

SAFETY DATA SHEET

SHELL GADUS S2 V100 3

Infosafe No.: HY2G9

ISSUED Date : 21/03/2023

ISSUED by: VIVA ENERGY AUSTRALIA PTY
LTD (FORMERLY: THE SHELL COMPANY OF
AUSTRALIA)

Section 1 - Identification

Product Identifier

SHELL GADUS S2 V100 3

Product Code

001D8464

Company Name

VIVA ENERGY AUSTRALIA PTY LTD (FORMERLY: THE SHELL COMPANY OF AUSTRALIA) (ABN 46 004 610 459)

Address720 Bourke Street Docklands
Victoria 3008 Australia**Telephone/Fax Number**

Tel: +61 (0)3 8823 4444

Fax: +61 (0)3 8823 4800

Emergency Phone Number

1800 651 818 (Australia). ; POISONS INFORMATION CENTRE: 13 11 26 (Australia).

Recommended use of the chemical and restrictions on use

Recommended use: Automotive and industrial grease.

Other Names

Name	Product Code
SHELL GADUS S2 V100 3	800001006646 AU

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture

Not classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Signal Word (s)

NO SIGNAL WORD

Hazard Statement (s)

PHYSICAL HAZARDS:

Not classified as a physical hazard under GHS criteria.

HEALTH HAZARDS:

Not classified as a health hazard under GHS criteria.

ENVIRONMENTAL HAZARDS:

Not classified as an environmental hazard under GHS criteria.

Pictogram (s)

No Hazard Symbol required

Precautionary Statement – Prevention

No precautionary phrases.

UNCONTROLLED COPY

Precautionary Statement – Response

No precautionary phrases.

Precautionary Statement – Storage

No precautionary phrases.

Precautionary Statement – Disposal

No precautionary phrases.

Other Information

GHS Classification:

Based on available data this substance / mixture does not meet the classification criteria.

Other hazards which do not result in classification:

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis. Used grease may contain harmful impurities. High-pressure injection under the skin may cause serious damage including local necrosis. Not classified as flammable but will burn.

Section 3 - Composition and Information on Ingredients

Ingredients

Name	CAS	Proportion
Alkaryl amine	68411-46-1	0.1-0.9 % w/w
Zinc naphthenate	12001-85-3	0.1-0.9 % w/w
Triazole derivative	91273-04-0	0.01-0.09 % w/w
Alkyl thiadiazole	13539-13-4	0.01-0.09 % w/w

Other Information

Substance / Mixture: Mixture

Chemical nature:

A lubricating grease containing highly-refined mineral oils and additives.

The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

Hazardous components:

Chemical name: Alkaryl amine

Classification: Repr.2; H361

Chemical name: Zinc naphthenate

Classification:

Skin Sens. 1B; H317

Eye Irrit. 2; H319

Aquatic Chronic 2; H411

Chemical name: Triazole derivative

Classification:

Skin Corr 1B; H314

Skin Sens. 1A; H317

Aquatic Acute 2; H401

Aquatic Chronic 2; H411

Chemical name: Alkyl thiadiazole

Classification:

Skin Irrit. 2; H315

Skin Sens. 1A; H317

Acute Tox. 4; H332

Aquatic Chronic 4; H413

For explanation of abbreviations see section 16.

Section 4 - First Aid Measures

Inhalation

No treatment necessary under normal conditions of use.

If symptoms persist, obtain medical advice.

Ingestion

In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.

Skin

Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.

If persistent irritation occurs, obtain medical attention.

When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop.

Obtain medical attention even in the absence of apparent wounds.

Eye

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.

Advice to Doctor

Treat symptomatically.

High pressure injection injuries require prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function.

Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anaesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anaesthetics, and wide exploration is essential.

Protection for First Aiders

When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.

Most important symptoms/effects, acute, delayed and aggravated medical conditions

Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas.

Ingestion may result in nausea, vomiting and/or diarrhoea.

Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection.

Section 5 - Firefighting 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.

Special Protective Equipment for fire fighters

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).

Specific Methods

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

Hazardous combustion products may include:

A complex mixture of airborne solid and liquid particulates and gases (smoke).

Carbon monoxide may be evolved if incomplete combustion occurs.

UNCONTROLLED COPY

Unidentified organic and inorganic compounds.

Hazchem Code

NONE

Decomposition Temperature

Data not available

Section 6 - Accidental Release Measures

Methods and materials for containment and cleaning up

Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.

Personal Precautions

Avoid contact with skin and eyes.

Environmental Precautions

Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.

Other Information

Additional advice:

For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet.

For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.

Section 7 - Handling and Storage

Handling and storage

General Precautions:

Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols.

Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Precautions for Safe Handling

Avoid prolonged or repeated contact with skin.

Avoid inhaling vapour and/or mists.

When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.

Avoidance of contact:

Strong oxidising agents.

Conditions for safe storage, including any incompatibilities

Other data:

Keep container tightly closed and in a cool, well-ventilated place.

Use properly labeled and closable containers.

Store at ambient temperature.

Packaging material:

Suitable material: For containers or container linings, use mild steel or high density polyethylene.

Unsuitable material: PVC.

Container Advice:

Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

Section 8 - Exposure Controls and Personal Protection

Occupational exposure limit values

Components with workplace control parameters:

Components / CAS-No. / Value type (Form of exposure) / Control parameters / Permissible concentration / Basis

Oil mist, mineral Not Assigned TWA (Mist) 5 mg/m³ AU OEL

Oil mist, mineral Not Assigned TWA (Mist) 5 mg/m³ Australia. Workplace Exposure Standards for Airborne Contaminants.

UNCONTROLLED COPY

Oil mist, mineral Not Assigned TWA (Mist) 5 mg/m³ OSHA Z-1

Oil mist, mineral Not Assigned TWA (Inhalable particulate matter) 5 mg/m³ ACGIH

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.

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 Securite, (INRS), France <http://www.inrs.fr/accueil>

Biological Monitoring

Biological occupational exposure limits:

Biological Limit Values (BLV) have not been established for this material.

Engineering Controls

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:

Adequate ventilation to control airborne concentrations.

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

General Information:

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.

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.

Due to the product's semi-solid consistency, generation of mists and dusts is unlikely to occur.

Environmental exposure controls

General advice:

Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Section 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water.

Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

Respiratory Protection

No respiratory protection is ordinarily required under normal conditions of use.

In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material.

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 suitable, select an appropriate combination of mask and filter.

Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65°C (149°F)].

Eye and Face Protection

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

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)

UNCONTROLLED COPY

made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubber gloves. 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.

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 short-term/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.

Personal Protective Equipment

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

Thermal Hazards

Not applicable

Body Protection

Skin protection is not ordinarily required beyond standard work clothes.

It is good practice to wear chemical resistant gloves.

Section 9 - Physical and Chemical Properties

Properties	Description	Properties	Description
Form	Semi Solid	Appearance	Semi-solid at room temperature.
Colour	Light brown	Odour	Slight hydrocarbon
Melting/Freezing Point	Not applicable	Boiling Point	Data not available
Decomposition Temperature	Data not available	Solubility in Water	Negligible
pH	Not applicable	Vapour Pressure	< 0.5 Pa (20 °C / 68 °F) Estimated value(s)
Relative Vapour Density (Air=1)	> 1 Estimated value(s)	Evaporation Rate	Data not available
Odour Threshold	Data not available	Partition Coefficient: n-octanol/water (log value)	Log Pow: > 6 (based on information on similar products)
Dropping Point	180 °C / 356 °F Method: IP 396	Density	900 kg/m3 (15.0 °C / 59.0 °F) Method: Unspecified
Flash Point	Not applicable	Flammability	(solid, gas): Not applicable (liquids): Not classified as flammable but will burn.
Auto-Ignition Temperature	> 320 °C / 608 °F	Explosion Limit - Upper	Typical 10 %(V)
Explosion Limit - Lower	Typical 1 %(V)	Explosion Properties	Classification Code: Not classified
Oxidising Properties	Data not available	Initial boiling point and boiling range	Data not available
Kinematic Viscosity	Not applicable	Dynamic Viscosity	Data not available
Solubility in other solvents (kg/m3)	Data not available	Particle Size	Data not available
Relative Density	0.900 (15 °C / 59 °F)		

Other Information

Conductivity:

This material is not expected to be a static accumulator.

Section 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

Stable.

Possibility of hazardous reactions

Reacts with strong oxidising agents.

Conditions to Avoid

Extremes of temperature and direct sunlight.

Incompatible Materials

Strong oxidising agents.

Hazardous Decomposition Products

No decomposition if stored and applied as directed.

Section 11 - Toxicological Information

Toxicology Information

Basis for assessment:

Information given is based on data on the components and the toxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

Exposure routes:

Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.

Acute Toxicity - Oral

Product:

LD50 rat: > 5,000 mg/kg

Remarks: Low toxicity:

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

Acute Toxicity - Dermal

Product:

LD50 Rabbit: > 5,000 mg/kg

Remarks: Low toxicity:

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

Acute Toxicity - Inhalation

Product:

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

Skin Corrosion/Irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Serious Eye Damage/Irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Skin Sensitisation

Product:

Remarks: Not a skin sensitiser.

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

Germ Cell Mutagenicity

UNCONTROLLED COPY

Product:

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

Carcinogenicity

Product:

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

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Material: Highly refined mineral oil

GHS/CLP Carcinogenicity Classification: No carcinogenicity classification.

Reproductive Toxicity

Product:

Remarks: Based on available data, the classification criteria are not met., Not a developmental toxicant., Does not impair fertility.

STOT - Single Exposure

Product:

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.

Aspiration Hazard

Product:

Not an aspiration hazard.

Other Information

Further information

Product:

Remarks: Used grease may contain harmful impurities that have accumulated during use. The concentration of such harmful impurities will depend on use and they may present risks to health and the environment on disposal., ALL used grease should be handled with caution and skin contact avoided as far as possible.

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

Remarks: Slightly irritating to respiratory system.

Section 12 - Ecological Information

Ecotoxicity

Product:

Toxicity to fish (Chronic toxicity):

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

Toxicity to crustacean (Chronic toxicity):

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

Toxicity to microorganisms (Acute toxicity):

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

Persistence and degradability

Product:

Biodegradability:

Remarks: Not readily biodegradable., Major constituents are inherently biodegradable, but contains components that may persist in the environment.

Mobility

Mobility in soil

Product:

Remarks: Semi-solid under most environmental conditions., If it enters soil, it will adsorb to soil particles and will not be mobile.

Remarks: Floats on water.

Bioaccumulative Potential

Product:

Remarks: Contains components with the potential to bioaccumulate.

Partition coefficient: n-octanol/water:

log Pow: > 6

Remarks: (based on information on similar products)

Other Adverse Effects

No data available

Product:

Additional ecological information:

Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential., Product is a mixture of non-volatile components, which will not be released to air in any significant quantities under normal conditions of use.

Poorly soluble mixture., Causes physical fouling of aquatic organisms.

Mineral oil does not cause chronic toxicity to aquatic organisms at concentrations less than 1 mg/l.

Basis for Assessment

Ecotoxicological data have not been determined specifically for this product.

Information given is based 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).

Acute Toxicity - Fish

Product:

Remarks: LL/EL/IL50 > 100 mg/l

Practically non toxic:

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

Acute Toxicity - Daphnia

Product:

Remarks: LL/EL/IL50 > 100 mg/l

Practically non toxic:

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

Acute Toxicity - Algae

Product:

Remarks: LL/EL/IL50 > 100 mg/l

Practically non toxic:

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

Section 13 - Disposal Considerations

Waste Disposal

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.

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

Container Disposal and Methods

Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.

Disposal should be in accordance with applicable regional, national, and local laws and regulations.

UNCONTROLLED COPY

Local Legislation

Remarks:

Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Section 14 - Transport Information

UN Number

None Allocated

Proper Shipping Name

None Allocated

Transport Hazard Class

None Allocated

Hazchem Code

NONE

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.

IATA UN Number

NCAD

IATA Proper Shipping Name

Not dangerous for conveyance under IATA code

IMDG UN Number

NCAD

IMDG Proper Shipping Name

Not dangerous for conveyance under IMO/IMDG code

Additional Information

National Regulations

ADG:

Not regulated as a dangerous good

International Regulations

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.

Section 15 - Regulatory Information

Regulatory Information

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

Standard for the Uniform Scheduling of Medicines and Poisons: No poison schedule number allocated

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2020 based on Globally Harmonized Classification version 7.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011).

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code). Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

UNCONTROLLED COPY

Poisons Schedule

Not Scheduled

Global Inventory Status

Country/Region Inventory	Status Description	Country/Region Inventory	Status Description
Australia (AICS/AIIC)	Listed introduction	USA (TSCA)	All components listed.

Section 16 - Any Other Relevant Information

User Codes

User Title Label	User Codes
Wis Numbers	01068475
Wis Numbers	01263974
Wis Numbers	04390800
Wis Numbers	04397803

Other Information

Version: 4.9

800001006646

AU

Full text of H-Statements:

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H361 Suspected of damaging fertility or the unborn child.

H401 Toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

H413 May cause long lasting harmful effects to aquatic life.

Full text of other abbreviations:

Acute Tox. Acute toxicity

Aquatic Acute Short-term (acute) aquatic hazard

Aquatic Chronic Long-term (chronic) aquatic hazard

Eye Irrit. Eye irritation

Repr. Reproductive toxicity

Skin Corr. Skin corrosion

Skin Irrit. Skin irritation

Skin Sens. Skin sensitisation

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

UNCONTROLLED COPY

-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

A vertical bar (|) in the left margin indicates an amendment from the previous version.

AU/ EN

This SDS has been transcribed into Infosafe GHS format from an original, issued by the manufacturer on the date shown. Any disclaimer by the manufacturer may not be included in the transcription.

END OF SDS

© Copyright Chemical Safety International Pty Ltd

Copyright in the source code of the HTML, PDF, XML, XFO and any other electronic files rendered by an Infosafe system for Infosafe SDS displayed is the intellectual property of Chemical Safety International Pty Ltd.

Copyright in the layout, presentation and appearance of each Infosafe SDS displayed is the intellectual property of Chemical Safety International Pty Ltd.

The compilation of SDS's displayed is the intellectual property of Chemical Safety International Pty Ltd.

Copying of any SDS displayed is permitted for personal use only and otherwise is not permitted. In particular the SDS's displayed cannot be copied for the purpose of sale or licence or for inclusion as part of a collection of SDS without the express written consent of Chemical Safety International Pty Ltd.