Shell GTL Solvent GS 215

Version 1.2 Revision Date 2023.04.28 Print Date 2023.05.03

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Shell GTL Solvent GS 215

Product code : Q6541, Q6536

Synonyms : Hydrocarbons C12-C15, n-alkanes, isoalkanes, <2%

aromatics

CAS-No. : 1437281-03-2

Manufacturer or supplier's details

Supplier :

SHELL EASTERN CHEMICALS (S)

A REGISTERED BUSINESS OF SHELL EASTERN

TRADING (PTE) LTD (UEN:198902087C)

9 North Buona Vista Drive, #07-01

The Metropolis Tower 1 Singapore 138588

Singapore

Telephone : Shell Tsing Yi Installation Central Control Room (TYI CCR)

+65 6384 8269

Telefax : +65 6384 8454

Contact for Safety Data

Sheet

Emergency telephone

number

: + (65) 6542 9595 (Alert-SGS)

Recommended use of the chemical and restrictions on use

Recommended use : Lubricant

Solvent.

Restrictions on use :

This product must not be used in applications other than the

above without first seeking the advice of the supplier.

2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 4
Aspiration hazard : Category 1

GHS label elements

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Hazard pictograms

Signal word : Danger

Hazard statements : PHYSICAL HAZARDS:

H227 Combustible liquid. HEALTH HAZARDS:

H304 May be fatal if swallowed and enters airways.

ENVIRONMENTAL HAZARDS:

Not classified as an environmental hazard under GHS criteria.

Precautionary statements

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames

and other ignition sources. No smoking.

P243 Take precautionary measures against static discharge.

P280 Wear protective gloves/ protective clothing/ eye

protection/ face protection.

Response:

P370 + P378 In case of fire: Use appropriate media to

extinguish.

P301 + P310 IF SWALLOWED: Immediately call a POISON

CENTER/doctor.

P331 Do NOT induce vomiting.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal:

P501 Dispose of contents and container to appropriate waste

site or reclaimer in accordance with local and national

regulations.

Other hazards which do not result in classification

May form flammable/explosive vapour-air mixture. This material is a static accumulator. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable airvapour mixtures can occur. Repeated exposure may cause skin dryness or cracking.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Hazardous components

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Chemical name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
Alkanes, C12-15- branched and linear	1437281-03-2	Flam. Liq.4; H227 Asp. Tox.1; H304	<= 100

For explanation of abbreviations see section 16.

4. FIRST-AID MEASURES

General advice : Not expected to be a health hazard when used under normal

conditions.

If inhaled : No treatment necessary under normal conditions of use.

If symptoms persist, obtain medical advice.

In case of skin contact : Remove contaminated clothing. Flush exposed area with

> water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.

In case of eye contact : Flush eye with copious quantities of water.

Remove contact lenses, if present and easy to do. Continue

rinsing.

If persistent irritation occurs, obtain medical attention.

If swallowed Call emergency number for your location / facility.

> If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.

Most important symptoms and effects, both acute and delayed

Not considered to be an inhalation hazard under normal

conditions of use.

Possible respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat,

coughing, and/or difficulty breathing.

No specific hazards under normal use conditions.

Skin irritation signs and symptoms may include a burning

sensation, redness, or swelling.

No specific hazards under normal use conditions. Eye irritation signs and symptoms may include a burning

sensation, redness, swelling, and/or blurred vision.

If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest

congestion, shortness of breath, and/or fever.

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	If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.	
	Defatting dermatitis signs and synburning sensation and/or a dried/o	
Protection of first-aiders	: When administering first aid, ensurappropriate personal protective edincident, injury and surroundings.	,
Notes to physician	: Call a doctor or poison control cer Potential for chemical pneumonitis Treat symptomatically.	•

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Foam, water spray or fog. Dry chemical powder, carbon

dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing

media

: Do not use water in a jet.

Specific hazards during

firefighting

: Clear fire area of all non-emergency personnel. Hazardous combustion products may include:

A complex mixture of airborne solid and liquid particulates and

gases (smoke). Carbon monoxide.

Unidentified organic and inorganic compounds.

Flammable vapours may be present even at temperatures

below the flash point.

The vapour is heavier than air, spreads along the ground and

distant ignition is possible.

Will float and can be reignited on surface water.

Specific extinguishing

methods

Standard procedure for chemical fires.

Keep adjacent containers cool by spraying with water.

Special protective equipment

for firefighters

: Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if

large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to

relevant Standards (e.g. Europe: EN469).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and

Observe all relevant local and international regulations. Notify authorities if any exposure to the general public or the

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emergency procedures	environment occurs or is likely to Local authorities should be advise cannot be contained.	
	 Avoid contact with skin, eyes and Isolate hazard area and deny ent unprotected personnel. Do not breathe fumes, vapour. Do not operate electrical equipment 	ry to unnecessary or
Environmental precautions	: Shut off leaks, if possible without possible sources of ignition in the appropriate containment to avoid contamination. Prevent from spre ditches or rivers by using sand, expanding to disperse the value as af elocation for example by using precautionary measures against selectrical continuity by bonding are equipment. Monitor area with combustible ga	e surrounding area. Use environmental eading or entering drains, arth, or other appropriate vapour or to direct its flow to ing fog sprays. Take static discharge. Ensure and grounding (earthing) all
Methods and materials for containment and cleaning up	: For small liquid spills (< 1 drum), means to a labeled, sealable consafe disposal. Allow residues to eappropriate absorbent material ar contaminated soil and dispose of For large liquid spills (> 1 drum), means such as vacuum truck to a safe disposal. Do not flush away as contaminated waste. Allow resup with an appropriate absorbent safely. Remove contaminated soil Ventilate contaminated area thorough the safely.	tainer for product recovery or evaporate or soak up with an and dispose of safely. Remove safely. transfer by mechanical a salvage tank for recovery or residues with water. Retain sidues to evaporate or soak material and dispose of ill and dispose of safely bughly.
Additional advice	 specialist advice. For guidance on selection of pers see Section 8 of this Safety Data For guidance on disposal of spille this Safety Data Sheet. 	Sheet.

7. HANDLING AND STORAGE

Handling

General Precautions

: Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see

Section 8 of this Safety Data Sheet.

Use the information in this data sheet as input to a risk assessment of local circumstances to help determine

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appropriate controls for safe handling, storage and disposal of

this material.

Ensure that all local regulations regarding handling and

storage facilities are followed.

Avoid inhaling vapour and/or mists. Advice on safe handling

Avoid contact with skin, eyes and clothing.

Extinguish any naked flames. Do not smoke. Remove ignition

sources. Avoid sparks.

Use local exhaust ventilation if there is risk of inhalation of

vapours, mists or aerosols.

Bulk storage tanks should be diked (bunded).

When using do not eat or drink.

The vapour is heavier than air, spreads along the ground and

distant ignition is possible.

Avoidance of contact : Strong oxidising agents.

Product Transfer : Even with proper grounding and bonding, this material can still

> accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur. Be aware of handling operations that may give rise to additional hazards that result from the accumulation of static charges. These include but are not limited to pumping (especially turbulent flow), mixing, filtering, splash filling, cleaning and filling of tanks and containers, sampling, switch loading, gauging, vacuum truck operations, and mechanical movements. These activities may lead to static discharge e.g. spark formation. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/s until fill pipe submerged to twice its diameter, then ≤ 7 m/s). Avoid splash

filling. Do NOT use compressed air for filling, discharging, or

handling operations.

Refer to guidance under Handling section.

Storage

Conditions for safe storage : Refer to section 15 for any additional specific legislation

covering the packaging and storage of this product.

Other data : Storage Temperature:

Ambient.

Bulk storage tanks should be diked (bunded).

Locate tanks away from heat and other sources of ignition. Cleaning, inspection and maintenance of storage tanks is a specialist operation, which requires the implementation of

strict procedures and precautions.

Must be stored in a diked (bunded) well- ventilated area, away from sunlight, ignition sources and other sources of heat. Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not

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Version 1.2	Revision Date 2023.04.28 harmful or toxic to man or to the envir Electrostatic charges will be generate Electrostatic discharge may cause fire continuity by bonding and grounding (to reduce the risk. The vapours in the head space of the in the flammable/explosive range and flammable.	d during pumping. e. Ensure electrical earthing) all equipment storage vessel may lie
Packaging material	Suitable material: For containers, or containers, steel, stainless steel., For container princ silicate paint. Unsuitable material: Avoid prolonged butyl or nitrile rubbers.	aints, use epoxy paint,
Container Advice	Do not cut, drill, grind, weld or perforn near containers.	n similar operations on or
Specific use(s)	Not applicable	
	See additional references that provide for liquids that are determined to be s American Petroleum Institute 2003 (P Ignitions Arising out of Static, Lightnin National Fire Protection Agency 77 (F on Static Electricity). IEC/TS 60079-32-1: Electrostatic haz	tatic accumulators: rotection Against g and Stray Currents) or tecommended Practices

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Aliphatic dearom. solvents 200 - 250	Not Assigned	TWA	1,050 mg/m3	OEL based on European Hydrocarbon Solvents Producers (CEFIC- HSPA) methodology.

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

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Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA) , Germany http://www.dguv.de/inhalt/index.jsp

L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

Engineering measures

: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include:

Use sealed systems as far as possible.

Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits.

Local exhaust ventilation is recommended.

Firewater monitors and deluge systems are recommended.

Eye washes and showers for emergency use.

Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

General Information:

Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Define procedures for safe handling and maintenance of controls.

Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.

Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.

Drain down system prior to equipment break-in or maintenance.

Retain drain downs in sealed storage pending disposal or subsequent recycle.

Personal protective equipment

Protective measures

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

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Respiratory protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. If air-filtering respirators are suitable for conditions of use: Select a filter suitable for organic gases and vapours [Type A boiling point >65°C (149°F)].

Hand protection Remarks

Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. Longer term protection: butylrubber Nitrile rubber gloves.

Incidental contact/Splash protection: Nitrile rubber gloves. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For shortterm/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Eye protection

: If material is handled such that it could be splashed into eyes. protective eyewear is recommended.

Skin and body protection

: Skin protection is not required under normal conditions of use. For prolonged or repeated exposures use impervious clothing over parts of the body subject to exposure. If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to relevant Standard, and provide employee skin care programmes.

Wear antistatic and flame-retardant clothing, if a local risk

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assessment deems it so.

Hygiene measures : Wash hands before eating, drinking, smoking and using the

toilet.

Launder contaminated clothing before re-use.

Do not ingest. If swallowed, then seek immediate medical

assistance.

Environmental exposure controls

General advice : Local guidelines on emission limits for volatile substances

must be observed for the discharge of exhaust air containing

vapour.

Minimise release to the environment. An environmental assessment must be made to ensure compliance with local

environmental legislation.

Information on accidental release measures are to be found in

section 6.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid.

Colour : colourless
Odour : Hydrocarbon

Odour Threshold : Data not available pH : Data not available Melting / freezing point : Data not available

Boiling point/boiling range : 210 - 260 °C / 410 - 500 °F

Flash point : 83.5 °C / 182.3 °F

Evaporation rate : Data not available Flammability (solid, gas) : Not applicable

Upper explosion limit : 7 %(V)

Lower explosion limit : 0.5 %(V)

Vapour pressure : Data not available (50 °C / 122 °F)

Relative vapour density : Data not available

Relative density : < 0.8Method: ASTM D4052

Density : $< 800 \text{ kg/m} 3 (15 \,^{\circ}\text{C} / 59 \,^{\circ}\text{F})$

Method: ASTM D4052

Solubility(ies)

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Water solubility : insoluble

Partition coefficient: n-

octanol/water

: log Pow: > 5.5

Auto-ignition temperature : $> 200 \, ^{\circ}\text{C} / > 392 \, ^{\circ}\text{F}$

Decomposition temperature : Data not available

Viscosity

Viscosity, dynamic : Data not available

Viscosity, kinematic : < 2 mm2/s (25 °C / 77 °F)

Method: ASTM D445

Explosive properties : Not classified

Oxidizing properties : Not applicable

Surface tension : Data not available

Conductivity: < 100 pS/m

The conductivity of this material makes it a static

accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10,000 pS/m., Whether a liquid is nonconductive or semi-conductive, the precautions are the same., A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid

Particle size : Data not available

Molecular weight : Data not available

10. STABILITY AND REACTIVITY

Reactivity : The product does not pose any further reactivity hazards in

addition to those listed in the following sub-paragraph.

Chemical stability : No hazardous reaction is expected when handled and stored

according to provisions Stable under normal conditions of use.

Possibility of hazardous

reactions

Conditions to avoid

: Reacts with strong oxidising agents.

: Avoid heat, sparks, open flames and other ignition sources.

In certain circumstances product can ignite due to static

electricity.

Incompatible materials : Strong oxidising agents.

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Hazardous decomposition

products

: Hazardous decomposition products are not expected to form

during normal storage.

Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this

material undergoes combustion or thermal or oxidative

degradation.

11. TOXICOLOGICAL INFORMATION

: Information given is based on data obtained from similar Basis for assessment

substances.

Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for

individual component(s).

exposure

Information on likely routes of : Exposure may occur via inhalation, ingestion, skin absorption,

skin or eye contact, and accidental ingestion.

Acute toxicity

Product:

Acute oral toxicity : LD 50 Rat, male and female: > 5,000 mg/kg

Method: OECD Test Guideline 401

Remarks: Based on available data, the classification criteria

are not met.

: LC 50 Rat, male and female: > 2 -<= 10 mg/l Acute inhalation toxicity

> Exposure time: 4 h Test atmosphere: vapour

Method: Test(s) equivalent or similar to OECD Test Guideline

Remarks: LC50 greater than near-saturated vapour

concentration.

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

Acute dermal toxicity : LD 50 Rat, male and female: > 2,000 mg/kg

Method: Test(s) equivalent or similar to OECD Test Guideline

Remarks: Based on available data, the classification criteria

are not met.

Components:

Alkanes, C12-15-branched and linear:

Acute oral toxicity : LD 50 Rat, male and female: > 5,000 mg/kg

Method: OECD Test Guideline 401

Remarks: Based on available data, the classification criteria

are not met.

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Acute inhalation toxicity : LC 50 Rat, male and female: > 20 mg/l

Exposure time: 4 h
Test atmosphere: vapour

Method: Test(s) equivalent or similar to OECD Test Guideline

403

Remarks: LC50 greater than near-saturated vapour

concentration.

Based on data from similar materials

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

Acute dermal toxicity : LD 50 Rat, male and female: > 2,000 mg/kg

Method: Test(s) equivalent or similar to OECD Test Guideline

402

Remarks: Based on available data, the classification criteria

are not met.

Skin corrosion/irritation

Product:

Species: Rabbit

Method: Test(s) equivalent or similar to OECD Test Guideline 404

Remarks: Moderately irritating to skin (but insufficient to classify)., Prolonged/repeated contact

may cause defatting of the skin which can lead to dermatitis.

Components:

Alkanes, C12-15-branched and linear:

Species: Rabbit

Method: Test(s) equivalent or similar to OECD Test Guideline 404

Remarks: Moderately irritating to skin (but insufficient to classify).. Prolonged/repeated contact

may cause defatting of the skin which can lead to dermatitis.

Serious eye damage/eye irritation

Product:

Species: Rabbit

Method: OECD Test Guideline 405

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

Components:

Alkanes, C12-15-branched and linear:

Species: Rabbit

Method: OECD Test Guideline 405

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

Respiratory or skin sensitisation

Product:

Species: Guinea pig

Method: OECD Test Guideline 406

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

Components:

Alkanes, C12-15-branched and linear:

Species: Guinea pig

Method: OECD Test Guideline 406

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

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Method: Test(s) equivalent or similar to OECD Guideline 471

Remarks: Based on available data, the classification criteria

are not met.

: Method: Test(s) equivalent or similar to OECD Test Guideline

473

Remarks: Based on available data, the classification criteria

are not met.

Method: Test(s) equivalent or similar to OECD Test Guideline

476

Remarks: Based on available data, the classification criteria

are not met.

Test species: MouseMethod: Test(s) equivalent or similar to

OECD Test Guideline 474

Remarks: Based on available data, the classification criteria

are not met.

Germ cell mutagenicity-

Assessment

: This product does not meet the criteria for classification in

categories 1A/1B.

Components:

Alkanes, C12-15-branched and linear:

Genotoxicity in vitro

: Method: Test(s) equivalent or similar to OECD Guideline 471 Remarks: Based on available data, the classification criteria

are not met.

: Method: Test(s) equivalent or similar to OECD Test Guideline

473

Remarks: Based on available data, the classification criteria

are not met.

: Method: Test(s) equivalent or similar to OECD Test Guideline

476

Remarks: Based on available data, the classification criteria

are not met.

: Test species: MouseMethod: Test(s) equivalent or similar to

OECD Test Guideline 474

Remarks: Based on available data, the classification criteria

are not met.

Germ cell mutagenicity-

Assessment

This product does not meet the criteria for classification in

categories 1A/1B.

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Carcinogenicity

Product:

Species: Rat, (male and female) Application Route: Inhalation

Method: Test(s) equivalent or similar to OECD Test Guideline 453

Remarks: Weight of evidence does not support classification as a carcinogen

Species: Mouse, (male and female) Application Route: Inhalation

Method: Test(s) equivalent or similar to OECD Test Guideline 453

Remarks: Weight of evidence does not support classification as a carcinogen

Carcinogenicity - : This product does not meet the criteria for classification in

Assessment categories 1A/1B.

Components:

Alkanes, C12-15-branched and linear:

Species: Rat, (male and female) Application Route: Inhalation

Method: Test(s) equivalent or similar to OECD Test Guideline 453

Remarks: Weight of evidence does not support classification as a carcinogen

Species: Mouse, (male and female) Application Route: Inhalation

Method: Test(s) equivalent or similar to OECD Test Guideline 453

Remarks: Weight of evidence does not support classification as a carcinogen

Carcinogenicity - : This product does not meet the criteria for classification in

Assessment categories 1A/1B.

Material	GHS/CLP Carcinogenicity Classification
Alkanes, C12-15-branched and linear	No carcinogenicity classification.

Reproductive toxicity

Product:

: Species: Rat

Sex: male and female Application Route: Oral

Method: OECD Test Guideline 416

Remarks: Based on available data, the classification criteria

are not met.

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Effects on foetal Species: Rat, female development

Application Route: Oral

Method: Test(s) equivalent or similar to OECD Test Guideline

Remarks: Based on available data, the classification criteria

are not met.

Species: Rat, female

Application Route: Inhalation

Method: Test(s) equivalent or similar to OECD Test Guideline

Remarks: Based on available data, the classification criteria

are not met.

Reproductive toxicity -

Assessment

: This product does not meet the criteria for classification in

categories 1A/1B.

Components:

Alkanes, C12-15-branched and linear:

Species: Rat

Sex: male and female Application Route: Oral

Method: OECD Test Guideline 416

Remarks: Based on available data, the classification criteria

are not met.

Effects on foetal

development

: Species: Rat, female

Application Route: Oral Method: Test(s) equivalent or similar to OECD Test Guideline

Remarks: Based on available data, the classification criteria

are not met.

Species: Rat. female

Application Route: Inhalation

Method: Test(s) equivalent or similar to OECD Test Guideline

Remarks: Based on available data, the classification criteria

are not met.

Reproductive toxicity -

Assessment

categories 1A/1B.

This product does not meet the criteria for classification in

STOT - single exposure

Product:

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

Components:

Alkanes, C12-15-branched and linear:

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

STOT - repeated exposure

Product:

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

Components:

Alkanes, C12-15-branched and linear:

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

Repeated dose toxicity

Product:

Rat, male and female: Application Route: Oral

Method: Test(s) equivalent or similar to OECD Test Guideline 408

Target Organs: No specific target organs noted

Rat, male and female: Application Route: Inhalation Test atmosphere: vapour

Method: Test(s) equivalent or similar to OECD Test Guideline 413

Target Organs: No specific target organs noted

Components:

Alkanes, C12-15-branched and linear:

Rat, male and female: Application Route: Oral

Method: Test(s) equivalent or similar to OECD Test Guideline 408

Target Organs: No specific target organs noted

Rat, male and female: Application Route: Inhalation Test atmosphere: vapour

Method: Test(s) equivalent or similar to OECD Test Guideline 413

Target Organs: No specific target organs noted

Aspiration toxicity

Product:

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Components:

Alkanes, C12-15-branched and linear:

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

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Further information

Product:

Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

Components:

Alkanes, C12-15-branched and linear:

Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

12. ECOLOGICAL INFORMATION

Basis for assessment : Incomplete ecotoxicological data are available for this product.

The information given below is based partly on a knowledge of

the components and the ecotoxicology of similar products.

Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for

individual component(s).

Ecotoxicity

Product:

Toxicity to fish (Acute

toxicity)

: LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203 Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to crustacean (Acute

toxicity)

: EL50 (Daphnia magna (Water flea)): > 1,000 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202 Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to algae/aquatic plants (Acute toxicity)

: EL50 (Pseudokirchneriella subcapitata (algae)): > 1,000 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201 Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to fish (Chronic

toxicity)

: Remarks: Data not available

Toxicity to crustacean

(Chronic toxicity)

: Remarks: Data not available

Toxicity to microorganisms

(Acute toxicity)

: Remarks: Data not available

Components:

Alkanes, C12-15-branched and linear :

Toxicity to fish (Acute : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l

toxicity) Exposure time: 96 h

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Method: OECD Test Guideline 203 Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to crustacean (Acute

toxicity)

: EL50 (Daphnia magna (Water flea)): > 1,000 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202 Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to algae/aquatic

plants (Acute toxicity)

: EL50 (Pseudokirchneriella subcapitata (algae)): > 1,000 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201 Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to microorganisms

(Acute toxicity)

: Remarks: Data not available

Toxicity to fish (Chronic

toxicity)

TOXICITY TO HISTI (CHITOTHIC

Toxicity to

: Remarks: Data not available: Remarks: Data not available

crustacean(Chronic toxicity)

Persistence and degradability

Product:

Biodegradability : Biodegradation: 80 %

Exposure time: 28 d

Method: OECD Test Guideline 301F

Remarks: Readily biodegradable., Oxidises rapidly by photo-

chemical reactions in air.

Components:

Alkanes, C12-15-branched and linear:

Biodegradability : Biodegradation: 80 % Exposure time: 28 d

Exposure time. 26 d

Method: OECD Test Guideline 301F Remarks: Readily biodegradable.

Oxidises rapidly by photo-chemical reactions in air.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Has the potential to bioaccumulate.

Partition coefficient: n-

: $\log Pow: > 5.5$

octanol/water Components:

Alkanes, C12-15-branched and linear:

Bioaccumulation : Remarks: Has the potential to bioaccumulate.

Mobility in soil

Product:

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Mobility : Remarks: Floats on water., If it enters soil, it will adsorb to soil

particles and will not be mobile.

Components:

Alkanes, C12-15-branched and linear:

Mobility : Remarks: Floats on water., If it enters soil, it will adsorb to soil

particles and will not be mobile.

Other adverse effects

Product:

Results of PBT and vPvB

assessment

: The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not

considered to be PBT or vPvB.

Components:

Alkanes, C12-15-branched and linear:

Results of PBT and vPvB

assessment

: The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not

considered to be PBT or vPvB.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Recover or recycle if possible.

It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water courses.

Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination.

Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.

established beforenand.

Waste, spills or used product is dangerous waste.

Disposal should be in accordance with applicable regional,

national, and local laws and regulations.

Local regulations may be more stringent than regional or national requirements and must be complied with.

MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.

Contaminated packaging : Drain container thoroughly.

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> After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture,

cut or weld uncleaned drums.

Send to drum recoverer or metal reclaimer.

Comply with any local recovery or waste disposal regulations.

14. TRANSPORT INFORMATION

International Regulations

ADR

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Remarks : Special Precautions: Refer to Section 7, Handling & Storage,

for special precautions which a user needs to be aware of or

needs to comply with in connection with transport.

Additional Information : This product may be transported under nitrogen blanketing.

> Nitrogen is an odourless and invisible gas. Exposure to nitrogen enriched atmospheres displaces available oxygen which may cause asphyxiation or death. Personnel must observe strict safety precautions when involved with a

confined space entry.

15. REGULATORY INFORMATION

National regulatory information

Hong Kong Dangerous Goods Ordinance (CAP. 295) - Dangerous Goods (General) Regulations. Hong Kong Factories and Industrial Undertakings Ordinance (CAP. 59) - Factories and Industrial Undertakings (Dangerous Substances) Regulations.

Hong Kong Waste Disposal Ordinance (CAP. 354) Section 35 - Code of Practice on the Packaging, Labelling and Storage of chemical Wastes.

Other international regulations

The components of this product are reported in the following inventories:

ENCS Listed **KECI** Listed **EINECS** Listed **TSCA** Listed

IECSC Notified with Restrictions.

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Notified with Restrictions. **PICCS**

DSL Listed

16. OTHER INFORMATION

Full text of H-Statements

H227 Combustible liquid.

H304 May be fatal if swallowed and enters airways.

Full text of other abbreviations

Aspiration hazard Asp. Tox. Flammable liquids Flam. Liq.

Abbreviations and Acronyms

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate: NOM - Official Mexican Norm: NTP - National Toxicology Program: NZIoC -New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG -Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Further information

Training advice : Provide adequate information, instruction and training for

operators.

Other information : A vertical bar (|) in the left margin indicates an amendment

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Sources of key data used to compile the Safety Data Sheet

The quoted data are from, but not limited to, one or more sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU IUCLID date base, EC 1272 regulation, etc).

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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