SECTION 1. IDENTIFICATION

Product name : TERSPERSE® 2510

Manufacturer or supplier’s details
Company name of supplier : Huntsman International LLC
Address : P.O. Box 4980
The Woodlands, TX 77387
United States of America (USA)
Telephone : TechInfo: (281) 719-7780
E-mail address of person responsible for the SDS : MSDS@huntsman.com
Emergency telephone number : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use
Recommended use : Emulsifier

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200
Skin sensitisation : Category 1

GHS label elements
Hazard pictograms :

Signal word : Warning
Hazard statements : H317 May cause an allergic skin reaction.
Precautionary statements : Prevention:
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
Storage:
Not available
Disposal:
P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international guidelines.
Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Hazardous components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octadecanoic acid, 12-hydroxy-, polymer with alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl)</td>
<td>70142-34-6</td>
<td>90 - 100</td>
</tr>
<tr>
<td>Naphtha (petroleum), hydrotreated heavy</td>
<td>64742-48-9</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
                Show this safety data sheet to the doctor in attendance.
                Treat symptomatically.
                Get medical attention if symptoms occur.

If inhaled : If inhaled, remove to fresh air.
             Get medical attention if symptoms occur.

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

In case of eye contact : Flush eyes with water as a precaution.
                        Remove contact lenses.
                        Protect unharmed eye.
                        Keep eye wide open while rinsing.
                        If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
               Never give anything by mouth to an unconscious person.
               If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed : None known.

Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local regulations.
circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : No hazardous combustion products are known

Specific extinguishing methods : No data is available on the product itself.

Further information : No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Avoid dust formation.
Avoid breathing dust.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Avoid dust formation.
Provide appropriate exhaust ventilation at places where dust is formed.

Advice on safe handling : Avoid formation of respirable particles.
Do not breathe vapours/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 sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Keep in properly labelled containers.
Materials to avoid: Keep away from oxidizing agents.

Further information on storage stability: Stable under normal conditions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphtha (petroleum), hydrotreated heavy</td>
<td>64742-48-9</td>
<td>TWA</td>
<td>500 ppm 2,000 mg/m3</td>
<td>OSHA Z-1</td>
</tr>
</tbody>
</table>

Engineering measures: Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Respiratory protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hand protection

Remarks: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

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

Skin and body protection

Remarks: Dust impervious protective suit Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures: Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: solid

Colour: red brown

Odour: No data is available on the product itself.

Odour Threshold: No data is available on the product itself.

pH: 7 - 8
Melting point : 45 °C
Boiling point : No data is available on the product itself.
Flash point : 78 °C
   Method: closed cup
Evaporation rate : No data is available on the product itself.
Flammability (solid, gas) : No data is available on the product itself.
Flammability (liquids) : No data is available on the product itself.
Upper explosion limit / Upper flammability limit : No data is available on the product itself.
Lower explosion limit / Lower flammability limit : No data is available on the product itself.
Vapour pressure : No data is available on the product itself.
Relative vapour density : 0.94
Relative density : 0.94
Density : No data is available on the product itself.
Solubility(ies) : No data is available on the product itself.
   Water solubility
Solubility in other solvents : No data is available on the product itself.
Partition coefficient: n-octanol/water
   Auto-ignition temperature : No data is available on the product itself.
Thermal decomposition : No data is available on the product itself.
Self-Accelerating decomposition temperature (SADT) : No data is available on the product itself.
Viscosity
   Viscosity, dynamic : 1,000 mPa.s (50 °C)
Explosive properties : No data is available on the product itself.
Oxidizing properties : No data is available on the product itself.
Molecular weight : No data available
Particle size : No data is available on the product itself.
Reactivity: No dangerous reaction known under conditions of normal use.
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: Dust may form explosive mixture in air.
Conditions to avoid: None known.
Incompatible materials: None known.
Hazardous decomposition products: No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure: No data is available on the product itself.

Acute toxicity
Acute oral toxicity - Product: LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity: No data available

Acute dermal toxicity - Product: LD50 (Rabbit): > 5,000 mg/kg

Acute toxicity (other routes of administration): No data available

Skin corrosion/irritation
Components:
Octadecanoic acid, 12-hydroxy-, polymer with alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl):
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Serious eye damage/eye irritation
Components:
Octadecanoic acid, 12-hydroxy-, polymer with alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl):
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

Respiratory or skin sensitisation
Components:
Octadecanoic acid, 12-hydroxy-, polymer with alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl):
Test Type: Maximisation Test
Exposure routes: Skin
Species: Guinea pig
Method: OECD Test Guideline 406
Result: May cause sensitisation by skin contact.

Assessment: No data available

**Germ cell mutagenicity**
Genotoxicity in vitro: No data available
Genotoxicity in vivo: No data available

**Components:**
Naphtha (petroleum), hydrotreated heavy:
Germ cell mutagenicity-
Assessment: Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

Germ cell mutagenicity-
Assessment: No data available

**Carcinogenicity**
No data available

**Components:**
Naphtha (petroleum), hydrotreated heavy:
Carcinogenicity -
Assessment: Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

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

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

**OSHA**
No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

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

**Reproductive toxicity**
Effects on fertility: No data available
Effects on foetal development: No data available
Reproductive toxicity -
Assessment: No data available
STOT - single exposure
No data available

STOT - repeated exposure
No data available

Repeated dose toxicity
No data available

Repeated dose toxicity - Assessment
No data available

Aspiration toxicity

Components:
Naphtha (petroleum), hydrotreated heavy:
May be fatal if swallowed and enters airways.

Experience with human exposure
General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution
No data available

Neurological effects
No data available

Further information
Ingestion: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:
Octadecanoic acid, 12-hydroxy-, polymer with alpha-hydro-omega-hydroxy(poly(oxy-1,2-ethanediyl)):

Toxicity to fish: LC50 (Brachydanio rerio (zebrafish)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:
EC50: 332 mg/l
Exposure time: 48 h

**Components:**
Octadecanoic acid, 12-hydroxy-, polymer with alpha-hydro-omega-hydroxy(poly(oxy-1,2-ethanediyl)):

Toxicity to algae: EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity): No data available

Toxicity to fish (Chronic toxicity): No data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): No data available

M-Factor (Chronic aquatic toxicity): No data available

Toxicity to microorganisms: No data available

Toxicity to soil dwelling organisms: No data available

Plant toxicity: No data available

Sediment toxicity: No data available

Toxicity to terrestrial organisms: No data available

Ecotoxicology Assessment
Acute aquatic toxicity: No data available

Chronic aquatic toxicity: No data available

Toxicity Data on Soil: No data available

Other organisms relevant to the environment: No data available

**Persistence and degradability**

**Components:**
Octadecanoic acid, 12-hydroxy-, polymer with alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl):

- **Biodegradability**: Result: Not biodegradable
- **Biochemical Oxygen Demand (BOD)**: No data available
- **Chemical Oxygen Demand (COD)**: No data available
- **BOD/COD**: No data available
- **ThOD**: No data available
- **BOD/ThOD**: No data available
- **Dissolved organic carbon (DOC)**: No data available
- **Physico-chemical removability**: No data available
- **Stability in water**: No data available
- **Photodegradation**: No data available
- **Impact on Sewage Treatment**: No data available

**Bioaccumulative potential**
- **Bioaccumulation**: No data available
- **Partition coefficient: n-octanol/water**: No data available

**Mobility in soil**
- **Mobility**: No data available
- **Distribution among environmental compartments**: No data available
- **Stability in soil**: No data available

**Other adverse effects**
- **Environmental fate and pathways**: No data available
- **Results of PBT and vPvB assessment**: No data available
- **Endocrine disrupting potential**: No data available
Adsorbed organic bound halogens (AOX) : No data available

**Hazardous to the ozone layer**

**Ozone-Depletion Potential** : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks: 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).

**Additional ecological information** : No data available

**Global warming potential (GWP)** : No data available

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**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

**Waste from residues** : Do not dispose of waste into sewer.
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.

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**SECTION 14. TRANSPORT INFORMATION**

**International Regulations**

**IATA**
Not regulated as dangerous goods

**IMDG**
Not regulated as dangerous goods

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**
Not applicable for product as supplied.

**National Regulations**

**DOT Classification**
Not regulated as dangerous goods
SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 311/312 Hazards : No SARA Hazards

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.

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

California Prop. 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

- CH INV: On the inventory, or in compliance with the inventory
- DSL: All components of this product are on the Canadian DSL
- AICS: On the inventory, or in compliance with the inventory
- NZIoC: On the inventory, or in compliance with the inventory
- ENCS: On the inventory, or in compliance with the inventory
- KECI: On the inventory, or in compliance with the inventory
- PICCS: On the inventory, or in compliance with the inventory
- IECSC: On the inventory, or in compliance with the inventory
- TCSI: On the inventory, or in compliance with the inventory
- TSCA: On the inventory, or in compliance with the inventory

Inventories

- AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

TSCA - 5(a) Significant New Use Rule List of Chemicals
No substances are subject to a Significant New Use Rule.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
No substances are subject to TSCA 12(b) export notification requirements.
SECTION 16. OTHER INFORMATION

Further information

NFPA:

- Flammability
  - 1
  - 2
  - 0

Health

- 1

Instability

Special hazard.

HMIS® IV:

- HEALTH: 0
- FLAMMABILITY: 2
- PHYSICAL HAZARD: 0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/'" represents the absence of a chronic hazard.

Revision Date: 01/03/2018

OSHA Z-1: USA. Occupational Exposure Limits (OSHA) - Table Z-1

OSHA Z-1 / TWA: 8-hour time weighted average

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IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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