

Version 4.4 Revision Date 2022-08-16

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product information

Product Name : Sulfole® 120B Mercaptan

Material : 1116064, 1108796, 1105436, 1101538, 1101537

Use : Polymer Molecular Weight Modification

Uses advised against : None known.

Company : Chevron Phillips Chemical Company LP

Specialty Chemicals 10001 Six Pines Drive The Woodlands, TX 77380

Local : See Company Address

Emergency telephone:

Health

866.442.9628 (North America) 1.832.813.4984 (International)

Transport:

CHEMTREC 800.424.9300 or 703.527.3887(int'l)

Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090

Mexico CHEMTREC 01-800-681-9531 (24 hours)

South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Argentina: +(54)-1159839431

EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Austria: VIZ +43 1 406 43 43 (24 hours/day, 7 days/week)

Belgium: 070 245 245 (24 hours/day, 7 days/week)

Bulgaria: +359 2 9154 233

Croatia: +3851 2348 342 (24 hours/day, 7 days/week)

Cyprus: 1401

Czech Republic: Toxicological Information Center +420 224 919 293, +420 224 915 402

Denmark: Danish Poison Center (Giftlinjen): +45 8212 1212 Estonia: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Finland: 0800 147 111 09 471 977 (24 hours/day)

France: ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (24 hours/day, 7 days/week)

Germany: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Greece: (0030) 2107793777 (24 hours/day, 7 days/week) Hungary: +36-80-201-199 (24 hours/day, 7 days/week)

Iceland: 543 2222 (24 hours/day, 7 days/week)

Ireland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

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Italy: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Latvia: State Fire and Rescue Service, phone number: 112; Toxicology and Sepsis Clinic Poisoning and Drug Information Center, Hipokrāta 2, Riga, Latvia, LV-1038, phone number +371

67042473. (24 hours.)

Liechtenstein: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Lithuania: +370 (85) 2362052

Luxembourg: (+352) 8002 5500 (24 hours/day, 7 days/week)

Malta: +356 2395 2000

The Netherlands: NVIC: +31 (0)88 755 8000 Norway: 22 59 13 00 (24 hours/day, 7 days/week)

Poland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Portugal: CIAV phone number: +351 800 250 250

Romania: +40213183606 Slovakia: +421 2 5477 4166 Slovenia: Phone number: 112

Spain: National Emergency Telephone Number of Spanish Poison Centre: +34 91 562 04 20 (24

hours/day, 7 days/week)

Sweden: 112 – ask for Poisons Information

Responsible Department : Product Safety and Toxicology Group

E-mail address : SDS@CPChem.com Website : www.CPChem.com

SECTION 2: Hazards identification

Classification of the substance or mixture GHS Classification and labelling according to JIS Z 7252-2019 and JIS Z 7253-2019 (GHS 2015)

Classification

: Flammable liquids, Category 4 Skin corrosion/irritation, Category 2

Serious eye damage/eye irritation, Category 2A

Skin sensitization, Category 1

Specific target organ toxicity - single exposure, Category 3,

Respiratory tract irritation, Narcotic effects Short-term (acute) aquatic hazard, Category 1 Long-term (chronic) aquatic hazard, Category 1

Labeling

Symbol(s) :





Signal Word : Warning

Hazard Statements : H227: Combustible liquid.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction. H319: Causes serious eye irritation. H335: May cause respiratory irritation. H336: May cause drowsiness or dizziness.

H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statements : Prevention:

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

flames and other ignition sources. No smoking.

P261: Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264: Wash skin thoroughly after handling.

P271: Use only outdoors or in a well-ventilated area.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

P280: Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352: IF ON SKIN: Wash with plenty of water. P304 + P340 + P312: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333 + P313: If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313: If eye irritation persists: Get medical advice/attention.

P362 + P364: Take off contaminated clothing and wash it before reuse.

P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P391: Collect spillage.

Storage:

P403: Store in a well-ventilated place.

P403 + P233: Store in a well-ventilated place. Keep container

tightly closed.

P405: Store locked up.

Disposal:

P501: Dispose of contents/ container to an approved waste disposal plant.

SECTION 3: Composition/information on ingredients

Synonyms : TDM

Tertiary Dodecyl Mercaptan

Molecular formula : C12H26S

| Moleculai Iommula . | 01211203 | | |
|---------------------|------------|---------------|-----------|
| Chemical name | CAS-No. | Concentration | ENCS/ISHL |
| | | | number |
| tert-Dodecanethiol | 25103-58-6 | 98 % - 100% | 2-464 |
| | | | |

SECTION 4: First aid measures

General advice : Move out of dangerous area. Show this material safety data

sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

If inhaled : If unconscious, place in recovery position and seek medical

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advice. If symptoms persist, call a physician.

In case of skin contact : If skin irritation persists, call a physician. If on skin, rinse well

with water. If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water. Remove contact

lenses. Protect unharmed eye. Keep eye wide open while

rinsing. If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear. Do not give milk or alcoholic

beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim

immediately to hospital.

SECTION 5: Firefighting measures

Flash point : 92°C (198°F)

Method: Tag closed cup

Autoignition temperature : No data available

Suitable extinguishing

media

Carbon dioxide (CO2).

Unsuitable extinguishing

media

: High volume water jet.

Specific hazards during fire

fighting

: Do not allow run-off from fire fighting to enter drains or water

courses.

Special protective

equipment for fire-fighters

: Wear self-contained breathing apparatus for firefighting if

necessary.

Further information : Collect contaminated fire extinguishing water separately. This

must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case

of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed

containers.

Fire and explosion

protection

: Do not spray on a naked flame or any incandescent material.

Keep away from open flames, hot surfaces and sources of

ignition.

Hazardous decomposition

products

: Carbon oxides. Sulfur oxides.

SECTION 6: Accidental release measures

Personal precautions : Use personal protective equipment. Ensure adequate

ventilation.

Environmental precautions : Prevent product from entering drains. Prevent further leakage

or spillage if safe to do so. If the product contaminates rivers

and lakes or drains inform respective authorities.

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Methods for cleaning up

: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Handling

Advice on safe handling : Avoid formation of aerosol. Do not breathe vapors/dust. Avoid

exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any

process in which this mixture is being used.

Advice on protection against fire and explosion

Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of

ignition.

Storage

Requirements for storage areas and containers

No smoking. Keep in a well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical

installations / working materials must comply with the

technological safety standards.

Uses advised against : None known.

Use : Polymer Molecular Weight Modification

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

Chevron Phillips Chemical Company LP

| Components | Basis | Value | Control parameters | Note |
|--------------------|--------------|-------|--------------------|------|
| tert-Dodecanethiol | Manufacturer | TWA | 0.1 ppm, | |
| JP | | | | |
| Components | Basis | Value | Control parameters | Note |

Engineering measures

Adequate ventilation to control airborned concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

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Personal protective equipment

Respiratory protection : Wear a supplied-air NIOSH approved respirator unless

ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as:. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, aerosolization, exposure levels are not known, or other circumstances where air-purifying respirators may not provide

adequate protection.

Hand protection : The suitability for a specific workplace should be discussed

with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.

Skin and body protection : Choose body protection in relation to its type, to the

concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate:. Flame retardant protective clothing. Remove and wash contaminated clothing before re-use. Skin should be washed after contact. Footwear

protecting against chemicals.

Hygiene measures : When using do not eat or drink. When using do not smoke.

Wash hands before breaks and at the end of workday.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Form : liquid
Physical state : liquid
Color : Colorless
Odor : Repulsive

Safety data

Flash point : 92°C (198°F)

Method: Tag closed cup

Lower explosion limit : No data available

Upper explosion limit : No data available

Oxidizing properties : no

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Autoignition temperature : No data available

Molecular formula : C12H26S

Molecular weight : 202.44 g/mol

pH : No data available

Pour point : No data available

Boiling point/boiling range : 234°C (453°F)

Vapor pressure : 4.00 Pa

at 24°C (75°F)

Relative density : 0.8664

at 16 °C (61 °F)

Density : 0.9 g/cm3

Water solubility : 0.00393 mg/l

Method: OECD Test Guideline 105

Partition coefficient: n-

octanol/water

: No data available

Viscosity, dynamic : 4 mPa.s

Relative vapor density : 3

(Air = 1.0)

Evaporation rate : 1

Percent volatile : > 99 %

SECTION 10: Stability and reactivity

Reactivity : Stable under recommended storage conditions.

Chemical stability : This material is considered stable under normal ambient and

anticipated storage and handling conditions of temperature

and pressure.

Possibility of hazardous reactions

Hazardous reactions : Hazardous reactions: Hazardous polymerization does not

occur.

Hazardous reactions: Vapors may form explosive mixture with

air.

Conditions to avoid : Heat, flames and sparks.

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Materials to avoid : May react with oxygen and strong oxidizing agents, such as

chlorates, nitrates, peroxides, etc.

Hazardous decomposition

products

: Carbon oxides Sulfur oxides

: No decomposition if stored and applied as directed. Other data

SECTION 11: Toxicological information

Acute oral toxicity

tert-Dodecanethiol : LD50: > 2,000 mg/kg

Species: Rat Sex: female

Method: OECD Test Guideline 423

Acute inhalation toxicity

tert-Dodecanethiol : LC50: > 1.97 mg/l

Exposure time: 4 h Species: Rat Sex: male and female

Method: OECD Test Guideline 403

Information given is based on data obtained from similar

substances.

Acute dermal toxicity

tert-Dodecanethiol : LD50: > 2,000 mg/kg

> Species: Rat Sex: male

Method: OECD Test Guideline 402

Information given is based on data obtained from similar

substances.

Skin irritation

tert-Dodecanethiol : Skin irritation

Eye irritation

tert-Dodecanethiol : Eye irritation

Sensitization

tert-Dodecanethiol : The product is a skin sensitizer, sub-category 1B.

Repeated dose toxicity

tert-Dodecanethiol : Species: Rat, male

Sex: male

Application Route: Inhalation

Dose: 0, 26, 98 ppm Exposure time: 4 wk

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| | | SAFETY DATA SHEET |
|-------------------------------------|------|-------------------------|
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| | | |

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Species: Rat, female

Sex: female

Application Route: Inhalation

Dose: 0, 26, 98 ppm Exposure time: 4 wk

Number of exposures: 6 h/d, 5 d/wk

NOEL: 26 ppm

Method: OECD Guideline 412 Target Organs: Liver, Kidney

Species: Dog, male and female

Sex: male and female Application Route: Inhalation Dose: 0, 25, 106 ppm Exposure time: 4 wk

Number of exposures: 6 h/d, 5 d/wk

NOEL: 25 ppm

Lowest observable effect level: 109 ppm

Method: OECD Test Guideline 412

Target Organs: Liver

Species: Mouse, male and female

Sex: male and female Application Route: Inhalation Dose: 0, 25, 109 ppm

Exposure time: 4 wk

Number of exposures: 6 h/d, 5 d/wk Lowest observable effect level: 25 ppm Method: OECD Test Guideline 412

Target Organs: Liver

Species: Rat, male

Sex: male

Application Route: oral gavage Dose: 50, 100, 200 mg/kg Exposure time: 10 wk

Number of exposures: once daily

NOEL: 200 mg/kg

Method: OECD Guideline 422 Target Organs: Kidney, Liver

Species: Rat, female

Sex: female

Application Route: oral gavage Dose: 50, 100, 200 mg/kg Exposure time: 8 - 9 wk

Number of exposures: once daily

NOEL: 200 mg/kg

Method: OECD Guideline 422

Target Organs: Liver

Species: Rat, male

Sex: male

Application Route: Inhalation Dose: 5, 25, 100 ppm

Exposure time: 13 wk

Number of exposures: 6h/d, 5d/wk

NOEL: 25 ppm

Method: OECD Test Guideline 413

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Species: Rat, female

Sex: female

Application Route: Inhalation Dose: 5, 25, 100 ppm Exposure time: 13 wk

Number of exposures: 6h/d, 5d/wk

NOEL: 25 ppm

Method: OECD Test Guideline 413

Genotoxicity in vitro

tert-Dodecanethiol : Test Type: Ames test

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Mouse lymphoma assay

Metabolic activation: with and without metabolic activation

Method: OECD Guideline 476

Result: negative

Test Type: Sister Chromatid Exchange Assay

Metabolic activation: with and without metabolic activation

Method: OECD Guideline 479

Result: negative

Test Type: Chromosome aberration test in vitro

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Genotoxicity in vivo

tert-Dodecanethiol : Test Type: In vivo micronucleus test

Species: Mouse

Route of Application: Oral

Dose: 1250, 2500, 5000 mg/kg/bw Method: Mutagenicity (micronucleus test)

Result: negative

Remarks: Information given is based on data obtained from

similar substances.

Reproductive toxicity

tert-Dodecanethiol : Species: Rat

Sex: male

Application Route: oral gavage Dose: 50, 100, 200 mg/kg/d Exposure time: 10 wk Number of exposures: Daily Method: OECD Guideline 422 NOAEL Parent: 200 mg/kg

Animal testing did not show any effects on fertility.

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Species: Rat Sex: female

Application Route: oral gavage Dose: 50, 100, 200 mg/kg/d Exposure time: 8 - 9 wk Number of exposures: Daily Method: OECD Guideline 422 NOAEL Parent: 200 mg/kg NOAEL F1: 100 mg/kg

Animal testing did not show any effects on fertility.

Reduced fetal weight.

Species: Rat Sex: male

Application Route: oral gavage Dose: 25, 75, 200 mg/kg/d Exposure time: 18 wk Number of exposures: Daily

Method: OECD Test Guideline 443

NOAEL Parent: 200 mg/kg NOAEL F1: 200 mg/kg NOAEL F2: 200 mg/kg

Animal testing did not show any effects on fertility.

Species: Rat Sex: female

Application Route: oral gavage Dose: 25, 75, 200 mg/kg/d Exposure time: 16 - 18 wk Number of exposures: Daily Method: OECD Test Guideline 443

NOAEL Parent: 200 mg/kg NOAEL F1: 200 mg/kg NOAEL F2: 200 mg/kg

Animal testing did not show any effects on fertility.

Reduced fetal weight.

Developmental Toxicity

tert-Dodecanethiol : Species: Rat

Application Route: Inhalation Dose: 0, 22.7, 88.6 ppm Number of exposures: 6 hrs/d

Test period: GD 6-19

Method: OECD Guideline 414 NOAEL Teratogenicity: >= 88.6 ppm

No adverse effects expected

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Species: Mouse

Application Route: Inhalation Dose: 0, 22.7, 88.6 ppm Number of exposures: 6 hrs/d

Test period: GD 6-19

Method: OECD Guideline 414 NOAEL Teratogenicity: >= 88.6 ppm

No adverse effects expected

Species: Rabbit

Application Route: oral gavage Dose: 0, 50, 100, 200 mg/kg/d Number of exposures: Daily Test period: GD 6-28

Method: OECD Guideline 414 NOAEL Teratogenicity: 100 mg/kg NOAEL Maternal: 100 mg/kg

Embryotoxic effects and adverse effects on the offspring were

detected only at high maternally toxic doses

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Aspiration toxicity : May be harmful if swallowed and enters airways.

CMR effects

tert-Dodecanethiol : Carcinogenicity: Not available

Mutagenicity: Tests on bacterial or mammalian cell cultures

did not show mutagenic effects.

Teratogenicity: Animal testing did not show any effects on

fetal development.

Reproductive toxicity: No toxicity to reproduction

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Further information : Solvents may degrease the skin.

SECTION 12: Ecological information

Toxicity to fish

tert-Dodecanethiol : LL50: > 100 mg/l

Exposure time: 96 h

Species: Danio rerio (Zebra Fish)

static test Method: OECD Test Guideline 203

No toxicity at the limit of solubility.

Toxicity to daphnia and other aquatic invertebrates

tert-Dodecanethiol : EC50: > 0.056 mg/l

Exposure time: 48 h

Species: Daphnia magna (Water flea)

semi-static test Method: OECD Test Guideline 202

No toxicity at the limit of solubility.

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Toxicity to bacteria

tert-Dodecanethiol : NOEC: 8.6 mg/l

Exposure time: 3 h
Growth rate

Respiration inhibition

Method: OECD Test Guideline 209

NOEC: > 10 mg/l Exposure time: 3 h Growth rate

Respiration inhibition

Method: OECD Test Guideline 209

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

tert-Dodecanethiol : NOEC: 0.0108 mg/l

Exposure time: 21 d

Species: Daphnia magna (Water flea)

semi-static test

Method: OECD Test Guideline 211 No toxicity at the limit of solubility.

Biodegradability : This material is not expected to be readily biodegradable.

Elimination information (persistence and degradability)

Bioaccumulation

tert-Dodecanethiol : Species: Danio rerio (zebra fish)

Exposure time: 15 d

Bioconcentration factor (BCF): > 500 - < 1,950

Method: OECD Test Guideline 305

Biomagnification factor <1

The product may be accumulated in organisms.

: May cause long lasting harmful effects to aquatic life.

Mobility

tert-Dodecanethiol : After release, adsorbs onto soil.

Results of PBT assessment

tert-Dodecanethiol : Non-classified PBT substance, Non-classified vPvB substance

Additional ecological

information

Ecotoxicology Assessment

Short-term (acute) aquatic hazard

tert-Dodecanethiol : No toxicity at the limit of solubility.

Long-term (chronic) aquatic hazard

tert-Dodecanethiol : May cause long lasting harmful effects to aquatic life.

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SECTION 13: Disposal considerations

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product : The product should not be allowed to enter drains, water

courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed

waste management company.

Contaminated packaging : Empty remaining contents. Dispose of as unused product.

Do not re-use empty containers. Do not burn, or use a cutting

torch on, the empty drum.

SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)

NA1993, COMBUSTIBLE LIQUID, N.O.S., (TERTIARY DODECANETHIOL), III

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

UN3334, AVIATION REGULATED LIQUID, N.O.S., (TERTIARY DODECANETHIOL), 9, III

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR

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TRANSPORTATION BY THIS AGENCY.

Other information : tert- Dodecanethiol, S.T. 3, Cat.Y

Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information

National legislation

Poisonous and Deleterious Substances Control Law

: Not applicable

Industrial Safety and Health Law

Substances Subject to be

Notified Names

: Not applicable

Enforcement Order of the Industrial Safety and Health Law - Attached table 1 (Dangerous Substances)

Harmful Substances Required

Permission for Manufacture

Hazardous Substances

Subject to Labeling

Requirements

Ordinance on Prevention of

Organic Solvent Poisoning

Ordinance on Prevention of

Lead Poisoning

Harmful Substances

Prohibited from Manufacture

Ordinance on Prevention of Hazards Due to Specified Chemical Substances

Ordinance on Prevention of

Tetraalkyl Lead Poisoning

: Not applicable

Not applicable

Substances Prevented From

Impairment of Health

: Not applicable

Listed

Chemical Substance Control Law

: Not applicable for Specified Chemical Substance, Monitoring Chemical Substance and Priority Assessment Chemical Substance.

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Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the **Environment and Promotion of Improvements to the Management Thereof**

Class I Designated Chemical : tert-dodecanethiol(274)

Substances

Other regulations

Fire Service Law : Flammable liquids

> Type 3 petroleums Hazardous rank III

High Pressure Gas Safety Act : Not applicable

Explosive Control Law : Not applicable

Vessel Safety Law : Not regulated as a dangerous good

Aviation Law : Miscellaneous dangerous substances and articles (Article 194

of The Enforcement Rules of Aviation Law and its Attached

Table 1)

Notification status

Europe REACH This product is in full compliance according to REACH

regulation 1907/2006/EC.

Switzerland CH INV On the inventory, or in compliance with the inventory

United States of America (USA) On or in compliance with the active portion of the

TSCA TSCA inventory

Other AIIC On the inventory, or in compliance with the inventory New Zealand NZIoC On the inventory, or in compliance with the inventory

On the inventory, or in compliance with the inventory Japan ENCS Korea KECI All substances in this product were registered, notified

to be registered, or exempted from registration by CPChem through an Only Representative according to K-REACH regulations. Importation of this product is permitted if the Korean Importer of Record was

included on CPChem's notifications or if the Importer of

Record themselves notified the substances.

Philippines PICCS On the inventory, or in compliance with the inventory Taiwan TCSI On the inventory, or in compliance with the inventory China IECSC On the inventory, or in compliance with the inventory

SECTION 16: Other information

Further information

Legacy SDS Number : CPC00490

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

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Version 4.4 Revision Date 2022-08-16

The information in this SDS pertains only to the product as shipped.

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.

| Key or legend to abbreviations and acronyms used in the safety data sheet | | | | |
|---------------------------------------------------------------------------|----------------------------------------------------------|-------|--------------------------------------------------------------------------------------------|--|
| ACGIH | American Conference of Government Industrial Hygienists | LD50 | Lethal Dose 50% | |
| AICS | Australia, Inventory of Chemical Substances | LOAEL | Lowest Observed Adverse Effect Level | |
| DSL | Canada, Domestic Substances List | NFPA | National Fire Protection Agency | |
| NDSL | Canada, Non-Domestic Substances List | NIOSH | National Institute for Occupational Safety & Health | |
| CNS | Central Nervous System | NTP | National Toxicology Program | |
| CAS | Chemical Abstract Service | NZIoC | New Zealand Inventory of Chemicals | |
| EC50 | Effective Concentration | NOAEL | No Observable Adverse Effect Level | |
| EC50 | Effective Concentration 50% | NOEC | No Observed Effect Concentration | |
| EGEST | EOSCA Generic Exposure Scenario Tool | OSHA | Occupational Safety & Health Administration | |
| EOSCA | European Oilfield Specialty Chemicals Association | PEL | Permissible Exposure Limit | |
| EINECS | European Inventory of Existing Chemical Substances | PICCS | Philippines Inventory of Commercial Chemical Substances | |
| MAK | Germany Maximum Concentration Values | PRNT | Presumed Not Toxic | |
| GHS | Globally Harmonized System | RCRA | Resource Conservation Recovery Act | |
| >= | Greater Than or Equal To | STEL | Short-term Exposure Limit | |
| IC50 | Inhibition Concentration 50% | SARA | Superfund Amendments and Reauthorization Act. | |
| IARC | International Agency for Research on Cancer | TLV | Threshold Limit Value | |
| IECSC | Inventory of Existing Chemical Substances in China | TWA | Time Weighted Average | |
| ENCS | Japan, Inventory of Existing and New Chemical Substances | TSCA | Toxic Substance Control Act | |
| KECI | Korea, Existing Chemical Inventory | UVCB | Unknown or Variable Composition, Complex Reaction Products, and Biological Materials | |
| <= | Less Than or Equal To | WHMIS | Workplace Hazardous Materials Information System | |
| LC50 | Lethal Concentration 50% | | | |

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