

## Di-tert-Dodecyl Polysulfide (TDPS 320)

Version 1.9

### Revision Date 2018-01-18

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

#### **Product information**

| Product Name | : | Di-tert-Dodecyl Polysulfide (TDPS 320)                |
|--------------|---|---|
| Material     | : | 1024832, 1024831, 1024559, 1024560, 1024579, 1024561, |
|              |   | 1024564, 1024562, 1024556, 1024558, 1024557           |

### EC-No.Registration number

| Chemical name            | CAS-No.                 | Legal Entity   |
|--------------------------|-------------------------|--|
|                          | EC-No.                  | Registration number  |
|                          | Index No.               |  |
| Di-t-Dodecyl Polysulfide | 68425-15-0<br>270-335-7 | Chevron Phillips Chemicals International NV<br>01-2119540516-41-0001 |

| Relevant Identified Uses<br>Supported | : Manufacture<br>Formulation<br>Lubricants - Industrial<br>Lubricants - Professional<br>Lubricants - Consumer   |
|---------------------------------------|---|
| Company                               | <ul> <li>Chevron Phillips Chemical Company LP<br/>Specialty Chemicals<br/>10001 Six Pines Drive<br/>The Woodlands, TX 77380</li> </ul>                            |
| Local                                 | <ul> <li>Chevron Phillips Chemicals International N.V.<br/>Airport Plaza (Stockholm Building)<br/>Leonardo Da Vincilaan 19<br/>1831 Diegem<br/>Belgium</li> </ul> |
|                                       | SDS Requests: (800) 852-5530<br>Technical Information: (832) 813-4862<br>Responsible Party: Product Safety Group<br>Email:sds@cpchem.com                          |
| Emergency telephone:                  |   |
| Health:                               |   |
| SDS Number:100000014150               | 1/12  |

# Di-tert-Dodecyl Polysulfide (TDPS 320)

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| 866.442.9628 (North America)<br>1.832.813.4984 (International)Transport:<br>CHEMTREC 800.424.9300 or 703.527.3887(int'l)<br>Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090<br>EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)<br>Mexico CHEMTREC 01-800-681-9531 (24 hours)<br>South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600<br>Argentina: +(54)-1159839431Responsible Department:Product Safety and Toxicology Group<br>E-mail address:SDS@CPChem.com<br>Website:www.CPChem.com |   |  |  |  |
|---|---|--|--|--|
| Classification of the substance or  | mixturo   |  |  |  |
| REGULATION (EC) No 1272/2008  | mixture   |  |  |  |
| Chronic aquatic toxicity, Catego  | ory 4   | H413:<br>May cause long lasting harm<br>life.                          | ful effects to aquatic                         |  |
| Label elements  |   |  |  |  |
| Labeling (REGULATION (EC) I   | No 1272/2008)   |  |  |  |
| Hazard Statements :   | H413  | May cause long lastir aquatic life.                                    | ng harmful effects to                          |  |
| Precautionary Statements :  | <b>Prevention</b><br>P273<br><b>Disposal:</b><br>P501 | Avoid release to the e<br>Dispose of contents/<br>approved waste dispo | environment.<br>container to an<br>osal plant. |  |
| Hazardous ingredients which m<br>• 68425-15-0 Di-t-Do   | nust be listed o<br>odecyl Polysulf                   | n the label:<br>ïide   |  |  |
| SECTION 3: Composition/informa  | tion on ingree  | dients   |  |  |
| Synonyms :  | t-Dodecyl po<br>tertiary-Dod<br>Di-tert-dode          | blysulfide<br>ecyl polysulfide<br>cyl polysulfide                      |  |  |
| Molecular formula :   | UVCB  |  |  |  |
| Mixtures  |   |  |  |  |
| Hazardous ingredients   |   |  |  |  |
| Chemical name   | CAS-No.<br>EC-No.<br>Index No.                        | Classification<br>(REGULATION (EC) No<br>1272/2008)                    | Concentration<br>[wt%]                         |  |
| SDS Number: 4000004 44 50   |   | 0/40   |  |  |
| 500 Number: 100000014150  |   | 2/12   |  |  |

| -tert-Dodecyl Polysu                           | ulfide (TDPS  | SAFETY DATA SHEE  |
|--|---|---|
| ersion 1.9                                     |   | Revision Date 2018-01-  |
| Di-t-Dodecyl Polysulfide                       | 68425-15-0<br>270-335-7                                     | 100   |
| For the full text of the H-State               | ements mentione   | d in this Section, see Section 16.  |
| CTION 4: First aid measures                    |   |   |
|  |   |   |
| General advice                                 | : No hazards  | which require special first aid measures.   |
| If inhaled                                     | : If unconscio<br>advice. If sy                             | us, place in recovery position and seek medical<br>mptoms persist, call a physician.  |
| In case of eye contact                         | : Remove cor<br>irritation pers                             | itact lenses. Protect unharmed eye. If eye sists, consult a specialist.   |
| If swallowed                                   | : Keep respira physician.                                   | atory tract clear. If symptoms persist, call a  |
| CTION 5: Firefighting measu                    | res   |   |
| Flash point                                    | : 121 - 132 °(<br>Method: PM                                | C (250 - 270 °F)<br>CC  |
| Autoignition temperature                       | : 240 °C (464   | °F)   |
| Specific hazards during fire fighting          | : Do not allow courses.                                     | run-off from fire fighting to enter drains or water   |
| Special protective equipment for fire-fighters | : Wear self-co<br>necessary.                                | ontained breathing apparatus for firefighting if  |
| Further information                            | : Collect conta<br>must not be<br>contaminate<br>accordance | aminated fire extinguishing water separately. This<br>discharged into drains. Fire residues and<br>d fire extinguishing water must be disposed of in<br>with local regulations. |
| Fire and explosion protection                  | : Normal mea  | sures for preventive fire protection.   |
| Hazardous decomposition products               | : Carbon oxid   | es. Sulfur oxides.  |
| CTION 6: Accidental release                    | measures  |   |
| Environmental precautions                      | : Prevent proc<br>contaminate<br>authorities.               | Juct from entering drains. If the product s rivers and lakes or drains inform respective  |
| Methods for cleaning up                        | : Wipe up with suitable, close                              | n absorbent material (e.g. cloth, fleece). Keep in sed containers for disposal.   |
| CTION 7: Handling and stora                    | ige   |   |
| Handling                                       |   |   |
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SAFETY DATA SHEET

| Advice on safe handling                         | : | For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.   |
|---|---|---|
| Advice on protection against fire and explosion | : | Normal measures for preventive fire protection.   |
| Storage   |   |   |
| Requirements for storage areas and containers   | : | Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards. |
| Advice on common storage                        | : | No materials to be especially mentioned.  |

### SECTION 8: Exposure controls/personal protection

### Ingredients with workplace control parameters

| H                                |  |   |   |                            |
|----------------------------------|--|---|---|----------------------------|
| Inhaltsstoffe                    | Grundlage  | Wert  | Zu überwachende<br>Parameter  | Bemerkung                  |
| Di-tert-dodecyl polysulfides     | CH SUVA  | MAK-Wert  | 300 mg/m3   | SSc, einatembarer<br>Staub |
|                                  | CH SUVA  | KZGW  | 600 mg/m3   | SSc, einatembarer<br>Staub |
| SSc Eine Schädigung der Leibe    | esfrucht braucht bei Ei  | nhaltung des MAK-We   | rtes nicht befürchtet zu werden.  |                            |
| DNEL<br>Di-t-Dodecyl Polysulfide | : End Use<br>Routes<br>Potentia<br>Value:<br>End Use<br>Routes<br>Potentia | e: Workers<br>of exposure: Inl<br>al health effects:<br>23,5 mg/m3<br>e: Workers<br>of exposure: Sk<br>al health effects: | nalation<br>: Chronic effects, System<br>:in contact<br>: Chronic effects, System | nic effects<br>nic effects |
|                                  | Value:<br>End Us<br>Routes<br>Potentia<br>Value:                           | 33,3 mg/kg<br>e: Consumers<br>of exposure: Inl<br>al health effects:<br>5,8 mg/m3   | nalation<br>Chronic effects, System   | nic effects                |
|                                  | End Use<br>Routes<br>Potentia<br>Value:                                    | e: Consumers<br>of exposure: Sk<br>al health effects:<br>16,6 mg/kg   | in contact<br>Chronic effects, System   | nic effects                |
|                                  | End Us<br>Routes<br>Potentia<br>Value:                                     | e: Consumers<br>of exposure: Ing<br>al health effects:<br>1,66 mg/kg  | gestion<br>Chronic effects, System  | nic effects                |
| Engineering measures             |  |   |   |                            |
|                                  |  |   |   |                            |

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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<br>ventilation or other engineering controls are adequate to<br>maintain minimal oxygen content of 19.5% by volume under<br>normal atmospheric pressure. Wear a NIOSH approved<br>respirator that provides protection when working with this<br>material if exposure to harmful levels of airborne material may<br>occur, such as:. Air-Purifying Respirator for Dusts and Mists /<br>P100. Use a positive pressure, air-supplying respirator if there<br>is potential for uncontrolled release, exposure levels are not<br>known, or other circumstances where air-purifying respirators<br>may not provide adequate protection. |
|--------------------------|---|--|
| Hand protection          | : | The suitability for a specific workplace should be discussed<br>with the producers of the protective gloves. Please observe<br>the instructions regarding permeability and breakthrough time<br>which are provided by the supplier of the gloves. Also take into<br>consideration the specific local conditions under which the<br>product is used, such as the danger of cuts, abrasion, and the<br>contact time. Gloves should be discarded and replaced if there<br>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 according to the amount and concentration of the dangerous substance at the work place. Wear as appropriate:. Protective suit. Safety shoes.  |
| Hygiene measures         | : | General industrial hygiene practice.   |

#### **SECTION 9: Physical and chemical properties**

| Appearance                              |   |
|---|---|
| Form<br>Physical state<br>Color<br>Odor | : Liquid<br>: Liquid<br>: Yellow<br>: Mildly unpleasant |
| Safety data                             |   |
| Flash point                             | : 121 - 132 °C (250 - 270 °F)<br>Method: PMCC           |
| Lower explosion limit                   | : No data available                                     |
| Upper explosion limit                   | : No data available                                     |
| Oxidizing properties                    | : no  |
| S Number:100000014150                   | 5/12  |

# Di-tert-Dodecyl Polysulfide (TDPS 320)

Version 1.9

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| SDS Number:100000014150                    | 6/12   |
|--|--|
| Chemical stability                         | : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. |
| SECTION 10: Stability and reacti           | vity   |
| Evaporation rate                           | : <1   |
| Relative vapor density                     | : No data available  |
|  | 130,35 mm2/s<br>at  40 °C (104 °F)   |
| Viscosity, kinematic                       | : 716,19 mm2/s<br>at 20 °C (68 °F)   |
|  | Medium: Water<br>Insoluble   |
| Solubility in other solvents               | : Medium: Hydrocarbons<br>Soluble  |
| Partition coefficient: n-<br>octanol/water | : log Pow: > 6,2<br>at 20 °C (68 °F)<br>Method: OECD Test Guideline 117  |
| Water solubility                           | : 0,260 µg/l<br>at 20 °C (68 °F)<br>Method: OECD Test Guideline 105  |
| Relative density                           | : 0,94 - 1,01<br>at 15,6 °C (60,1 °F)  |
| Vapor pressure                             | : 0,00 Pa<br>at 20 °C (68 °F)<br>Method: OECD Test Guideline 104   |
| Boiling point/boiling range                | : 193,7 °C (380,7 °F)<br>at 101,30 kPa<br>Method: OECD Test Guideline 103  |
| Melting point/range                        | : -48 °C (-54 °F)<br>at 101,30 kPa<br>Method: OECD Test Guideline 102  |
| рН   | : No data available  |
| Molecular weight                           | : Not applicable   |
| Molecular formula                          | : UVCB   |
| Autoignition temperature                   | : 240 °C (464 °F)  |

| Version 1.9       Revision Date 2018-01-1         Possibility of hazardous reactions       Conditions to avoid       : No data available.         Hazardous decomposition       : Carbon oxides         products       Sulfur oxides         Other data       : No decomposition if stored and applied as directed.         SECTION 11: Toxicological information         Acute oral toxicity         DH-Dodecyl Polysulfide       : LD50: 19.550 mg/kg         Species: Rat         Method: OECD Test Guideline 401         Information given is based on data obtained from similar substances.         Acute inhalation toxicity         DH-Dodecyl Polysulfide       : LC50: > 15.5 mg/l         Exposure time: 4 h         Species: Rat         Test atmospher: dust/mist.         Method: OECD Test Guideline 403         Information given is based on data obtained from similar substances.         Skin irritation         DH-Dodecyl Polysulfide       : slight irritation.         Eye irritation         DH-Dodecyl Polysulfide       : slight irritation.         Sensitization       Did not cause sensitization on laboratory animals.         DH-Dodecyl Polysulfide       : Species: Rat, Male and female         Service in reade       Application Route: cral gavage <t< th=""><th>Di-tart-Dadacyl Polysy</th><th>SAFETY DATA SHEET</th></t<>   | Di-tart-Dadacyl Polysy                                     | SAFETY DATA SHEET   |
|--|--|---|
| Possibility of hazardous reactions         Conditions to avoid       : No data available.         Hazardous decomposition       : Carbon oxides         products       Sulfur oxides         Other data       : No decomposition if stored and applied as directed.         SECTION 11: Toxicological information         Acute oral toxicity         Di-Dodecyl Polysulfide       : LD50: 19.550 mg/tg         Section or similar         Substances.         Acute inhalation toxicity         Di-Dodecyl Polysulfide       : LC50: > 15.5 mg/t         Exposure time: 4         Species: Rat         Test atmosphere: dust/mist         Method: OECD Test Guideline 403         Information given is based on data obtained from similar substances.         Skin irritation         Di-Dodecyl Polysulfide       : slight irritation.         Eye irritation         Di-Dodecyl Polysulfide       : slight irritation.         Sensitization       Di-Dodecyl Polysulfide         Di-Dodecyl Polysulfide       : Species: Rat, Male and female         Application Route: cral gavage       Does: 50.250, 1000 mg/tg         Exposure time: (28 Days)       Number of exposures; daily         NOEL: 1.000 mg/tg       Method: OECD Test Guideline 407         No  | Version 1 9  | Revision Date 2018-01-18  |
| Conditions to avoid : No data available.<br>Hazardous decomposition : Carbon oxides<br>products : Sulfur oxides<br>Other data : No decomposition if stored and applied as directed.<br><b>SECTION 11: Toxicological information</b><br><b>Acute oral toxicity</b><br>Di-LDodecyl Polysulfide : LD50: 19.550 mg/kg<br>Species: Rat<br>Method: OECD Test Guideline 401<br>Information given is based on data obtained from similar<br>substances.<br><b>Acute inhalation toxicity</b><br>Di-Dodecyl Polysulfide : LC50: > 15.5 mg/t<br>Expecies: Rat<br>Method: OECD Test Guideline 403<br>Information given is based on data obtained from similar<br>substances.<br><b>Skin irritation</b><br>Di-Dodecyl Polysulfide : slight irritation.<br><b>Experimentation</b><br>Di-Dodecyl Polysulfide : slight irritation.<br><b>Skin irritation</b><br>Di-Dodecyl Polysulfide : slight irritation.<br><b>Sensitization</b><br>Di-Dodecyl Polysulfide : Did not cause sensitization on laboratory animals.<br><b>Repeated dose toxicity</b><br>Di-Dodecyl Polysulfide : Species: Rat, Male and female<br>Sex: Male and female<br>Application Route: aral gavage<br>Does: 60, 250, 1000 mg/kg<br>Exposure ime: (28 Days)<br>Number of exposures: daily<br>NOEL: 1.000 mg/kg<br>Method: OECD Test Guideline 407<br>No adverse effects expected   | Possibility of hazardous rea                               | actions   |
| Other data       x       No decomposition if stored and applied as directed.         SECTION 11: Toxicological information         Acute oral toxicity         Di-Dodecyl Polysulfide       x       LDSD: 19.550 mg/kg.         Berdice:       Rethod: OECD Test Guideline 401         Chromation given is based on data obtained from similar aubstances.         Di-Dodecyl Polysulfide       x       LCSD: > 15.5 mg/t         Di-Dodecyl Polysulfide       x       LCSD: > 15.5 mg/t         Carte inhalation toxicity       Bereis tamosphere: dust/mist         Di-Dodecyl Polysulfide       x       Statances.         Bit       Species: Rat       Bereis tamosphere: dust/mist         Carte inhalation toxicity       Bereis tamosphere: dust/mist         Di-Dodecyl Polysulfide       x       slight irritation.         Bit       Britation       Bereis tamosphere: dust/mist         Di-Dodecyl Polysulfide       x       slight irritation.         Bereistization       Bit not cause sensitization on laboratory animals.         Di-Dodecyl Polysulfide       x       Species: Rat. Male and female         Sex: Male and female       Sex: Male and female       Sex: Male and female         Di-Dodecyl Polysulfide       x       Species: Rat. Male and female       Sex: Sustor Rat. Male and female     <  | Conditions to avoid<br>Hazardous decomposition<br>products | : No data available.<br>: Carbon oxides<br>Sulfur oxides  |
| SECTION 11: Toxicological information         Acute oral toxicity         Di-t-Dodecyl Polysulfide       : LD50: 19.550 mg/kg<br>Species: Rat<br>Method: OECD Test Guideline 401<br>Information given is based on data obtained from similar<br>substances.         Acute inhalation toxicity         Di-t-Dodecyl Polysulfide       : LC50: > 15.5 mg/l<br>Exposure time: 4 h<br>Species: Rat<br>Test atmosphere: dust/mist<br>Method: OECD Test Guideline 403<br>Information given is based on data obtained from similar<br>substances.         Skin irritation       Di-t-Dodecyl Polysulfide       : slight irritation.         Di-t-Dodecyl Polysulfide       : slight irritation.         Sensitization       Di-t-Dodecyl Polysulfide       : slight irritation.         Sensitization       Di-t-Dodecyl Polysulfide       : Did not cause sensitization on laboratory animals.         Repeated dose toxicity       Di-t-Dodecyl Polysulfide       : Species: Rat, Male and female<br>Sex: Male and female<br>Application Route: oral gavage<br>Dose: 50, 250, 1000 mg/kg<br>Exposure time: (28 Days)<br>Number of exposures: Gaily<br>NOEL: 1.000 mg/kg<br>Method: OECD Test Guideline 407<br>No adverse effects expected         Reproductive toxicity       Di-t-Dodecyl Polysulfide       : No adverse effects expected  | Other data   | : No decomposition if stored and applied as directed.   |
| Acute oral toxicityDi-t-Dodecyl Polysulfide: LD50: 19.550 mg/kg<br>. Becies: Rat<br>Method: OECD Test Guideline 401<br>. Information given is based on data obtained from similar<br>. Busbatances. <b>Acute inhalation toxicity</b> Di-t-Dodecyl Polysulfide: LC50: > 15.5 mg/l<br>. Bepoare inverse. <b>Acute inhalation toxicity</b> Di-t-Dodecyl Polysulfide: LC50: > 15.5 mg/l<br>. Bepoare inverse. <b>Acute inhalation toxicity</b> Di-t-Dodecyl Polysulfide: LC50: > 15.5 mg/l<br>. Bepoare inverse.Method: OECD Test Guideline 403<br>. Method: OECD Test Guideline 403.<br>. Information given is based on data obtained from similar<br>. Bustances. <b>Bit irritation</b> Di-t-Dodecyl Polysulfide: slight irritation. <b>Bit irritation</b> Di-t-Dodecyl Polysulfide: slight irritation. <b>Sensitization</b> Di-t-Dodecyl Polysulfide: Did not cause sensitization on laboratory animals. <b>Repeated dose toxicity</b><br>. Beplication Route: oral gavage<br>. Dose: So2, 250, 1000 mg/kg<br>. Exposure time: (28 Days)<br>. Mumber of exposures: claily<br>. More: 'CCD Test Guideline 407.<br>. More: 'CCD mg/kg<br>. Method: 'CCD Test Guideline 407.<br>. More: 'CCD 'CCD Test Guideline 407.<br>. More: 'CCD 'CCD 'CCD' Context'.<br>. More: 'CCD' CCD'. Test Guideline 407.<br>. More: 'CCD'. Test Guideline 407.<br>. More: 'CCD'. Test Guideline 407.<br>. More: 'CCD'. More: 'CCD'. Test Guideline 407.<br>. More: 'CCD'. More: '  | SECTION 11: Toxicological info                             | ormation  |
| Actual oral toxicity         Di-t-Dodecyl Polysulfide       : LD50: 19.550 mg/kg<br>Species: Rat<br>Method: OECD Test Guideline 401<br>Information given is based on data obtained from similar<br>substances.         Acute inhalation toxicity       Di-t-Dodecyl Polysulfide       : LC50: > 15,5 mg/l<br>Exposure time: 4 h<br>Species: Rat<br>Test atmosphere: dust/mist<br>Method: OECD Test Guideline 403<br>Information given is based on data obtained from similar<br>substances.         Skin irritation       Di-t-Dodecyl Polysulfide       : slight irritation.         Di-t-Dodecyl Polysulfide       : slight irritation.         Eye irritation       Di-t-Dodecyl Polysulfide       : slight irritation.         Di-t-Dodecyl Polysulfide       : slight irritation.         Sensitization       Di-t-Dodecyl Polysulfide       : slight irritation.         Di-t-Dodecyl Polysulfide       : Did not cause sensitization on laboratory animals.         Repeated dose toxicity       Exposure time: (28 Days)<br>Number of exposures: daily<br>Number of exposures: daily | A  |   |
| Acute inhalation toxicityDi-t-Dodecyl Polysulfide:: LC50: > 15,5 mg/l<br>Exposure time: A h<br>Species: Rat<br>Test atmosphere: dust/mist<br>Method: OECD Test Guideline 403<br>Information given is based on data obtained from similar<br>substances.Skin irritation<br>Di-t-Dodecyl Polysulfide:: slight irritation.Eye irritation<br>Di-t-Dodecyl Polysulfide:: slight irritation.Bensitization<br>Di-t-Dodecyl Polysulfide:: bid not cause sensitization on laboratory animals.Pi-t-Dodecyl Polysulfide:: Did not cause sensitization on laboratory animals.Pi-t-Dodecyl Polysulfide:: Species: Rat, Male and female<br>Sex: Male and female<br>Maplication Route: oral gavage<br>Dose: 50, 250, 1000 mg/kg<br>Exposure time: (28 Days)<br>Number of exposures: daily<br>NOEE: 1.000 mg/kg<br>Method: OECD Test Guideline 407<br>No adverse effects expectedPi-t-Dodecyl Polysulfide:: No adverse effects expected  | Di-t-Dodecyl Polysulfide                                   | <ul> <li>LD50: 19.550 mg/kg</li> <li>Species: Rat</li> <li>Method: OECD Test Guideline 401</li> <li>Information given is based on data obtained from similar substances.</li> </ul>   |
| Di-t-Dodecyl Polysulfide       : LC50: > 15,5 mg/l         Exposure time: 4 h       Species: Rat         Test atmosphere: dust/mist       Method: OECD Test Guideline 403         Information given is based on data obtained from similar substances.         Skin irritation         Di-t-Dodecyl Polysulfide       : slight irritation.         Eye irritation         Di-t-Dodecyl Polysulfide       : slight irritation.         Sensitization         Di-t-Dodecyl Polysulfide       : Did not cause sensitization on laboratory animals.         Repeated dose toxicity         Di-t-Dodecyl Polysulfide       : Species: Rat, Male and female         Sex: Male and female         Sex: Male and female         Application Route: oral gavage         Dose: 50, 250, 1000 mg/kg         Exposure: (28 Days)         Number of exposures: daily         NOEL: 1.000 mg/kg         Method: OECD Test Guideline 407         No adverse effects expected  | Acute inhalation toxicity                                  |   |
| Skin irritationDi-t-Dodecyl Polysulfide: slight irritation.Eye irritation<br>Di-t-Dodecyl Polysulfide: slight irritation.Sensitization<br>Di-t-Dodecyl Polysulfide: Did not cause sensitization on laboratory animals.Di-t-Dodecyl Polysulfide: Did not cause sensitization on laboratory animals.Poi-t-Dodecyl Polysulfide: Species: Rat, Male and female<br>Sex: Male and female<br>Application Route: oral gavage<br>Dose: 50, 250, 1000 mg/kg<br>Exposure time: (28 Days)<br>Number of exposures: daily<br>NOEL: 1.000 mg/kg<br>Method: OECD Test Guideline 407<br>No adverse effects expectedReproductive toxicity<br>Di-t-Dodecyl Polysulfide: No adverse effects expected   | Di-t-Dodecyl Polysulfide                                   | <ul> <li>LC50: &gt; 15,5 mg/l<br/>Exposure time: 4 h<br/>Species: Rat<br/>Test atmosphere: dust/mist<br/>Method: OECD Test Guideline 403<br/>Information given is based on data obtained from similar<br/>substances.</li> </ul>  |
| Di-t-Dodecyl Polysulfide: slight irritation.Eye irritation<br>Di-t-Dodecyl Polysulfide: slight irritation.Sensitization<br>Di-t-Dodecyl Polysulfide: Did not cause sensitization on laboratory animals.Repeated dose toxicity<br>Di-t-Dodecyl Polysulfide: Species: Rat, Male and female<br>Sex: Male and female<br>Application Route: oral gavage<br>Dose: 50, 250, 1000 mg/kg<br>Exposure time: (28 Days)<br>Number of exposures: daily<br>NOEL: 1.000 mg/kg<br>Method: OECD Test Guideline 407<br>No adverse effects expectedReproductive toxicity<br>Di-t-Dodecyl Polysulfide: No adverse effects expected   | Skin irritation  |   |
| Eye irritation<br>Di-t-Dodecyl Polysulfide: slight irritation.Sensitization<br>Di-t-Dodecyl Polysulfide: Did not cause sensitization on laboratory animals.Repeated dose toxicity<br>Di-t-Dodecyl Polysulfide: Species: Rat, Male and female<br>Sex: Male and female<br>Application Route: oral gavage<br>Dose: 50, 250, 1000 mg/kg<br>Exposure time: (28 Days)<br>NUMBER of exposures: daily<br>NOEL: 1.000 mg/kg<br>Method: OECD Test Guideline 407<br>No adverse effects expectedReproductive toxicity<br>Di-t-Dodecyl Polysulfide: No adverse effects expected   | Di-t-Dodecyl Polysulfide                                   | : slight irritation.  |
| Sensitization         Di-t-Dodecyl Polysulfide       : Did not cause sensitization on laboratory animals.         Repeated dose toxicity         Di-t-Dodecyl Polysulfide       : Species: Rat, Male and female<br>Sex: Male and female<br>Application Route: oral gavage<br>Dose: 50, 250, 1000 mg/kg<br>Exposure time: (28 Days)<br>Number of exposures: daily<br>NOEL: 1.000 mg/kg<br>Method: OECD Test Guideline 407<br>No adverse effects expected         Reproductive toxicity       : No adverse effects expected  | <b>Eye irritation</b><br>Di-t-Dodecyl Polysulfide          | : slight irritation.  |
| Di-t-Dodecyl Polysulfide       : Did not cause sensitization on laboratory animals.         Repeated dose toxicity       : Species: Rat, Male and female<br>Sex: Male and female<br>Application Route: oral gavage<br>Dose: 50, 250, 1000 mg/kg<br>Exposure time: (28 Days)<br>Number of exposures: daily<br>NOEL: 1.000 mg/kg<br>Method: OECD Test Guideline 407<br>No adverse effects expected         Reproductive toxicity       : No adverse effects expected   | Sensitization  |   |
| Repeated dose toxicity       : Species: Rat, Male and female<br>Sex: Male and female<br>Application Route: oral gavage<br>Dose: 50, 250, 1000 mg/kg<br>Exposure time: (28 Days)<br>Number of exposures: daily<br>NOEL: 1.000 mg/kg<br>Method: OECD Test Guideline 407<br>No adverse effects expected         Reproductive toxicity       : No adverse effects expected   | Di-t-Dodecyl Polysulfide                                   | : Did not cause sensitization on laboratory animals.  |
| Di-t-Dodecyl Polysulfide: Species: Rat, Male and female<br>Sex: Male and female<br>Application Route: oral gavage<br>Dose: 50, 250, 1000 mg/kg<br>Exposure time: (28 Days)<br>Number of exposures: daily<br>NOEL: 1.000 mg/kg<br>Method: OECD Test Guideline 407<br>No adverse effects expectedReproductive toxicity<br>Di-t-Dodecyl Polysulfide: No adverse effects expected  | Repeated dose toxicity                                     |   |
| Reproductive toxicity         Di-t-Dodecyl Polysulfide       : No adverse effects expected   | Di-t-Dodecyl Polysulfide                                   | <ul> <li>Species: Rat, Male and female<br/>Sex: Male and female<br/>Application Route: oral gavage<br/>Dose: 50, 250, 1000 mg/kg<br/>Exposure time: (28 Days)<br/>Number of exposures: daily<br/>NOEL: 1.000 mg/kg<br/>Method: OECD Test Guideline 407<br/>No adverse effects expected</li> </ul> |
| Di-t-Dodecyl Polysulfide : No adverse effects expected   | Reproductive toxicity                                      |   |
|  | Di-t-Dodecyl Polysulfide                                   | : No adverse effects expected   |
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# Di-tert-Dodecyl Polysulfide (TDPS 320)

SDS Number:100000014150

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|--|--|
| Developmental Toxicity                             |  |
| Di-t-Dodecyl Polysulfide                           | <ul> <li>Species: Rat<br/>Application Route: oral gavage<br/>Dose: 50, 250, 1000 mg/kg bw<br/>Number of exposures: daily<br/>Test period: GD6 - 15<br/>Method: OECD Guideline 414<br/>NOAEL Teratogenicity: 1.000 mg/kg<br/>NOAEL Maternal: 1.000 mg/kg<br/>Animal testing did not show any effects on fetal development.</li> </ul> |
| Di-tert-Dodecyl Polysulfide<br>Aspiration toxicity | <b>(TDPS 320)</b><br>: No aspiration toxicity classification.  |
| CMR effects  |  |
| Di-t-Dodecyl Polysulfide                           | : Mutagenicity: In vivo tests did not show mutagenic effects<br>Teratogenicity: Animal testing did not show any effects on<br>fetal development.   |
| Di-tert-Dodecyl Polysulfide<br>Further information | <b>; (TDPS 320)</b><br>: No data available.  |
| CTION 12: Ecological inform                        | ation  |
| Toxicity to fish                                   |  |
| Di-t-Dodecyl Polysulfide                           | : LL50: > 100 mg/l<br>Exposure time: 96 h<br>Species: Danio rerio (Zebra Fish)<br>static test Method: OECD Test Guideline 203<br>No toxicity at the limit of solubility.   |
| Toxicity to daphnia and ot                         | her aquatic invertebrates  |
| Di-t-Dodecyl Polysulfide                           | <ul> <li>NOEC: &lt; 0,1 mg/l<br/>Exposure time: 48 h<br/>Species: Daphnia magna (Water flea)<br/>static test Method: Directive 67/548/EEC, Annex V, C.2.<br/>No toxicity at the limit of solubility.</li> </ul>  |
| Toxicity to algae                                  |  |
| Di-t-Dodecyl Polysulfide                           | <ul> <li>NOEC: &lt; 0,08 mg/l<br/>Exposure time: 72 h<br/>Species: Pseudokirchneriella subcapitata (green algae)<br/>Growth inhibition Method: OECD Test Guideline 201<br/>No toxicity at the limit of solubility.</li> </ul>  |
| Toxicity to bacteria                               |  |
| Di-t-Dodecyl Polysulfide                           | : NOEC: 10.000 mg/l<br>Exposure time: 72 h   |

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# Di-tert-Dodecyl Polysulfide (TDPS 320)

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|--|--|--|--|--|
|  | Species: Pseudomonas putida<br>Growth inhibition   |  |  |  |
| Toxicity to fish (Chronic toxicity)                                  |  |  |  |  |
| Di-t-Dodecyl Polysulfide :   | NOEC: 0,84 µg/l<br>Exposure time: 33 d<br>Species: Pimephales promelas (fathead minnow)<br>semi-static test<br>Method: OECD Test Guideline 210 |  |  |  |
| Toxicity to daphnia and other a                                      | aquatic invertebrates (Chronic toxicity)   |  |  |  |
| Di-t-Dodecyl Polysulfide :   | NOEC: 0,79 µg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>semi-static test<br>Method: OECD Test Guideline 211           |  |  |  |
| Bioaccumulation  |  |  |  |  |
| Di-t-Dodecyl Polysulfide :   | Species: Cyprinus carpio (Carp)<br>Exposure time: 14 d<br>Method: OECD Test Guideline 305<br>Does not bioaccumulate.                           |  |  |  |
| Biodegradability   |  |  |  |  |
| Di-t-Dodecyl Polysulfide :   | aerobic<br>0 %<br>Testing period: 28 d<br>Method: OECD Test Guideline 301F   |  |  |  |
| Ecotoxicology Assessment   |  |  |  |  |
| Acute aquatic toxicity<br>Di-t-Dodecyl Polysulfide :                 | This product has no known ecotoxicological effects.  |  |  |  |
| Chronic aquatic toxicity<br>Di-t-Dodecyl Polysulfide :               | This product has no known ecotoxicological effects.  |  |  |  |
| Results of PBT assessment<br>Di-t-Dodecyl Polysulfide :              | No conclusion can be reached based on available information.<br>Further testing proposed.  |  |  |  |
| Additional ecological :<br>information                               | May cause long lasting harmful effects to aquatic life.  |  |  |  |
| SECTION 13: Disposal considerations                                  |  |  |  |  |
| The information in this SDS pertains only to the product as shipped. |  |  |  |  |
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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.

### **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)

UN3334, AVIATION REGULATED LIQUID, N.O.S., (DI-TERT-DODECYL POLYSULFIDES), 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

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| SECTION 15: Regulatory information   |   |  |  |  |  |
|--|---|--|--|--|--|
| National legislation   |   |  |  |  |  |
| Chemical Safety Assessment   |   |  |  |  |  |
| Ingredients : Poly<br>tert-  | ysulfides, di-<br>·dodecyl  | 270-335-7  |  |  |  |
| Major Accident Hazard<br>Legislation   | : 96/82/EC Update: 2003<br>Directive 96/82/EC does not apply  |  |  |  |  |
| Water contaminating class<br>(Germany)   | : WGK 1 slightly water endangering<br>Classification according to appendix 3  |  |  |  |  |
| Notification status<br>Europe REACH<br>Switzerland CH INV<br>United States of America (USA)<br>TSCA<br>Canada DSL<br>Australia AICS<br>New Zealand NZIoC<br>Japan ENCS<br>Korea KECI<br>Philippines PICCS<br>China IECSC   | <ul> <li>On the inventory, or in compliance</li> <li>On the inventory, or in compliance</li> <li>On TSCA Inventory</li> <li>All components of this product a DSL</li> <li>On the inventory, or in compliance</li> <li>Not in compliance with the inventory</li> <li>On the inventory, or in compliance</li> </ul> | ce with the inventory<br>ce with the inventory<br>re on the Canadian<br>ce with the inventory<br>tory<br>ce with the inventory<br>ce with the inventory<br>ce with the inventory<br>ce with the inventory<br>ce with the inventory |  |  |  |
| SECTION 16: Other information  |   |  |  |  |  |
| NFPA Classification :  | Health Hazard: 1<br>Fire Hazard: 1<br>Reactivity Hazard: 0  |  |  |  |  |
| Further information  |   | v  |  |  |  |
| Legacy SDS Number :  | 408480  |  |  |  |  |
| 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 |   |  |  |  |  |
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|  |   |  |  |  |  |

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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<br>Government Industrial Hygienists | LD50  | Lethal Dose 50%  |  |
| AICS  | Australia, Inventory of Chemical<br>Substances             | LOAEL | Lowest Observed Adverse Effect<br>Level  |  |
| DSL   | Canada, Domestic Substances<br>List                        | NFPA  | National Fire Protection Agency  |  |
| NDSL  | Canada, Non-Domestic<br>Substances List                    | NIOSH | National Institute for Occupational<br>Safety & Health                                     |  |
| CNS   | Central Nervous System                                     | NTP   | National Toxicology Program  |  |
| CAS   | Chemical Abstract Service                                  | NZIoC | New Zealand Inventory of<br>Chemicals  |  |
| EC50  | Effective Concentration                                    | NOAEL | No Observable Adverse Effect<br>Level  |  |
| EC50  | Effective Concentration 50%                                | NOEC  | No Observed Effect Concentration   |  |
| EGEST   | EOSCA Generic Exposure<br>Scenario Tool                    | OSHA  | Occupational Safety & Health<br>Administration   |  |
| EOSCA   | European Oilfield Specialty<br>Chemicals Association       | PEL   | Permissible Exposure Limit   |  |
| EINECS  | European Inventory of Existing<br>Chemical Substances      | PICCS | Philippines Inventory of<br>Commercial Chemical Substances                                 |  |
| MAK   | Germany Maximum Concentration Values                       | PRNT  | Presumed Not Toxic   |  |
| GHS   | Globally Harmonized System                                 | RCRA  | Resource Conservation Recovery<br>Act  |  |
| >=  | Greater Than or Equal To                                   | STEL  | Short-term Exposure Limit  |  |
| IC50  | Inhibition Concentration 50%                               | SARA  | Superfund Amendments and<br>Reauthorization Act.   |  |
| IARC  | International Agency for Research<br>on Cancer             | TLV   | Threshold Limit Value  |  |
| IECSC   | Inventory of Existing Chemical<br>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<br>Inventory                      | UVCB  | Unknown or Variable Composition,<br>Complex Reaction Products, and<br>Biological Materials |  |
| <=  | Less Than or Equal To                                      | WHMIS | Workplace Hazardous Materials<br>Information System  |  |
| 1 C50   | Lethal Concentration 50%                                   |       |  |  |

### Full text of H-Statements referred to under sections 2 and 3.

H413

May cause long lasting harmful effects to aquatic life.