SAFETY DATA SHEET

Version #: 1,0
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture	AMBERKLENE FE10
Registration number	-
Synonyms	None.
Product code	UDS000349AE

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Cleaners - Heavy duty
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Company name	CRC Industries UK Ltd.
Address	Wylds Road Castlefield Industrial Estate TA6 4DD Bridgwater Somerset United Kingdom
Telephone	+44 1278 727200
Fax	+44 1278 425644
E-mail	hse.uk@crcind.com
Website	www.crcind.com

Company name	CRC Industries Europe bv
Address	Touwslagerstraat 1 9240 Zele Belgium
Telephone	+32(0)52/45.60.11
Fax	+32(0)52/45.00.34
E-mail	hse@crcind.com
Website	www.crcind.com

1.4. Emergency telephone number	Tel.:(+44)(0)1278 72 7200 (office hours: 9-17h GMT)
Austria National Poisons Information Centre	+431 406 4343 (Available 24 hours a day.)
Belgium National Poisons Control Center	070 245 245 (Available 24 hours a day.)
Bulgaria National Toxicological Information Centre	+359 2 9154233 (Available 24 hours a day.)
Czech Republic National Poisons Information Centre	+420 224 919 293, or +420 224 915 402 (Hours of operation not provided.)
Denmark National Poisons Control Center	+45 82 12 12 12 (Available 24 hours a day.)
Estonia National Poisons Information Centre	16662 or abroad: (+372) 626 9390 (Monday 9:00AM to Saturday 9:00AM (closed on Sundays and on national holidays))

Finland National Poison Information Center	(09) 471 977 (direct) or (09) 4711 (exchange) (Available 24 hours a day.)
France National Poisons Control Center	ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (Available 24 hours a day.)
Hungary National Emergency Phone Number	36 80 20 11 99 (Available 24 hours a day.)
Lithuania Neatidėliotina informacija apsinuodijus	+370 5 236 20 52 or +37068753378 (Hours of operation not provided.)
Malta Accident and Emergency Department	2545 4030 (Hours of operation not provided.)
Netherlands National Poisons Information Center (NVIC)	030-274 88 88 (Only for the purpose of informing medical personnel in cases of acute intoxications)
Norway Norwegian Poison Information Center	22 59 13 00 (Available 24 hours a day.)
Portugal Poison Centre	800 250 250 (Available 24 hours a day.)
Romania Număr de telefon care poate fi apelat în caz de urgență:	021 5992300, int. 291 Spitalul Clinic de Urgență București: spital@urgentafloreasca.ro
Romania	0265 212111, 0265 211292, 0265 217235 Spitalul Clinic Județean de Urgență Târgu Mureș: secretariat@spitjudms.ro
Slovakia National Toxicological Information Centre	+421 2 5477 4166 (Available 24 hours a day.)
Sweden National Poison Information Center	112 - and ask for Poison Information (Available 24 hours a day.)
Switzerland Tox Info Suisse	145 (Available 24 hours a day.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards		
Aerosols	Category 1	H222 - Extremely flammable aerosol. H229 - Pressurized container: May burst if heated.
Health hazards		
Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Specific target organ toxicity - single exposure	Category 3 narcotic effects	H336 - May cause drowsiness or dizziness.
Environmental hazards		
Hazardous to the aquatic environment, long-term aquatic hazard	Category 2	H411 - Toxic to aquatic life with long lasting effects.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Hydrocarbons, C6-C7, n-alkanes,isoalkanes,cyclics,< 5% n-hexane, Hydrocarbons, C7-C8, cyclics

Hazard pictograms

Signal word Danger

Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurized container: May burst if heated.

H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing mist/vapours.
P271	Use only outdoors or in a well-ventilated area.

Response Not assigned.

Storage

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information According to Regulation (EC) No. 648/2004 on Detergents, as amended; Contains: >30% aliphatic hydrocarbons.

2.3. Other hazards This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Hydrocarbons, C7-C8, cyclics	30 - 60	- 927-033-1	01-2119486992-20	-	
Classification:	Flam. Liq. 2;H225, Skin Irrit. 2;H315, STOT SE 3;H336, Asp. Tox. 1;H304, Aquatic Chronic 2;H411				
Hydrocarbons, C6-C7, n-alkanes,isoalkanes,cyclics,< 5% n-hexane	10 - 30	- 921-024-6	01-2119475514-35	-	
Classification:	Flam. Liq. 2;H225, Skin Irrit. 2;H315, STOT SE 3;H336, Asp. Tox. 1;H304, Aquatic Chronic 2;H411				
Carbon dioxide	1 - 5	124-38-9 204-696-9	-	-	#
Classification:	Press. Gas;H280				
n-hexane	<3	110-54-3 203-777-6	01-2119480412-44	601-037-00-0	#
Classification:	Flam. Liq. 2;H225, Skin Irrit. 2;H315, Repr. 2;H361f, STOT SE 3;H336, STOT RE 2;H373, Asp. Tox. 1;H304, Aquatic Chronic 2;H411				
Specific Concentration Limits:	STOT RE 2;H373: C >= 5 %				

List of abbreviations and symbols that may be used above

#: This substance has been assigned Union workplace exposure limit(s).
M: M-factor
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison centre or doctor/physician if you feel unwell.

Skin contact Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion In the unlikely event of swallowing contact a physician or poison control centre. Rinse mouth.

4.2. Most important symptoms and effects, both acute and delayed
May cause drowsiness or dizziness. Headache. Nausea, vomiting. Skin irritation. May cause redness and pain.

4.3. Indication of any immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards
Extremely flammable aerosol.

5.1. Extinguishing media

Suitable extinguishing media
Alcohol resistant foam. Powder. Carbon dioxide (CO2).

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture
Contents under pressure. Pressurised container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Special fire fighting procedures
Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapour pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials. In the event of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapours. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material.

For emergency responders
Keep unnecessary personnel away. Avoid breathing mist/vapours. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

6.2. Environmental precautions
Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up
Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. The product is immiscible with water and will spread on the water surface. Prevent product from entering drains. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

6.4. Reference to other sections
For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Pressurised container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid breathing mist/vapours. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities
Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).
Storage class (TRGS 510): 2B (Aerosol dispensers and lighters)

7.3. Specific end use(s)
Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria

Components	Type	Value
Hydrocarbons, C6-C7, n-alkanes,isoalkanes,cyclics,< 5% n-hexane	TWA (MAK)	200 ppm

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	Ceiling	18000 mg/m3
		10000 ppm
	MAK	9000 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	MAK	3100 mg/m3
		1000 ppm
n-hexane (CAS 110-54-3)	MAK	72 mg/m3
		20 ppm
	STEL	288 mg/m3
		80 ppm

Belgium. Exposure Limit Values

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	54784 mg/m3
		30000 ppm
	TWA	9131 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	TWA	3155 mg/m3
		1000 ppm
n-hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm
n-hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	MAC	9000 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	MAC	3160 mg/m3
		1000 ppm
	STEL	3950 mg/m3
		1250 ppm
n-hexane (CAS 110-54-3)	MAC	72 mg/m3
		20 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	Ceiling	45000 mg/m3
	TWA	9000 mg/m3

Czech Republic. OELs. Government Decree 361

Components	Type	Value
n-hexane (CAS 110-54-3)	Ceiling	200 mg/m3
	TWA	70 mg/m3

Denmark. Exposure Limit Values

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TLV	9000 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	TLV	3100 mg/m3
		1000 ppm
n-hexane (CAS 110-54-3)	TLV	72 mg/m3
		20 ppm

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	TWA	3100 mg/m3
		1000 ppm
n-hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9100 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	STEL	4100 mg/m3
		1300 ppm
	TWA	3200 mg/m3
		1000 ppm
n-hexane (CAS 110-54-3)	STEL	2300 mg/m3
		630 ppm
	TWA	72 mg/m3
		20 ppm

France

Components	Type	Value
Hydrocarbons, C6-C7, n-alkanes,isoalkanes,cyclics,< 5% n-hexane	STEL	1500 mg/m3
	TWA	1000 mg/m3

France. OELs. Indicative Occupational Exposure Limits as Prescribed by Order of 30 June 2004, as amended

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	VME	9000 mg/m3
		9000 mg/m3
		5000 ppm
		5000 ppm

France. OELs. Occupational Exposure Limits as Prescribed by Art. R.4412-149 of Labor Code, as amended

Components	Type	Value
n-hexane (CAS 110-54-3)	VME	72 mg/m3
		20 ppm

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value	Form
Carbon dioxide (CAS 124-38-9)	VME	9000 mg/m3	
Regulatory status:	Regulatory indicative (VRI)		
		5000 ppm	
Regulatory status:	Regulatory indicative (VRI)		
Methylal (CAS 109-87-5)	VME	3100 mg/m3	
Regulatory status:	Indicative limit (VL)		
		1000 ppm	
Regulatory status:	Indicative limit (VL)		
n-hexane (CAS 110-54-3)	VLE	1500 mg/m3	Vapour.
Regulatory status:	Indicative limit (VL)		
	VME	72 mg/m3	
Regulatory status:	Regulatory binding (VRC)		
		20 ppm	
Regulatory status:	Regulatory binding (VRC)		

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9100 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	TWA	1600 mg/m3
		500 ppm
n-hexane (CAS 110-54-3)	TWA	180 mg/m3
		50 ppm

Germany - TRGS 900

Components	Type	Value
Hydrocarbons, C6-C7, n-alkanes,isoalkanes,cyclics,< 5% n-hexane	TWA	700 mg/m3

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	AGW	9100 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	AGW	1600 mg/m3
		500 ppm
n-hexane (CAS 110-54-3)	AGW	180 mg/m3
		50 ppm

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m3
		5000 ppm
	TWA	9000 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	STEL	3880 mg/m3
		1250 ppm
	TWA	3100 mg/m3
		1000 ppm
n-hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
n-hexane (CAS 110-54-3)	TWA	72 mg/m3

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	TWA	3100 mg/m3
		1000 ppm
n-hexane (CAS 110-54-3)	TWA	90 mg/m3
		25 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	TWA	3100 mg/m3
		1000 ppm
n-hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm

Italy. Occupational Exposure Limits

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	TWA	1000 ppm
n-hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	TWA	10 mg/m3
n-hexane (CAS 110-54-3)	STEL	300 mg/m3
	TWA	72 mg/m3
		20 ppm

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm
n-hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm

Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm
n-hexane (CAS 110-54-3)	TWA	72 mg/m3

Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A

Components	Type	Value
		20 ppm

Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm
n-hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm

Netherlands. OELs (binding)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
n-hexane (CAS 110-54-3)	STEL	144 mg/m3
	TWA	72 mg/m3

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TLV	9000 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	TLV	1550 mg/m3
		500 ppm
n-hexane (CAS 110-54-3)	TLV	72 mg/m3
		20 ppm

Poland. Ordinance of the Minister of Labour and Social Policy on 6 June 2014 on the maximum permissible concentrations and intensities of harmful health factors in the work environment, Journal of Laws 2014, item 817

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	27000 mg/m3
	TWA	9000 mg/m3
Methylal (CAS 109-87-5)	STEL	3500 mg/m3
	TWA	1000 mg/m3
n-hexane (CAS 110-54-3)	TWA	72 mg/m3

Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm
n-hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
Methylal (CAS 109-87-5)	TWA	1000 ppm
n-hexane (CAS 110-54-3)	TWA	50 ppm

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value
Methylal (CAS 109-87-5)	STEL	2500 mg/m3
		885 ppm
	TWA	1500 mg/m3
		531 ppm
n-hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm
n-hexane (CAS 110-54-3)	STEL	140 mg/m3
		40 ppm
	TWA	72 mg/m3
		20 ppm

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	TWA	960 mg/m3
		300 ppm
n-hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm

Spain. Occupational Exposure Limits

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9150 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	TWA	3165 mg/m3
		1000 ppm
n-hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm

Sweden

Components	Type	Value
Hydrocarbons, C6-C7, n-alkanes,isoalkanes,cyclics,< 5% n-hexane	STEL (STV)	300 ppm
	TWA	200 ppm

Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	18000 mg/m3
		10000 ppm
	TWA	9000 mg/m3
		5000 ppm
n-hexane (CAS 110-54-3)	Ceiling	180 mg/m3
		50 ppm
	TWA	72 mg/m3
		25 ppm

Switzerland

Components	Type	Value
Hydrocarbons, C6-C7, n-alkanes,isoalkanes,cyclics,< 5% n-hexane	TWA	500 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	STEL	6200 mg/m3
		2000 ppm
	TWA	3100 mg/m3
		1000 ppm
n-hexane (CAS 110-54-3)	STEL	1440 mg/m3
		400 ppm
	TWA	180 mg/m3
		50 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	27400 mg/m3
		15000 ppm
	TWA	9150 mg/m3
		5000 ppm
Methylal (CAS 109-87-5)	STEL	3950 mg/m3
		1250 ppm
	TWA	3160 mg/m3
		1000 ppm
n-hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm
n-hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm

Biological limit values

Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended)

Components	Value	Determinant	Specimen	Sampling Time
n-hexane (CAS 110-54-3)	150 µg/l	n-hexane	Blood	*
	0,2 mg/g	2-Hexanol	Creatinine in urine	*
	0,22 mmol/mol	2-Hexanol	Creatinine in urine	*
	40 ppm	n-hexane	End-exhaled air	*
	1,74 umol/l	n-hexane	Blood	*
	1,66 umol/l	n-hexane	End-exhaled air	*

* - For sampling details, please see the source document.

France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065)

Components	Value	Determinant	Specimen	Sampling Time
n-hexane (CAS 110-54-3)	5 mg/g	2,5-Hexanedione	Creatinine in urine	*

* - For sampling details, please see the source document.

Germany. TRGS 903, BAT List (Biological Limit Values)

Components	Value	Determinant	Specimen	Sampling Time
n-hexane (CAS 110-54-3)	5 mg/l	2,5-Hexandion plus 4,5-Dihydroxy-2-hexanon (nach Hydrolyse)	Urine	*

* - For sampling details, please see the source document.

Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices

Components	Value	Determinant	Specimen	Sampling Time
n-hexane (CAS 110-54-3)	18 µmol/l	hexane-2,5-dion	Urine	*
	2 mg/l	hexane-2,5-dion	Urine	*

* - For sampling details, please see the source document.

Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2

Components	Value	Determinant	Specimen	Sampling Time
n-hexane (CAS 110-54-3)	3 mg/g	2,5-hexanedione and 4,5-dihydroxy-2-hexanone	Creatinine in urine	*
	5 mg/l	2,5-hexanedione and 4,5-dihydroxy-2-hexanone	Urine	*

* - For sampling details, please see the source document.

Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4

Components	Value	Determinant	Specimen	Sampling Time
n-hexane (CAS 110-54-3)	0,2 mg/l	2,5-Hexanodiona, sin hidrólisis	Urine	*

* - For sampling details, please see the source document.

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

Components	Value	Determinant	Specimen	Sampling Time
n-hexane (CAS 110-54-3)	5 mg/l	2,5-Hexandion plus 4,5-Dihydroxy-2-hexanon	Urine	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs)

General population

Components	Value	Assessment factor	Notes
Hydrocarbons, C6-C7, n-alkanes,isoalkanes,cyclics,< 5% n-hexane (CAS -)			
Long-term, Systemic, Dermal	699 mg/kg bw/day		
Long-term, Systemic, Inhalation	608 mg/m3		
Long-term, Systemic, Oral	699 mg/kg bw/day		
Methylal (CAS 109-87-5)			
Long-term, Systemic, Dermal	18,1 mg/kg bw/day	200	Repeated dose toxicity
Long-term, Systemic, Inhalation	31,5 mg/m3	50	Repeated dose toxicity

Workers

Components	Value	Assessment factor	Notes
Hydrocarbons, C6-C7, n-alkanes,isoalkanes,cyclics,< 5% n-hexane (CAS -)			
Long-term, Systemic, Dermal	773 mg/kg bw/day		
Long-term, Systemic, Inhalation	2035 mg/m3		
Methylal (CAS 109-87-5)			
Long-term, Systemic, Dermal	17,9 mg/kg bw/day	100	Repeated dose toxicity
Long-term, Systemic, Inhalation	0,31 mg/m3	12,5	Repeated dose toxicity

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
Methylal (CAS 109-87-5)			
Freshwater	14,577 mg/l	10	
Secondary poisoning	7,3 mg/kg	30	Oral
Sediment (freshwater)	13,135 mg/kg		
Soil	4,654 mg/kg		
STP	10 g/l	1	

Exposure guidelines

Croatia ELVs: Skin designation

n-hexane (CAS 110-54-3) Can be absorbed through the skin.

Czech Republic PELs: Skin designation

n-hexane (CAS 110-54-3) Can be absorbed through the skin.

Finland Exposure Limit Values: Skin designation

n-hexane (CAS 110-54-3) Can be absorbed through the skin.

Hungary OELs: Skin designation

n-hexane (CAS 110-54-3) Can be absorbed through the skin.

Ireland Exposure Limit Values: Skin designation

n-hexane (CAS 110-54-3) Can be absorbed through the skin.

Portugal VLEs Norm on Occupatioinal Exposure: Skin designation

n-hexane (CAS 110-54-3) Can be absorbed through the skin.

Switzerland SUVA Limit Values at the Workplace: Skin designation

n-hexane (CAS 110-54-3) Can be absorbed through the skin.

8.2. Exposure controls

Appropriate engineering controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection conforming to EN 166.

Skin protection

- Hand protection When handling the product wear chemical-resistant gloves (standard EN 374). The breakthrough time of the glove should be longer than the total duration of product use. If work lasts longer than the breakthrough time, gloves should be changed part-way through. Butyl rubber gloves are recommended. Suitable gloves can be recommended by the glove supplier.

- Other Wear appropriate chemical resistant clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Chemical respirator with organic vapour cartridge and full facepiece. (Filter type AX)

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental exposure controls Inform appropriate managerial or supervisory personnel of all environmental releases. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Form	Aerosol.
Colour	Colourless.
Odour	Solvent.
Melting point/freezing point	Not available.
Boiling point or initial boiling point and boiling range	42 °C (107,6 °F)
Flammability	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	0,7 %
Explosive limit – upper (%)	17,6 %
Flash point	-6,0 °C (21,2 °F)
Auto-ignition temperature	> 200 °C (> 392 °F)
Decomposition temperature	Not available.
pH	Not applicable.
Kinematic viscosity	Not available.
Solubility	
Solubility (water)	Immiscible with water
Partition coefficient (n-octanol/water) (log value)	Not available.
Vapour pressure	Not available.
Density and/or relative density	
Relative density	0,77 g/cm3 20 °C
Vapour density	Not available.
Particle characteristics	Not available.
9.2. Other information	
9.2.1. Information with regard to physical hazard classes	No relevant additional information available.
9.2.2. Other safety characteristics	
Aerosol spray enclosed space	
Deflagration density	Not available.
Aerosol spray ignition distance	Not available.
Evaporation rate	Not available.
Heat of combustion	Not available.
VOC	731 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
10.5. Incompatible materials	Acids. Strong oxidising agents.
10.6. Hazardous decomposition products	Carbon oxides.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.
Information on likely routes of exposure	
Inhalation	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

Symptoms May cause drowsiness or dizziness. Headache. Nausea, vomiting. Skin irritation. May cause redness and pain.

11.1. Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Components	Species	Test Results
Hydrocarbons, C6-C7, n-alkanes,isoalkanes,cyclics,< 5% n-hexane		
Acute		
Dermal		
LD50	Rat	2920 mg/kg bw/day, 24 h
Inhalation		
LC50	Rat	25200 mg/m³, 4 h
Oral		
LD50	Rat	5840 mg/kg bw/day
Hydrocarbons, C7-C8, cyclics		
Acute		
Dermal		
LD50	Rat	2920 mg/kg
Inhalation		
LC50	Rat	23300 mg/m3
Oral		
LD50	Rat	5840 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory sensitisation Based on available data, the classification criteria are not met.

Skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

n-hexane (CAS 110-54-3)

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Not likely, due to the form of the product.

Mixture versus substance information Not available.

11.2. Information on other hazards

Endocrine disrupting properties The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Hydrocarbons, C6-C7, n-alkanes,isoalkanes,cyclics,< 5% n-hexane			
Aquatic			
Acute			
Algae	EC50	Algae	> 30 - < 100 mg/l, 72 h
Crustacea	EC50	Daphnia	3 mg/l, 48 h
Fish	LC50	Fish	11,4 mg/l, 96 h

Components		Species	Test Results
Hydrocarbons, C7-C8, cyclics			
Acute			
Other	IC50	Pseudokirchnerella subcapitata	10 mg/l, 72 hours
Aquatic			
Acute			
Crustacea	EC50	Daphnia magna	3 mg/l, 48 hours
Fish	LC50	Rainbow trout	3,6 mg/l, 96 hours
Chronic			
Crustacea		Daphnia magna	1 mg/l, 21 days
Fish		Rainbow trout	0,84 mg/l, 28 days

12.2. Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

n-hexane	3,9

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.

12.6. Endocrine disrupting properties The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.
GWP: 0

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number UN1950

14.2. UN proper shipping name AEROSOLS

14.3. Transport hazard class(es)

Class 2.1

Subsidiary risk Not assigned.

Hazard No. (ADR) Not assigned.

Tunnel restriction code D

ADR/RID - Classification code: 5F

14.4. Packing group Not applicable

14.5. Environmental hazards Yes

14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

14.1. UN number	UN1950
14.2. UN proper shipping name	AEROSOLS
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	Not assigned.
14.4. Packing group	Not applicable
14.5. Environmental hazards	Yes
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

14.1. UN number	UN1950
14.2. UN proper shipping name	AEROSOLS, Marine pollutant
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	Not assigned.
14.4. Packing group	Not applicable
14.5. Environmental hazards	
Marine pollutant	Yes
EmS	F-D,S-U
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
14.7. Maritime transport in bulk according to IMO instruments	Not established.

ADR; IATA; IMDG

Marine pollutant

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Carbon dioxide (CAS 124-38-9)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

n-hexane (CAS 110-54-3)

Other regulations	The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.
National regulations	Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.
15.2. Chemical safety assessment	No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road.
AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).
ATE: Acute Toxicity Estimate according to REGULATION (EC) No 1272/2008 (CLP).
CAS: Chemical Abstract Service.
Ceiling: Short Term Exposure Limit Ceiling value.
CEN: European Committee for Standardization.
CLP: Classification, Labeling and Packaging REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.
GWP: Global Warming Potential.
IATA: International Air Transport Association.
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.
IMDG: International Maritime Dangerous Goods.
MAC: Maximum Allowed Concentration.
MAK: Threshold limit values Germany (Maximale Arbeitsplatzkonzentration - DFG).
MARPOL: International Convention for the Prevention of Pollution from Ships.
PBT: Persistent, bioaccumulative and toxic.
REACH: Registration, Evaluation and Authorization of Chemicals (REGULATION (EC) No 1907/2006 concerning Registration, Evaluation Authorization and Restriction of Chemicals).
RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer).
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
STEL: Short term exposure limit.
TLV: Threshold Limit Value.
TWA: Time Weighted Average.
VLE: Exposure Limit Value.
VME: Exposure Average Value.
VOC: Volatile organic compounds.
vPvB: Very persistent and very bioaccumulative.
STEL: Short-term Exposure Limit.

References	Not available.
Information on evaluation method leading to the classification of mixture	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements, which are not written out in full under sections 2 to 15	H225 Highly flammable liquid and vapour. H280 Contains gas under pressure; may explode if heated. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H336 May cause drowsiness or dizziness. H361f Suspected of damaging fertility. H373 May cause damage to organs through prolonged or repeated exposure. H411 Toxic to aquatic life with long lasting effects.
Revision information	None.
Training information	Follow training instructions when handling this material.
Disclaimer	CRC Industries Europe UK Limited cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. Apart from any fair dealing for purposes of study, research and review of health, safety and environmental risks, no part of these documents may be reproduced by any process without written permission from CRC. The products are governed by Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP); Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (in each case, as amended and replaced) and other applicable laws. It is an importers or downstream users responsibility to ensure compliance of product they import. An SDS provided in the official language(s) of a country is not a guarantee of compliance in that country.