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

Product information

Product Name: Orfom® CO210 Collector
Material: 1122016, 1121512, 1118478, 1117769, 1117768, 1117418, 1117417

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

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

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.

Classification:
Skin irritation, Category 2
Eye irritation, Category 2A
Skin sensitization, Sub-category 1B

Labeling

SDS Number: 100000102762
Orfom® CO210 Collector

Version 1.5

Revision Date 2019-12-18

Symbol(s) : !

Signal Word : Warning

Hazard Statements : 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.

Potential Health Effects

Primary Routes of Entry : Skin Absorption

Target Organs : Skin
                Eyes

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.

SECTION 3: Composition/information on ingredients

Synonyms : TDM

SDS Number:100000102762  2/17
SAFETY DATA SHEET
Orfom® CO210 Collector
Version 1.5
Revision Date 2019-12-18

Molecular formula : C12H26S

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>tert-Dodecanethiol</td>
<td>25103-58-6</td>
<td>90 - 100</td>
</tr>
</tbody>
</table>

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 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. If symptoms persist, call a physician. Take victim immediately to hospital.

SECTION 5: Firefighting measures

Flash point : 98-110°C (208-230°F)
Autoignition temperature : 198-230°C (388-446°F)

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.

Fire and explosion protection : Normal measures for preventive fire protection.

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: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Handling

Advice on safe handling: 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. 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: Normal measures for preventive fire protection.

Storage

Requirements for storage areas and containers: 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

Ingredients with workplace control parameters

Chevron Phillips Chemical Company LP

<table>
<thead>
<tr>
<th>Components</th>
<th>Basis</th>
<th>Value</th>
<th>Control parameters</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>tert-Dodecanethiol</td>
<td>Manufacturer</td>
<td>TWA</td>
<td>0.1 ppm.</td>
<td></td>
</tr>
</tbody>
</table>

US

<table>
<thead>
<tr>
<th>Components</th>
<th>Basis</th>
<th>Value</th>
<th>Control parameters</th>
<th>Note</th>
</tr>
</thead>
</table>

Contains no substances with occupational exposure limit values.

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 Dusts and Mists / P100. 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 according to the amount and concentration of the dangerous substance at the work place. Wear as appropriate:: Protective suit. Safety shoes.

**Hygiene measures**: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

**Protective measures**: Wear suitable protective equipment. When using do not eat, drink or smoke. Avoid contact with skin.

---

**SECTION 9: Physical and chemical properties**

**Information on basic physical and chemical properties**

**Appearance**

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>mild hydrocarbon</td>
</tr>
</tbody>
</table>

**Safety data**

<table>
<thead>
<tr>
<th>Flash point</th>
<th>98-110°C (208-230°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
</tbody>
</table>
### Orfom® CO210 Collector

**Version 1.5**  
**Revision Date** 2019-12-18

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>no</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>198-230°C (388-446°F)</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>300 °F</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>C12H26S</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>202.44 g/mol</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Pour point</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>-16°C (3°F)</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>233°C (451°F)</td>
</tr>
</tbody>
</table>
| Vapor pressure                                | 4.00 Pa  
  at 24°C (75°F) |
| Relative density                              | 0.86  
  at 16 °C (61 °F) |
| Water solubility                              | 0.00393 mg/l  
  Method: OECD Test Guideline 105 |
| Partition coefficient: n-octanol/water        | Pow: 7.43  
  at 20°C (68°F) |
| Viscosity, dynamic                            | 2.6 cP  
  at 20°C (68°F) |
| Viscosity, kinematic                          | No data available |
| Relative vapor density                        | 3  
  (Air = 1.0) |
| Evaporation rate                              | < 1 |

### SECTION 10: Stability and reactivity

#### 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: Further information: No decomposition if stored and applied as directed.

Conditions to avoid: Heat, sparks, fire, and oxidizing agents.

Materials to avoid: May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Thermal decomposition: 300 °F

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-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

- 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
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.

Species: Rat, male  
Sex: male  
Application Route: Inhalation  
Dose: 5, 25, 100 ppm  
Exposure time: 90 d
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Number of exposures: 6h/d, 5d/wk
NOEL: 25 ppm
Method: OECD Test Guideline 413

Species: Rat, female
Sex: female
Application Route: Inhalation
Dose: 5, 25, 100 ppm
Exposure time: 90 d
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 Guideline 473
Result: Ambiguous

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: 10, 50, 250 mg/kg/d
Exposure time: 35 d
Number of exposures: Daily
Method: OECD Guideline 422
NOAEL Parent: >= 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-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

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

Orfom® CO210 Collector
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

Orfom® CO210 Collector
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)
**Toxicity to daphnia and other aquatic invertebrates**

<table>
<thead>
<tr>
<th>Component</th>
<th>EC50 (mg/l)</th>
<th>Exposure time (h)</th>
<th>Species</th>
<th>Method</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>tert-Dodecanethiol</td>
<td>&gt; 0.056</td>
<td>48</td>
<td>Daphnia magna (Water flea)</td>
<td>OECD Test Guideline 203</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No toxicity at the limit of solubility.</td>
<td></td>
</tr>
</tbody>
</table>

**Toxicity to bacteria**

<table>
<thead>
<tr>
<th>Component</th>
<th>NOEC (mg/l)</th>
<th>Exposure time (h)</th>
<th>Growth rate</th>
<th>Respiration inhibition</th>
<th>Method</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>tert-Dodecanethiol</td>
<td>8.6</td>
<td>3</td>
<td></td>
<td></td>
<td>OECD Test Guideline 209</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>NOEC: &gt; 10 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Exposure time: 3 h</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Growth rate</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Respiration inhibition</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Method: OECD Test Guideline 209</td>
<td></td>
</tr>
</tbody>
</table>

**Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)**

<table>
<thead>
<tr>
<th>Component</th>
<th>NOEC (mg/l)</th>
<th>Exposure time (d)</th>
<th>Species</th>
<th>Method</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>tert-Dodecanethiol</td>
<td>0.0108</td>
<td>21</td>
<td>Daphnia magna (Water flea)</td>
<td>OECD Test Guideline 211</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No toxicity at the limit of solubility.</td>
<td></td>
</tr>
</tbody>
</table>

**Biodegradability**

<table>
<thead>
<tr>
<th>Component</th>
<th>Biodegradable</th>
<th>Testing period (d)</th>
<th>Method</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>tert-Dodecanethiol</td>
<td>Not readily</td>
<td>28</td>
<td>OECD Test Guideline 301D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>biodegradable</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Bioaccumulation**

<table>
<thead>
<tr>
<th>Component</th>
<th>Species</th>
<th>Exposure time (d)</th>
<th>Bioconcentration factor (BCF)</th>
<th>Method</th>
<th>Biomagnification factor</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>tert-Dodecanethiol</td>
<td>Danio rerio</td>
<td>15</td>
<td>&gt; 500 - &lt; 1,950</td>
<td>OECD Test Guideline 305</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(zebra fish)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The product may be accumulated in organisms.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Results of PBT assessment**

<table>
<thead>
<tr>
<th>Component</th>
<th>PBT classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>tert-Dodecanethiol</td>
<td>Non-classified PBT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>substance, Non-classified vPvB substance</td>
<td></td>
</tr>
</tbody>
</table>
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.

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

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.

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

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)
SAFETY DATA SHEET

Orfom® CO210 Collector

Version 1.5

UN3334, AVIATION REGULATED LIQUID, N.O.S., (TERT-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 TRANSPORTATION BY THIS AGENCY.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

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

SECTION 15: Regulatory information

National legislation

SARA 311/312 Hazards : Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization

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 : This material does not contain any components with a section 302 EHS TPQ.

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

SARA 313 Components : 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.

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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 112 (40 CFR 61).

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 SOCMI Intermediate or Final VOC’s (40 CFR 60.489).

US State Regulations

Pennsylvania Right To Know: tert-Dodecanethiol - 25103-58-6

California Prop. 65 Components: 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: 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) TSCA: On or in compliance with the active portion of the TSCA inventory

Canada DSL: All components of this product are on the Canadian DSL

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 KECl: 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

China IECSC: On the inventory, or in compliance with the inventory

Taiwan TCSI: On the inventory, or in compliance with the inventory
NFPA Classification

Health Hazard: 2
Fire Hazard: 1
Reactivity Hazard: 0

Further information

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% |
| 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          |
| IARC                            | International Agency for Research on Cancer            | SARA             | Superfund Amendments and Reauthorization Act. |
| IECSC                           | Inventory of Existing Chemical Substances in China     | TLV              | Threshold Limit Value             |
| ENCS                            | Japan, Inventory of Existing and New Chemical Substances | TWA              | Time Weighted Average             |
| KECI                            | Korea, Existing Chemical Inventory                     | TSCA             | Toxic Substance Control Act       |
|                                 |                                                             | UVCB             | Unknown or Variable Composition, Complex Reaction Products, and |

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<th>&lt;=</th>
<th>Less Than or Equal To</th>
<th>Biological Materials</th>
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<tr>
<td>LC50</td>
<td>Lethal Concentration 50%</td>
<td>Workplace Hazardous Materials Information System</td>
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