – Powder – Irrigate with water or Get Medical attention, if irritation is furned in the management of the manageme	d / or contact dermatitis. Wash ain medical assistance if irritation resaline solution for at least 15 on persists es should clear themselves if symptoms persist seek medical respiration if breathing obtential route of exposure, Ho	skin with on minutes.	Handling I Ensure adequate ventilation in all work areas Do not eat or drink or smoke while handling this product Avoid contact with the skin, eyes and clothing – Wash hands thoroughly with soap and water, after handling product Storage Silfos 5 Rods should only be stored in manufacturers / suppliers containers with lid / cap tightly closes. Store in a cool, well-ventilated area. Keep container tightly closed. Keep dry and do not expose to direct sunlight. Can be stored in clean, dry rooms under normal container with respect to humidity (50 - 70 %) and surrounding temperature (0 °C - 35 °C) Kept rods stable and store in a cool dry ventilated area away from sources of ignition, heat and head store away from oxidising agents and strong acids Transport Cooling accessment to be held in web idea.						tly closed nal conditions nd humidity	
l aval -f Di	iok with Control Moss.	in place		Rating Details	х	MEDIUM		HIGH		
_	isk with Control Measures Trevor Foster	s in piace	Date -	LOW March 20		Review Da	10	March	2020	
Assessor -	HEADI LOSIGI		Date -	IVIAICI120	10	iveriew Da		iviaiCH	2020	



	COSHH Assessment Fo	rm			
Product	Vacuum Pump Oil	Proc	duct Picture		Hazard
Manufacturer	Advanced Engineering Ltd Guardian House Stroudley Road Basingstoke Hampshire RG24 8NL				
Composition	Contains the following components – Distillates Petroleum Solvent-refined heavy paraffinic		Premium Pump Oil		
Workplace Exposure Limit	N/A		*		
	How is the Product / Substance Used	Quanti	ty	ime Task takes & Frequency	Persons Exposed
	Dil is a lubricant for use on refrigeration system Vacuum Pumps engineers, holding C&G 2079 F-gas Certificate, can carry out works on systems s.	containers used		This product can be used throughout the duration of the works JGR Eng	
	Working Methods & Controls		F	Personal Protective	Equipment

Only competent trained engineers holding C&G 2079 F-gas Certificate can work on systems containing refrigerant gases

When working with Robinair Vacuum Pump Oil, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Ensure correct PPE (Personal Protective Equipment) is as detailed in this assessment

Ensure only use specified tools and equipment which is suitable for working on refrigeration and air-conditioning systems are used and are serviced, maintained & inspected regularly

Vacuum Pump Oil only to be used in a well-ventilated areas







When working with Robinair Vacuum Pump Oil, operative are to use the following equipment –

- Gloves Protective gloves BS EN 511
- Safety glasses BS EN 166-349B
- Safety Footwear BS EN 345
- Overalls / Long Sleeved Top



							Hea	Ith & Safety		
Accidental F	Release / Spillage			Fire	Fighting					
Clean-up Procedure – Abso a suitable sealed container a waste	orb in dry earth or sand, transfer and disposed of as controlled	If involved in a fire, if possit do so – All known fire extin surrounding conditions –	guishers can be use	d to cool cylin	ders, use extinguis	hing media	appropriate to			
Other Actions – Do not allowater courses	w spills to enter the drains or		Use of self-contained breathing apparatus may be required in confined spaces or any place where its accumulation could be dangerous, such as confined spaces, sewers, basements							
Exposure Monitor	ing & Health Surveillance			Di	sposal					
Do not smoke while handling Do not eat or drink whilst har No Health Surveillance requi	ndling this product	Handle and dispose of a disposed of using the copassed to a specialist or	orrect Hazardous W	aste Transfe						
	First Aid		Safe Handling & Storage							
skin contact. On contact remove contamin with soap and warm water. States and states and states are discomfort occurs Eyes – Any material that contimediately. Hold eyelids apart and flush of eye wash solution or clear Remove contact lenses, if primedical advice Inhalation - Remove expose effects are observed. Seeking Ingestion - If swallowed, DC	NOT induce vomiting. Wash out of water to drink every 10 minu	area or - Reep away from product - Ensure adequate - Repeated exposu - Avoid contact with breaks and after was an after w	ventilation in all wo ventilation in all wo are may cause skin in the skin, eyes and working with product air Vacuum Pump (air Vacuum Pump (all be stored in mar oright and stable and void contact with oxi- ment to be held in ventilated in ventilated in ventilated are a secure solid be a suitable Fire Exti	rk areas dryness, cra clothing – V t. Dil should be nufacturers / d store in a c dising agent hicle ured / restrai ulkhead to p	cking Vash hands thorough kept to a minimum suppliers contained and strong acids and strong acids and in the rear of the context the driver	ghly with soans ors with lid / coarea away fro one vehicle to	ap and warm ware tightly close om sources of	vater, before ed when not in extreme heat,		
		Assessment	Rating Details	_						
Level of	Risk with Control Measures	in place -	LOW	Х	MEDIUM		HIGH			
Assessor -	Trevor Foster	Date -	March 20	18	Review Da	ate -	Marc	h 2020		



	COSHH Assessment Form									
Product	CoolSafe RTU (Ready to Use)	Proc	luct Pictur	re		Hazard				
Manufacturer	Advanced Engineering Ltd, Guardian House, Stroudly Road, Basingstoke, RG24 8NL Emergency Contact – 01256 854318					_				
Composition	Contains the following components – Trisodium Nitrilotriacetate – EC No. – 225-768-6 CAS 5064-31-3 Percentage <1% Didecyldimethylammonium Chloride – EC No – 230-525-2 CAS 7173-51-5 Percentage <1% Non-ionic Surfactant – EC No – N/A CAS 78330-21-9 Percentage <1% Ionic Surfactant – EC No – N/A CAS N/A Percentage <1%	tate – EC No. – 225-768-6 CAS 5064-31-3 Percentage nium Chloride – EC No – 230-525-2 CAS 7173-51-5 EC No – N/A CAS 78330-21-9 Percentage <1%								
Workplace Exposure Limit	None detailed on MSDS									
	How is the Product / Substance Used	Quanti	ty	Time Tasl Frequ		Persons Exposed				
CoolSafe RTU is an effective coil cleaner and disinfectant used to effectively remove all common contaminants left by organic materials and foodstuffs on refrigeration system cooling coils				This produ	ıct can be	ICD Engineering				
CoolSafe RTU is safe to use on food display cabinets, walk-in refrigerators, freezers, food preparation and storage areas (CoolSafe RTU is registered by NSF)		1 & 5ltr Con	tainers	used throu duration of		JGR Engineering Personnel				
Can be used by JGR eng	gineering personnel, with relevant knowledge, training and experience.									
	Working Methods & Controls			Personal	Protective	Equipment				

When working with CoolSafe RTU, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Coolsafe RTU is ready to use and should not be diluted

Turn off and isolate refrigeration equipment and remove all food items from work area - Ensure CoolSafe RTU does not come into contact with foodstuffs.

Spray into coil, starting at top corner and working methodically across and down.

Keep all surfaces wet for 5 minutes.

Rinse thoroughly after use with fresh water

CoolSafe RTU should be used in line with normal maintenance schedule - When used correctly, CoolSafe RTU is safe to use in food preparation and storage areas (CoolSafe RTU is registered by NSF)







When working with CoolSafe RTU, operatives are to use the following equipment -

- Gloves Impermeable gloves
- Tight Fitting Safety glasses BS EN 166
- Safety Footwear BS EN ISO 20345
- Overalls / Long Sleeved Top



								Heal	th & Safety
Acciden	ntal Release / Spillage					Fire Fighting			
	nediate area and ensure the use container, leak-side up to minim			n a fire, if possible stop ktinguishers can be use conditions					
earth) then place in a sealed	rb spill with inert material (e.g. d container and arrange for collec			on emits toxic fumes - Fire Fighters - Use of				otective clothing	ı may be
specialised disposal company			required to prevent contact with skin and eyes				•		
Wash affected area with large									
Exposure Monitoring	g & Health Surveillance					posal			
Do not smoke while handling	this product	Disposal	operations –	Transfer to a suitable	container and	d arrange for collect	ion by spec	cialised disposa	I company.
Do not eat or drink whilst hand	dling this product	Disposal o	of packaging	 Clean with fresh wa 	ter and dispo	ose of as normal ind	ustrial wast	te.	
No Health Surveillance require	ed while using this product	Do not disc	charge in to dr	ains or sewer - Very t	oxic to aquat	ic life with log lasting	g effects		
	First Aid					Safe Handling & S	torage		
clothes unless stuck to skin at 15 minutes. Get medical attention if requir reuse. Eyes – May cause eye irritation of eye wash or water for 15 m relevant, remove contact lens inhalation – Remove casualt so. If conscious, ensure the cabreathing and apply artificial rok, place in the recovery posingestion – Do not induce vowater to drink every 10minute if unconscious, check for breathing still in the recovery in the recovery in the recovery individuals.	ation at the site of contact. Remond wash area with plenty of soal ared after administering first aid. It can be presented after administering first aid. It can be presented and upper ease. Transfer to hospital for specific specific properties or lies down. If unconstitution. Transfer to hospital as soon or miting. Wash out mouth with wastes. But the presented and apply artificial respiration, place in the recovery position.	p and water for Wash clothing ely flush eyes yelids occasionation own safety wascious, check scious and both as possible ater and give tion if necession. Transfer the water and give the second of the water and give the wate	For at least g before Avoid contact with the skin, eyes and clothing – Wash hands thoroughly with soap a water, after handling product Avoid direct contact with the substance and breathing in fumes Do not handle in a confined space. Storage CoolSafe RTU should only be stored in manufacturers / suppliers containers with lid tightly closed when not in use Store upright in a cool, dry, well-ventilated area. Keep container tightly closed upright and stable away from sources of heat Keep away from oxidising agents Transport CoSHH assessment to be held in vehicle All containers MUST be suitably secured / restrained in the rear of the vehicle to pre					s with lid / cap	
	N. I. W. A		Assessme	nt Rating Details	1 .,			1	
_	Risk with Control Measures			LOW	X	MEDIUM		HIGH	
Assessor -	Trevor Foster	D	ate -	March 20	018	Review Da	te -	March	า 2020



	COSHH Assessment Form										
Product	DrainSafe	Product Pictu	re	Hazard							
Manufacturer	Advanced Engineering Ltd, Guardian House, Stroudly Road, Basingstoke, RG24 8NL Emergency Contact – 01256 854318										
Composition	Contains the following components – Sodium Hydroxide – EC No. – 215-185-5 CAS 1310-73-2 Percentage 10 - 30% Sodium Silicate Solution – EC No – 215-687-4 CAS 1344-09-8 Percentage 1 – 10%	DrainSafe* Polymere residented dels collicioles Activated in the collicion in the coll									
Workplace Exposure Limit	Hazardous Ingredients - Sodium Hydroxide 15min STEL 2mg/m³										
	How is the Product / Substance Used	Quantity	Time Task takes & Frequency	Persons Exposed							

How is the Product / Substance Used	Quantity	Frequency	Persons Exposed
DrainSafe is a bio-degradable drain un-blocker, used to unblock and remove biofilm from refrigeration systems. It has been designed to quickly dissolve slime and biofilms. These build-ups are commonly found in the condensate lines draining away from chilled storage and dairy cabinets and can cause blockages and the spread of bacteria. DrainSafe is acceptable for use on drains in and around food processing areas. Can be used by JGR engineering personnel, with relevant knowledge, training and experience.	500ml or 5ltr Container	This product can be used throughout the duration of the works	JGR Engineering Personnel

Working Methods & Controls

When working with DrainSafe, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Turn off and isolate refrigeration equipment and remove all food items from work area - Ensure DrainSafe does not come into contact with foodstuffs.

Remove excess water from condensate tray, and condensate drain, if possible.

Gently pour DrainSafe into the tray and allow it to enter the drain.

Ensure DrainSafe does not come into contact with foodstuffs.

Allow DrainSafe to remain in condensate tray and drain for five minutes or until obstruction is cleared.

Flush out with fresh water for 2-3 minutes.

Repeat as necessary until obstruction is cleared

DrainSafe should be used in line with normal maintenance schedule - When used correctly, DrainSafe is safe to use in food preparation and storage areas (DrainSafe is registered by NSF)

Personal Protective Equipment







When working with Smell Buster Tablets, operatives are to use the following equipment –

- Gloves Nitrile / Impermeable gloves
- Chemical Safety glasses BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long Sleeved Top



								Healt	h & Safety	
Accide	ental Release / Spillage			Fire Fighting						
clean-up. If able turn leaking container, leak-side up to minimise liquid loss. Clean-up Procedure – Absorb spill with inert material (e.g. dry sand or earth) then place in a sealed container and arrange for collection by specialised disposal company. All known surrounding in combust in case of			If involved in a fire, if possible stop flow of product and cool from a protected position if safe to do so – All known fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions In combustion emits toxic fumes. During combustion other unidentified fragments may be emitted. In case of fire do not breathe fumes - Use of self-contained breathing apparatus and protective clothing							
	& Health Surveillance		may be re	equired to prevent con		posal				
-		Diameter 1	т.			•	. ,			
Do not smoke while handling	•			ransfer to a suitable c					company.	
Do not eat or drink whilst hand	•	-		Clean with fresh wate	er and dispo	ose of as normal indi	ustriai wast	e.		
No Health Surveillance require	<u> </u>	Do not dischar	ge in to dra	ins or sewers						
	First Aid					Safe Handling & S	Storage			
Skin – There may be redness or whiteness of the skin in the area of exposure. Blistering may occur. Remove all contaminated clothes unless stuck to skin and drench the skin / area with plenty of water for at least 15 minutes. Get medical attention if required after administering first aid. Wash clothing before reuse. Eyes – May be pain and redness, eyes may water profusely. The vision may become blurred. Corneal burns may occur - May cause permanent damage. Immediately flush eyes with plenty of eye wash or water for 15 minutes, lifting lower and upper eyelids occasionally. If relevant and able, remove contact lenses. Transfer to hospital for specialist examination as soon as possible Inhalation – Remove casualty from exposure ensuring one's own safety whilst doing so. If conscious, ensure the casualty sits or lies down. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible. Ingestion – Corrosive burns may appear around the lips. Blood may be vomited. There may be bleeding from the mouth or nose. Do not induce vomiting. Wash out mouth with water and give 1 cup of water to drink every 10minutes.				 Avoid contact w water, after hand Ensure there is Do not handle in Storage DrainSafe shout tightly closed where with tightly closed where with tightly closed where with the store upright in the Keep container. Keep away from Transport CoSHH assess 	ith the skin, dling product sufficient version a confined a confined a cool, dry, tightly close a oxidising a ment to be harder.	entilation of the area. I space. Avoid the fortune tored in manufacture se well-ventilated area. Ed upright and stable agents meld in vehicle tably secured / restra	rmation or sers / supplie	spread of mists in ers containers with a sources of heat	n the air. th lid / cap	
If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.								vehicles to		
		Ass	sessment	t Rating Details						
Level of R	isk with Control Measures	in place -		LOW	Х	MEDIUM		HIGH		
Assessor -	Trevor Foster	Date	-	March 20	18	Review Da	te -	March	2020	

Template Status – JGR-H&S-March2018 Page 73 of 79



COSHH Assessment Form								
Product	HB 30 Ice Machine Cleaner & Disinfectant	Proc	duct Picture		Hazard			
Manufacturer	Advanced Engineering Ltd, Guardian House, Stroudly Road, Basingstoke, RG24 8NL Emergency Contact – 01256 854318	<u></u>						
Composition	Contains the following components – Orthophosphoric Acid – EC No. – 231-633-2 CAS 7664-38-2 Percentage 10 - 30% Acetic Acid – EC No – 200-580-7 CAS 64-19-7 Percentage 1 – 10% Didecyldimethylammonium Chloride – EC No – 230-525-2 CAS 7173-51-5 Percentage <1%	HE WARM	3-30° CONTROLLED TO THE PARTY OF THE PARTY O	!	Corrosive			
Workplace Exposure Limit	Orthophosphoric Acid – 8hr TWA - 1mg/m³ and 15min STEL 2mg/m³							
	How is the Product / Substance Used	Quanti	tv	Task takes & equency	Persons Exposed			
remove lime scale and sl HB 30 Ice Machine Clear storage areas	ner & Disinfectant is a high strength descaler and disinfectant used to effectively time, which are common problems in ice machines and will disinfect all surfaces. Ther & Disinfectant, when used correctly, is safe to use in food preparation and gineering personnel, with relevant knowledge, training and experience.	1 & 5ltr Con Product dilute 60ml per litre	ed - Mix used th	oduct can be iroughout the n of the works	JGR Engineering Personnel			
	Moulding Mathada 9 Cantuala	ı	_	and Ductocking				

Working Methods & Controls

When working with HB 30 Ice Machine Cleaner & Disinfectant, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Turn off refrigeration and leave pump in operation, if possible, drain machine and refill with fresh water.

Add HB 30 Ice Machine Cleaner & Disinfectant to circulating water at a rate of about 60ml per litre and allow to circulate for about 30 minutes.

Brush cleaning solution onto scaled surfaces not contacted by circulation - Extra-heavy scale may require another dose of HB 30 Ice Machine Cleaner & Disinfectant

Drums may be cleaned by mixing 250ml HB-30 with 2 litres of water in a plastic container and brushing solution onto scaled surfaces. After scale removal, drain cleaning solution and flush thoroughly with fresh water.

Use HB 30 Ice Machine Cleaner & Disinfectant in line with normal maintenance schedule

Personal Protective Equipment







When working with Smell Buster Tablets, operatives are to use the following equipment –

- Gloves Impermeable gloves
- Tight Fitting Safety glasses BS EN 166
- Safety Footwear BS EN ISO 20345
- Overalls / Long Sleeved Top



								Health & Sa	afety
Accider	ntal Release / Spillage			Fire Fighting					
clean up Clean-up Procedure – Absorb spill with inert material (e.g. dry sand or earth) then place in a sealed container and arrange for collection by known fire exting surrounding confidence in a sealed container and arrange for collection by			volved in a fire, if possible stop flow of product and cool from a protected position if safe to do so – All wn fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the ounding conditions ombustion emits toxic fumes. In case of fire do not breathe fumes - Use of self-contained breathing aratus and protective clothing may be required to prevent contact with skin and eyes						
Exposure Monitoring	& Health Surveillance				Dis	posal			
Do not smoke while handling Do not eat or drink whilst han No Health Surveillance requir	dling this product	-	-	nsfer to a suitable c Clean with fresh wate		•	lustrial wast	cialised disposal company te.	ıy.
Skin – Could cause irritation of Immediately remove all contaplenty of water for at least 15 Get medical attention if require Transfer to hospital if there are Eyes – May cause eye irritated damage may occur. Immediated minutes, lifting lower and upper Transfer to hospital for special Inhalation – There may be slength of the May cause coughing or whee safety whilst doing so. If consistency whilst doing so. If c	sh area with g before reuse. Dermanent er for 15 Dontact lenses. In the throat. Ing one's own f unconscious, ous and In as possible. Sive burns may may occur. Do Do drink every on if necessary. er to hospital as	Avoid contact and water, aft Avoid direct c Ensure there Do not handle Storage HB 30 Ice Ma suppliers com Store in a coc Keep contained Transport CoSHH asses All containers prevent move Vehicle must combat vehicle	with the sk ter handling ontact with is sufficient e in a confin chine Clear tainers with ol, dry, well- er tightly clo ssment to be ment during have a suita	product the substance. ventilation of the arrived space. ner & Disinfectant shid / cap tightly close ventilated area. sed upright and state held in vehicle suitably secured / reg transportation	g – Wash h ea. nould only bed when no ble away fro		ers/		
Level of R	Risk with Control Measures		Hooessiiieiit	Rating Details LOW	X	MEDIUM		HIGH	
Assessor -	Trevor Foster)ate -	March 20		Review Da	ito -	March 2020	
A33C33UI -	116401 1 02161	U	ale -	Iviai CIT 20	10	IVEAIEM Da	-	IVIAICI1 2020	



	COSHH Assessment For	rm				
Product	PyroCool	Pro	duct Pictu	re		Hazard
Manufacturer	Advanced Engineering Ltd, Guardian House, Stroudly Road, Basingstoke, RG24 8NL Emergency Contact – 01256 854318	*				_
Composition Contains the following components –			PyroCool			
Workplace Exposure Limit	None detailed on MSDS		ALTERNATION OF THE PARTY OF THE			
	How is the Product / Substance Used	Quant	ity		k takes & uency	Persons Exposed
PyroCool™ is a heat-dissipating, flame-retardant gel, developed to dramatically reduce heat transfer during soldering, brazing and welding. PyroCool™ protects against scorching of materials, loosening of existing joints and damaging of sensitive components. Can be used by JGR engineering personnel, with relevant knowledge, training and experience.			Oml or iners	This product can be used throughout the duration of the works		JGR Engineering Personnel
	Working Methods & Controls		Personal Protective Equipment			
methodologies detailed in PyroCool is ready to use Spray onto pipework and For best results, ensure of Note - During application PyroCool™ is not expect	Cool, engineers must always carry out works following all control measures and tast all relevant JGR Method Statements, Task Procedures and Risk Assessments. and should not be diluted - At first time of use, sprayer will require priming – possil adjacent surfaces, or components to be protected, using a fine or coarse spray as coating is as thick and even as possible. In of heat, PyroCool™ may evaporate; simply apply further coatings to maintain profested to harm any surfaces - If in doubt, test on a small, non-crucial area first. It is prayer to freeze.	bly 30 pumps. s appropriate -	following Glov Tigh Safe	equipment - ves - Imperm t Fitting Safe	neable gloves ty glasses - E – BS EN ISC	3S EN 166



Health & Safety								
Accidental Release / Spillage		Fire Fighting						
clean-up. If able turn leaking container, leak-side up to minimise liquid loss. Clean-up Procedure – Absorb spill with inert material (e.g. dry sand or earth) then place in a sealed container and arrange for collection by specialised			If involved in a fire, if possible stop flow of product and cool from a protected position if safe to do so – All known fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions Advice for Fire Fighters - Use of self-contained breathing apparatus and protective clothing may be required to prevent contact with skin and eyes					
Exposure Monitoring & Health Surveillance				Dis	posal			
Do not smoke while handling this product Do not eat or drink whilst handling this product No Health Surveillance required while using this product First Aid	Disposal operations – Transfer to a suitable contain Disposal of packaging – Clean with fresh water and				ole container and arrange for collection by specialised disposal company. water and dispose of as normal industrial waste.			
First Aid				3	afe Handling & Sto	raye		
Skin – Could cause mild irritation at the site of contact. Remove all contaminated clothes unless stuck to skin and wash area with plenty of soap and water for at least 15 minutes. Get medical attention if required after administering first aid. Wash clothing before reuse. Eyes – May cause eye irritation, pain and redness. Immediately flush eyes with plenty of eye wash or water for 15 minutes, lifting lower and upper eyelids occasionally. If relevant, remove contact lenses. Transfer to hospital for specialist examination. Inhalation – N/A Inhalation is not considered a potential route of exposure			ter handling product void direct contact wo not handle in a coge ge yroCool should only osed when not in us tore upright in a coo	e skin, eyes t vith the sub: nfined spac be stored i se I, dry, well-v	and clothing – Wasistance and breathing ee. n manufacturers / suventilated area.	g in fumes uppliers con	oroughly with soap and water tainers with lid / cap tighters of direct sunlight and	ntly
Ingestion – May cause soreness and redness of the mouth ar induce vomiting. Wash out mouth with water and give 1 cup of every 10minutes. Get medical attention if required after admini	■ AI m ■ Ve	oSHH assessment t I containers <i>MUST</i> l ovement during trar	be suitably asportation	secured / restrained		of the vehicle to prevent		
Level of Risk with Control Measures		Joine III I	LOW	X	MEDIUM		HIGH	
Assessor - Trevor Foster	Date -		March 20		Review Da	te -	March 2020	



	COSHH Assessment F	orm					
Product	StayClean Mini Tablets	Proc	Product Picture		Hazard		
Manufacturer	Advanced Engineering Ltd, Guardian House, Stroudly Road, Basingstoke, RG24 8NL Emergency Contact – 01256 854318			_			
Composition	Contains the following components – Alkyl Dimethyl Benzyl Ammonium Chloride – EC No. – 270-325-2 CAS 68424-85-1 Percentage 1 - 10%	100000	StayClean Mini Tablets Condensate truy bacterial control Charten adversed tru				
Workplace Exposure Limit	None detailed on MSDS	7=					Harn
	How is the Product / Substance Used	Quanti	Quantity		k takes & uency	Persons Expose	
	are an inexpensive, easy-to-use condensate tray treatment. The tablets will ent sludge build-ups and blockages in the condensate tray and drain.						
They are safe to use, non-corrosive and, being totally soluble, leaving no residues to create further problems.			tablets	This product can be used throughout the		JGR Engineering	
One tablet will treat a 2-3kW system and will last for a month. Multiple tablets can be used in larger systems for maximum flexibility.					f the works	Personnel	
Can be used by JGR en	gineering personnel, with relevant knowledge, training and experience.						
	Working Methods & Controls			Persona	I Protective	Equipment	

When working with StayClean Mini Tablets, engineers must always carry out works following all control measures and task methodologies detailed in all relevant JGR Method Statements, Task Procedures and Risk Assessments.

Place the tablet in the tray at the highest end, and adjacent to the coil, so that the resulting treatment will cover the entire tray.

For larger systems multiple tablets may be used.

For initial applications, or where the tray and drain are severely contaminated, double the suggested treatment rate.

One tablet will treat a 2-3kW system and will last for a month. Multiple tablets can be used in larger systems for maximum flexibility.

Disposal Product and packaging: Dispose of as normal industrial waste







When working with StayClean Mini Tablets, operatives are to use the following equipment –

- Gloves Nitrile / Impermeable gloves
- Chemical Safety glasses BS EN 166-349B
- Safety Footwear BS EN ISO 20345
- Overalls / Long Sleeved Top



								Health & Sat	efety
Accide	ental Release / Spillage			Fire Fighting					
clean-up. All known			All known	If involved in a fire, if possible stop flow of product and cool from a protected position if safe to do so – All known fire extinguishers can be used to cool cylinders, use extinguishing media appropriate to the surrounding conditions					
inert material (e.g. dry sand o arrange for collection by spec	r earth) then place in a sealed or ialised disposal company.	container and			•			gments may be emitted. aratus and protective clotl	
Wash affected area with large	e amount of fresh water			quired to prevent con			3 11	•	3
Exposure Monitoring	g & Health Surveillance				Dis	posal			
Do not smoke while handling	this product	Disposal ope	rations – Tr	ransfer to a suitable c	ontainer an	d arrange for collect	ion by spec	ialised disposal company	y.
Do not eat or drink whilst han	dling this product	Disposal of p	ackaging –	Clean with fresh water	er and dispo	ose of as normal ind	ustrial wast	e.	
No Health Surveillance requir	ed while using this product	Do not dischar	rge in to dra	ins or sewers - Very t	oxic to aqua	atic life with log lastir	ng effects		
	First Aid					Safe Handling & S	Storage		
Skin – Could cause mild irritation and an itchy rash at the site of contact Immediately wash area with plenty of mild soap and water for at least 15 minutes. Remove all contaminated clothes unless stuck to skin. Get medical attention if required after administering first aid. Wash clothing before reuse. Transfer to hospital if there are burns or symptoms of poisoning. Eyes – May cause eye irritation, pain and redness and cornea burns may occur. Immediately flush eyes with plenty of eye wash or water for 15 minutes, lifting lower and upper eyelids occasionally. If relevant, remove contact lenses. Transfer to hospital for specialist examination. Inhalation – Remove casualty from exposure ensuring one's own safety whilst doing so. If unconscious and breathing is OK, place in the recovery position. If conscious, ensure the casualty sits or lies down. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Transfer to hospital as soon as possible. Ingestion – There may be soreness and redness to the mouth and throat and could cause vomiting. Do not induce vomiting. Wash out mouth with water and give 1 cup of water to drink every 10minutes. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.				 Avoid contact w water, after hand the area Do not handle in Storage StayClean Miniwith packet clos Store in a cool, Keep packet tigl Keep away from Transport CoSHH assess All packet MUS movement durin Vehicle must hacombat vehicle for the area 	ith the skin, dling production or spream a confined Tablets should be able to be a confined at the suitable of	ad of dust in the air and of dust in the air and of dust in the air and only be stored in the string of the stored in use and stable away from agents are also in vehicle by secured / restrained ation	- Ensure the manufactum sources o	ds thoroughly with soap a ere is sufficient ventilation urers / suppliers container of heat ar of the vehicle to preven isher carried on vehicles t	on of ers
Lavel of F	Piok with Control Mass.		sessment	Rating Details	Х	MEDIUM		шен	
	Risk with Control Measures			LOW			4	HIGH	
Assessor -	Trevor Foster	Date	-	March 2018 Review Date - March 2018			March 2020		

Template Status – JGR-H&S-March2018 Page 79 of 79