

**Sulfole® 100 Mercaptan**

Version 1.3

Revision Date 2014-11-19

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

Product Name : Sulfole® 100 Mercaptan  
Material : 1098106, 1024816, 1021527, 1035961, 1021528, 1021529,  
1021526, 1027474, 1105025

Use : Chemical intermediate

**Company** : Chevron Phillips Chemical Company LP  
Specialty Chemicals  
10001 Six Pines Drive  
The Woodlands, TX 77380

**Emergency telephone:****Health:**

866.442.9628 (North America)

1.832.813.4984 (International)

**Transport:**

North America: CHEMTREC 800.424.9300 or 703.527.3887

Asia: +800 CHEMCALL (+800 2436 2255) China: +86-21-22157316

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

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

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**

This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

**Emergency Overview****Warning**

**Form:** Liquid    **Physical state:** Liquid    **Color:** Colorless    **Odor:** Repulsive

OSHA Hazards : Combustible Liquid, Skin sensitizer, Moderate skin irritant,  
Moderate eye irritant

**Classification**

: Flammable liquids , Category 4  
Skin irritation , Category 2  
Eye irritation , Category 2A

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Skin sensitization , 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.

Precautionary Statements

: **Prevention:**  
 P210 Keep away from heat/sparks/open flames/hot surfaces.  
 - No smoking.  
 P261 Avoid breathing dust/fume/gas/mist/vapors/spray.  
 P264 Wash skin thoroughly after handling.  
 P272 Contaminated work clothing should not be allowed out of the workplace.  
 P280 Wear protective gloves/ eye protection/ face protection.  
**Response:**  
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
 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 Take off contaminated clothing and wash before reuse.  
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
**Storage:**  
 P403 + P235 Store in a well-ventilated place. Keep cool.  
**Disposal:**  
 P501 Dispose of contents/ container to an approved waste disposal plant.

**Carcinogenicity:****IARC**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**NTP**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**ACGIH**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

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**SECTION 3: Composition/information on ingredients**

Synonyms : 100 Mercaptan  
TNM and TDM Mixture

Molecular formula : Mixture

Component	CAS-No.	Weight %
tert-Nonanethiol	25360-10-5	60 - 75
tert-Dodecanethiol	25103-58-6	15 - 40

**SECTION 4: First aid measures**

General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended.

If inhaled : If unconscious place in recovery position and seek medical 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 induce vomiting. 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 : 67 °C (153 °F)

Autoignition temperature : No data available

Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>).

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

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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 an open flame or any other 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.

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 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.

Advice on protection against fire and explosion : Do not spray on an open flame or any other incandescent material. 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.

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**SECTION 8: Exposure controls/personal protection****Ingredients with workplace control parameters****Chevron Phillips Chemical Company LP**

Ingredients	Basis	Value	Control parameters	Note
tert-Dodecanethiol	Manufacturer	TWA	0.1 ppm,	

**US**

Ingredients	Basis	Value	Control parameters	Note
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**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 : 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: Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, 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. Wear face-shield and protective suit for abnormal processing problems.
- 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 antistatic protective clothing. 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**

MSDS Number:100000014209

5/16

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**Appearance**

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

**Safety data**

Flash point : 67 °C (153 °F)  
Lower explosion limit : No data available  
Upper explosion limit : No data available

Autoignition temperature : No data available

Thermal decomposition : No data available

Molecular formula : Mixture

Molecular weight : Not applicable

pH : Not applicable

Freezing point : No data available

pour point : No data available

Boiling point/boiling range : 188 - 233 °C (370 - 451 °F)  
estimated

Vapor pressure : 0.02 PSI  
at 25.5 °C (77.9 °F)

Relative density : 0.855, 15.6 °C(60.1 °F)

Density : 853.2 g/l

Water solubility : Negligible

Partition coefficient: n-octanol/water : No data available

Viscosity, dynamic : 1.77 cP

Relative vapor density : 3  
(Air = 1.0)

Evaporation rate : 1

Percent volatile : > 99 %

**SECTION 10: Stability and reactivity**

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Chemical stability : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions**

Conditions to avoid : Avoid moisture.  
Heat, flames and sparks.

Materials to avoid : Avoid oxidizing agents.

Thermal decomposition : No data available

Hazardous decomposition products : Carbon oxides  
Sulfur oxides

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

**SECTION 11: Toxicological information****Acute oral toxicity**

tert-Nonanethiol : LD50: 5,550 mg/kg  
Species: rat  
Method: OECD Test Guideline 401  
Symptoms: Disorientation, Loss of balance

tert-Dodecanethiol : LD50: > 5,000 mg/kg  
Species: rat  
Sex: male and female  
Method: OECD Test Guideline 401  
Information given is based on data obtained from similar substances.

**Acute inhalation toxicity**

tert-Nonanethiol : LC50: >7,04milligram per literExposure time: 4 h  
Species: rat  
Sex: male and female  
Test atmosphere: vapor  
Method: OECD Test Guideline 403

tert-Dodecanethiol : LC50: > 1.97milligram per literExposure 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-Nonanethiol : LD50: >2000 milligram per kilogram  
Species: rat  
Sex: male

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Method: OECD Test Guideline 402

tert-Dodecanethiol

LD50: &gt;2000 mg/kg

Species: rat

Sex: male

Method: OECD Test Guideline 402

Information given is based on data obtained from similar substances.

**Sulfole® 100 Mercaptan  
Skin irritation**

: Causes skin irritation.

**Sulfole® 100 Mercaptan  
Eye irritation**

: Irritating to eyes.

**Sensitization**

tert-Nonanethiol

: The results of a test on guinea pigs showed this substance to be a weak skin sensitizer.

tert-Dodecanethiol

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

**Repeated dose toxicity**

tert-Nonanethiol

: Species: rat, male and female

Sex: male and female

Application Route: Inhalation

Dose: 0, 26, 98 ppm

Exposure time: 4 wk

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

Lowest observable effect level: 26 ppm

Method: OECD Guideline 412

Target Organs: Kidney, Liver

Information given is based on data obtained from similar substances.

tert-Dodecanethiol

Species: rat, male

Sex: male

Application Route: Inhalation

Dose: 0, 26, 98 ppm

Exposure time: 4 wk

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

Lowest observable effect level: 26 ppm

Method: OECD Test Guideline 412

Target Organs: Kidney, Liver



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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: 10, 50, 250 mg/kg  
Exposure time: 35 d  
Number of exposures: once daily  
NOEL: 50 mg/kg  
Method: OECD Guideline 422  
Target Organs: Liver, spleen  
Information given is based on data obtained from similar substances.

Species: rat, female  
Sex: female  
Application Route: oral gavage  
Dose: 10, 50, 250 mg/kg  
Exposure time: 53 d  
Number of exposures: once daily  
NOEL: 50 mg/kg  
Method: OECD Guideline 422  
Target Organs: Liver, spleen  
Information given is based on data obtained from similar substances.

**Reproductive toxicity**

tert-Dodecanethiol : Species: rat  
Sex: male

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Application Route: oral gavage  
 Dose: 10, 50, 250 mg/kg/d  
 Exposure time: 35 d  
 Number of exposures: Daily  
 Method: OECD Guideline 422  
 NOAEL Parent:  $\geq 250$  mg/kg  
 Information given is based on data obtained from similar substances.

Species: rat  
 Sex: female  
 Application Route: oral gavage  
 Dose: 10, 50, 250 mg/kg/d  
 Exposure time: 53 d  
 Number of exposures: Daily  
 Method: OECD Guideline 422  
 NOAEL Parent: 50 mg/kg  
 NOAEL F1: 50 mg/kg  
 Information given is based on data obtained from similar substances.  
 Decrease in Delivery Index

**Developmental Toxicity**

tert-Nonanethiol : Species: rat  
 Application Route: Inhalation  
 Dose: 0, 22.7, 88.6 ppm  
 Number of exposures: 6 h/d  
 Test period: GD 6 - 19  
 Method: OECD Guideline 414  
 NOAEL Teratogenicity:  $\geq 88.6$  ppm  
 NOAEL Maternal:  $\geq 88.6$  ppm  
 No adverse effects expected  
 Information given is based on data obtained from similar substances.

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:  $\geq 88.6$  ppm  
 No adverse effects expected

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:  $\geq 88.6$  ppm  
 No adverse effects expected

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Aspiration toxicity**

: May be harmful if swallowed and enters airways.

**CMR effects**

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tert-Nonanethiol : Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.  
Teratogenicity: Animal testing did not show any effects on fetal development.

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

**Sulfole® 100 Mercaptan  
Further information**

: Solvents may degrease the skin.

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

tert-Nonanethiol : No data available

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-Nonanethiol : EC50: 0.090 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)  
Immobilization Method: OECD Test Guideline 202

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.

**Toxicity to algae**

tert-Nonanethiol : No data available

M-Factor  
1,1-dimethylheptanethiol : 10

**Toxicity to bacteria**

tert-Dodecanethiol : NOEC: 8.6 mg/l  
Exposure time: 3 h  
Growth rate  
Respiration inhibition  
Method: OECD Test Guideline 209

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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.

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.

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

**Ecotoxicology Assessment**

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

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

Toxicity Data on Soil  
 tert-Dodecanethiol : Adsorbs on soil.

Other organisms relevant to the environment  
 tert-Dodecanethiol : No information available.

Impact on Sewage Treatment  
 tert-Dodecanethiol : No information available.

Results of PBT assessment  
 tert-Nonanethiol : Non-classified PBT substance, Non-classified vPvB substance

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

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

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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., (TERT-DODECANETHIOL, TERT-NONANETHIOL), III

**IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)**

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (TERT-NONANETHIOL), 9, III, (67 °C), MARINE POLLUTANT, (TERT-NONANETHIOL)

**IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)**

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (TERT-NONANETHIOL), 9, III

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

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (TERT-NONANETHIOL), 9, III, (E)

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

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (TERT-NONANETHIOL), 9, III

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

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (TERT-NONANETHIOL), 9, III

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code****SECTION 15: Regulatory information****National legislation**

**SARA 311/312 Hazards** : Fire Hazard  
Acute Health Hazard

**CERCLA Reportable Quantity** : This material does not contain any components with a CERCLA RQ.

**SARA 302 Reportable Quantity** : This material does not contain any components with a SARA 302 RQ.

**SARA 302 Threshold Planning Quantity** : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 304 Reportable Quantity** : This material does not contain any components with a section 304 EHS RQ.

**SARA 313 Ingredients** : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Clean Air Act**

**Ozone-Depletion Potential** : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

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This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMII Intermediate or Final VOC's (40 CFR 60.489).

**US State Regulations****Pennsylvania Right To Know**

: tert-Nonanethiol - 25360-10-5  
tert-Dodecanethiol - 25103-58-6

**New Jersey Right To Know**

: No components are subject to the New Jersey Right to Know Act.

**California Prop. 65  
Ingredients**

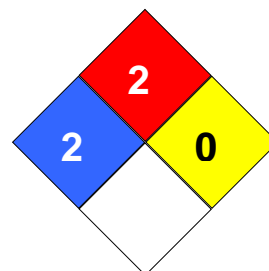
: This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**Notification status**

Europe REACH	:	On the inventory, or in compliance with the inventory
United States of America TSCA	:	On the inventory, or in compliance with the inventory
Canada DSL	:	On the inventory, or in compliance with the inventory
Australia AICS	:	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	:	Not in compliance with the inventory
Philippines PICCS	:	On the inventory, or in compliance with the inventory
China IECSC	:	On the inventory, or in compliance with the inventory

**SECTION 16: Other information****NFPA Classification**

: Health Hazard: 2  
Fire Hazard: 2  
Reactivity Hazard: 0  
Health Hazard: 2  
Fire Hazard: 2



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**Further information**

Legacy SDS Number : 34660

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 Material 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%		