



Isopropyl Mercaptan

Version 2.5

Revision Date 2023-10-11

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

Product information

Product Name : Isopropyl Mercaptan
 Material : 1083608, 1029885, 1021450, 1028387, 1021451, 1027451,
 1021448, 1031054, 1021449

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)

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

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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 2
 Skin sensitization, Sub-category 1B
 Short-term (acute) aquatic hazard, Category 1
 Long-term (chronic) aquatic hazard, Category 1

Labeling

Symbol(s)



Signal Word

: Danger

Hazard Statements

: H225: Highly flammable liquid and vapor.
 H317: May cause an allergic skin reaction.
 H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statements

: **Prevention:**
 P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233: Keep container tightly closed.
 P240: Ground and bond container and receiving equipment.
 P241: Use explosion-proof electrical/ ventilating/ lighting/ equipment.
 P242: Use non-sparking tools.
 P243: Take action to prevent static discharges.
 P261: Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

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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:

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P333 + P313: If skin irritation or rash occurs: 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 + P235: Store in a well-ventilated place. Keep cool.

Disposal:

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

SECTION 3: Composition/information on ingredients

Synonyms : 2-propanethiol
IPM
IC3SH

Molecular formula : C3H8S

Chemical name	CAS-No.	Concentration	ENCS/ISHL number
Isopropyl Mercaptan	75-33-2	95 % - 100%	2-464
n-Propyl Mercaptan	107-03-9	1 % - 5%	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 advice. If symptoms persist, call a physician.

In case of skin contact : If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Flush eyes with water as a precaution. 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. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

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Notes to physician

Symptoms	:	No data available.
Risks	:	No data available.
Treatment	:	No data available.

SECTION 5: Firefighting measures

Flash point	:	-34°C (-29°F) estimated
Autoignition temperature	:	No data available
Suitable extinguishing media	:	Alcohol-resistant foam. Carbon dioxide (CO ₂). Dry chemical.
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. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
Hazardous decomposition products	:	Sulfur.

SECTION 6: Accidental release measures

Personal precautions	:	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
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).

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. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. 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. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Storage

Requirements for storage areas and containers : No smoking. Keep container tightly closed in a dry and 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.

SECTION 8: Exposure controls/personal protection**Engineering measures**

Adequate ventilation to control airborne 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.

Personal protective equipment

Respiratory protection : If ventilation or other engineering controls are not adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure, a supplied-air NIOSH approved respirator may be appropriate. If exposure to harmful levels of airborne material may occur, a NIOSH approved respirator that

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provides protection may be appropriate, such as:. Air-Purifying Respirator for Organic Vapors. A positive pressure, air-supplying respirator may be appropriate 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:. 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 : Clear
- Odor : Repulsive

Safety data

- Flash point : -34°C (-29°F)
estimated
- Lower explosion limit : No data available
- Upper explosion limit : No data available
- Flammability (solid, gas) :
- Oxidizing properties : yes
- Autoignition temperature : No data available
- Molecular formula : C₃H₈S
- Molecular weight : 90.2 g/mol
- pH : Not applicable

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Pour point	: No data available
Boiling point/boiling range	: 51°C (124°F)
Vapor pressure	: 8.80 PSI at 37.8°C (100.0°F)
Relative density	: 0.82 at 15.6 °C (60.1 °F)
Water solubility	: slightly soluble
Partition coefficient: n-octanol/water	: No data available
Viscosity, dynamic	: 0.369 cP
Relative vapor density	: 2.62 (Air = 1.0)
Evaporation rate	: 1 estimated
Percent volatile	: > 99 %
Conductivity	: No data available

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

SECTION 11: Toxicological information

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**Isopropyl Mercaptan
Acute oral toxicity**: Acute toxicity estimate: 2,496 mg/kg
Method: Calculation method**Isopropyl Mercaptan
Acute inhalation toxicity**: Acute toxicity estimate: > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Calculation method**Isopropyl Mercaptan
Acute dermal toxicity**: Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method**Isopropyl Mercaptan
Skin irritation**: No skin irritation
largely based on animal evidence.**Isopropyl Mercaptan
Eye irritation**

: slight irritation. largely based on animal evidence.

**Isopropyl Mercaptan
Sensitization**: The product is a skin sensitizer, sub-category 1B.
largely based on animal evidence.**Repeated dose toxicity****Isopropyl Mercaptan**: Species: Rat, male and female
Sex: male and female
Application Route: Inhalation
Exposure time: 13 wks
Number of exposures: 6hrs/d, 5 d/wk
NOEL: 0.367 mg/l 99.6 ppm
Lowest observable effect level: 1.488 mg/l 403.4 ppm
Method: OECD Test Guideline 413
Target Organs: Liver, Kidney, Upper respiratory tract, Blood
Information given is based on data obtained from similar
substances.

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Species: Rat, male and female
 Sex: male and female
 Application Route: oral gavage
 Dose: 10, 50, 200 mg/kg bw/day
 Exposure time: 42-53 days
 Number of exposures: Daily
 NOEL: 50 mg/kg
 Lowest observable effect level: 200 mg/kg
 Method: OECD Guideline 422
 Target Organs: Liver, Blood
 Information given is based on data obtained from similar substances.

Species: Rat, male and female
 Sex: male and female
 Application Route: Inhalation
 Exposure time: 13 wks
 Number of exposures: 6hrs/d, 5 d/wk
 NOEL: >= 196 ppm
 Method: OECD Test Guideline 413
 Target Organs: Kidney, Upper respiratory tract, Blood
 Information given is based on data obtained from similar substances.

n-Propyl Mercaptan

Species: Rat, male and female
 Sex: male and female
 Application Route: Inhalation
 Dose: 9, 97, 196 ppm
 Exposure time: 13 wks
 Number of exposures: 6 hrs/d, 5 d/wk
 NOEL: 196 ppm
 Method: OECD Test Guideline 413
 Information given is based on data obtained from similar substances.

Genotoxicity in vitro**Isopropyl Mercaptan**

: Test Type: reverse mutation assay
 Test system: Salmonella typhimurium
 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 Test Guideline 490
 Result: negative

Test Type: Micronucleus test
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 487
 Result: negative

n-Propyl Mercaptan

Test Type: Ames test
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 471
 Result: negative

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Test Type: Cytogenetic assay
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 473
 Result: negative

Test Type: Mouse lymphoma assay
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 476
 Result: negative
 Remarks: Information given is based on data obtained from similar substances.

Reproductive toxicity

Isopropyl Mercaptan : Species: Rat
 Sex: male and female
 Application Route: oral gavage
 Dose: 10, 50, 200 mg/kg/bw
 Exposure time: 42 d
 Number of exposures: Daily
 Method: OECD Guideline 422
 NOAEL Parent: \geq 200 mg/kg
 NOAEL F1: 50 mg/kg
 Information given is based on data obtained from similar substances.
 No adverse effects expected

Developmental Toxicity

Isopropyl Mercaptan : Species: Rat
 Application Route: Inhalation
 Dose: 11, 99, 195 ppm
 Exposure time: 6h/d
 Test period: GD 9 - 19
 Method: OECD Guideline 414
 NOAEL Teratogenicity: \geq 195 ppm
 NOAEL Maternal: \geq 195 ppm
 Information given is based on data obtained from similar substances.

Species: Mouse
 Application Route: Inhalation
 Dose: 11, 99, 195 ppm
 Exposure time: 6h/d
 Test period: GD 9 - 19
 Method: OECD Guideline 414
 NOAEL Teratogenicity: \geq 195 ppm
 NOAEL Maternal: \geq 195 ppm
 Information given is based on data obtained from similar substances.

**Isopropyl Mercaptan
Aspiration toxicity**

: May be harmful if swallowed and enters airways.

CMR effects

Isopropyl Mercaptan : Carcinogenicity: Not available
 Mutagenicity: In vitro tests did not show mutagenic effects

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n-Propyl Mercaptan
 Reproductive toxicity: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

n-Propyl Mercaptan
 Carcinogenicity: Not available
 Mutagenicity: In vitro tests did not show mutagenic effects
 Reproductive toxicity: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments., No toxicity to reproduction

Isopropyl Mercaptan
Further information : Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Solvents may degrease the skin.

SECTION 12: Ecological information**Toxicity to fish**

Isopropyl Mercaptan : LC50: 34 mg/l
 Exposure time: 96 h
 semi-static test Analytical monitoring: yes
 Method: OECD Test Guideline 203
 Information given is based on data obtained from similar substances.

n-Propyl Mercaptan LC50: 1.3 mg/l
 Exposure time: 96 h
 Species: Pimephales promelas (fathead minnow)
 semi-static test Analytical monitoring: yes
 Test substance: yes
 Method: OECD Test Guideline 203
 Toxic to aquatic organisms.

Toxicity to daphnia and other aquatic invertebrates

Isopropyl Mercaptan : EC50: 0.25 - 0.5 mg/l
 Exposure time: 48 h
 Species: Daphnia magna (Water flea)
 static test Test substance: yes
 Method: OECD Test Guideline 202

n-Propyl Mercaptan EC50: 70 µg/l
 Exposure time: 48 h
 Species: Daphnia magna (Water flea)
 Analytical monitoring: yes
 Test substance: yes
 Method: OECD Test Guideline 202
 Very toxic to aquatic organisms.

Toxicity to algae

Isopropyl Mercaptan : ErC50: 21.9 mg/l
 Exposure time: 72 h
 Species: Pseudokirchneriella subcapitata (green algae)

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n-Propyl Mercaptan static test Method: OECD Test Guideline 201

ErC50: 3 mg/l
 Exposure time: 72 h
 Species: Pseudokirchneriella subcapitata (algae)
 Growth inhibition Method: OECD Test Guideline 201
 Information given is based on data obtained from similar substances.

M-Factor

propane-2-thiol : M-Factor (Acute Aquat. Tox.) 1

M-Factor (Chron. Aquat. Tox.) 1

M-Factor

propane-1-thiol : M-Factor (Acute Aquat. Tox.) 10

M-Factor (Chron. Aquat. Tox.) 10

Toxicity to bacteria

Isopropyl Mercaptan : EC50: 880.5 mg/l
 Exposure time: 3 h
 Respiration inhibition
 Method: OECD Test Guideline 209

n-Propyl Mercaptan EC50: 880.5 mg/l
 Exposure time: 3 h
 Respiration inhibition
 Method: OECD Test Guideline 209
 Information given is based on data obtained from similar substances.

Biodegradability

Isopropyl Mercaptan : aerobic
 Result: Not readily biodegradable.
 0 %
 Testing period: 28 Days
 Method: OECD Test Guideline 301D

n-Propyl Mercaptan : aerobic
 Result: Not readily biodegradable.
 17 %
 Testing period: 28 Days
 Method: OECD Test Guideline 301

Bioaccumulation

Isopropyl Mercaptan : Bioconcentration factor (BCF): 6
 Method: QSAR modeled data
 This material is not expected to bioaccumulate.

n-Propyl Mercaptan : Bioconcentration factor (BCF): 7.26

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This material is not expected to bioaccumulate.

Mobility

Isopropyl Mercaptan : Method: Calculation, Mackay Level III Fugacity Model
The product will be dispersed amongst the various environmental compartments (soil/ water/ air).

n-Propyl Mercaptan : Method: Calculation, Mackay Level III Fugacity Model
The product will be dispersed amongst the various environmental compartments (soil/ water/ air).

Results of PBT assessment

Isopropyl Mercaptan : Non-classified PBT substance, Non-classified vPvB substance

n-Propyl Mercaptan : Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information : Very toxic to aquatic life with long lasting effects.

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Very toxic to aquatic life.

Long-term (chronic) aquatic hazard : Very toxic to aquatic life with long lasting effects.

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.

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US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)

UN2402, PROPANETHIOLS, 3, II

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

UN2402, PROPANETHIOLS, 3, II, (-34 °C c.c.), MARINE POLLUTANT, (ISOPROPYL MERCAPTAN, N-PROPYL MERCAPTAN)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

UN2402, PROPANETHIOLS, 3, II

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

UN2402, PROPANETHIOLS, 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS, (ISOPROPYL MERCAPTAN, N-PROPYL MERCAPTAN)

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

33, UN2402, PROPANETHIOLS, 3, II, ENVIRONMENTALLY HAZARDOUS, (ISOPROPYL MERCAPTAN, N-PROPYL MERCAPTAN)

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

UN2402, PROPANETHIOLS, 3, II, ENVIRONMENTALLY HAZARDOUS, (ISOPROPYL MERCAPTAN, N-PROPYL MERCAPTAN)

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 : Not applicable

Notified Names

Enforcement Order of the : Inflammable Substance

Industrial Safety and Health

Law - Attached table 1

(Dangerous Substances)

Enforcement Order of the : Inflammable Substance

Industrial Safety and Health

Law - Attached table 1

(Dangerous Substances)

Harmful Substances Required : Not applicable

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Permission for Manufacture
 Hazardous Substances : Not applicable
 Subject to Labeling
 Requirements
 Ordinance on Prevention of : Not applicable
 Organic Solvent Poisoning
 Ordinance on Prevention of : Not applicable
 Lead Poisoning
 Harmful Substances : Not applicable
 Prohibited from Manufacture
 Ordinance on Prevention of : Not applicable
 Hazards Due to Specified
 Chemical Substances
 Ordinance on Prevention of : Not applicable
 Tetraalkyl Lead Poisoning
 : Not applicable
 : Not applicable

Substances Prevented From : Not applicable
 Impairment of Health Listed

Chemical Substance Control Law

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

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

: Not applicable

Other regulations

Fire Service Law : Flammable liquids
 Type 1 petroleums
 Hazardous rank II

High Pressure Gas Safety Act : Not applicable

Explosive Control Law : Not applicable

Vessel Safety Law : Flammable liquids (Article 2 and 3 of rules on shipping and
 storage of dangerous goods and its Attached Table 1)

Aviation Law : Flammable liquid (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.

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

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Australia AIIC	:	On the inventory, or in compliance with the inventory
New Zealand NZIoC	:	On the inventory, or in compliance with the inventory
Japan ENCS	:	On the inventory, or in compliance with the inventory
Korea KECI	:	A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still permitted provided the Korean Importer of Record has themselves notified the substance or the exported amount does not exceed the minimum threshold quantity of the non-registered substance(s).
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 : 38500

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

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%
AIIC	Australian Inventory of Industrial Chemicals	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

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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%	ATE	Acute toxicity estimate