1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

GHS product identifier : Synthetic Biodegradeable Hydraulic Oil—5w20/ISO 46
Code : 404
Product type : Liquid.

Identified uses
Lubricating oil. Not to be misted.

Details of the supplier of the safety data sheet
Manufacturer Address : U.S. Lubricants A Division of U.S. Venture, Inc.
425 Better Way
Appleton, WI 54915

Emergency telephone number
Company Phone Number : 800-490-4900
24 Hour Emergency Phone Number : 800-688-4005 DTCG84-01-A-900043

2. HAZARDS IDENTIFICATION

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : AQUATIC HAZARD (ACUTE) - Category 3
GHS label elements : None known.

Signal word : No signal word.
Hazard statements : Harmful to aquatic life with long lasting effects.
Precautionary statements
Prevention : Avoid release to the environment.
Response : Not applicable.
Storage : Not applicable.
Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture : Mixture
Other means of identification : Not available.
CAS number/other identifiers
Product code : 404

United States

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,6-Di-tert-butylpheonal</td>
<td>0.1-1</td>
<td>128-39-2</td>
</tr>
</tbody>
</table>
Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### 4. FIRST AID MEASURES

**Description of necessary first aid measures**

**Eye contact**: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention if irritation occurs.

**Inhalation**: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Get medical attention if symptoms occur.

**Skin contact**: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**: Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

- **Eye contact**: No known significant effects or critical hazards.
- **Inhalation**: No known significant effects or critical hazards.
- **Skin contact**: No known significant effects or critical hazards.
- **Ingestion**: No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

- **Eye contact**: No known significant effects or critical hazards.
- **Inhalation**: No known significant effects or critical hazards.
- **Skin contact**: No known significant effects or critical hazards.
- **Ingestion**: No known significant effects or critical hazards.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician**: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments**: No specific treatment.

**Protection of first-aiders**: No special protection is required.

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### 5. FIRE-FIGHTING MEASURES

**Extinguishing media**

- **Suitable extinguishing media**: Use an extinguishing agent suitable for the surrounding fire.
- **Unsuitable extinguishing media**: None known.

**Specific hazards arising from the chemical**: This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products: No specific data.
Special protective actions for fire-fighters: No special protection is required.
Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
For non-emergency personnel: Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".
Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
Methods and materials for containment and cleaning up
Spill: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Protective measures: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Avoid contact with used product. Do not reuse container.
Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Occupational exposure limits
Under conditions which may generate mists, the following exposure limits are recommended:
ACGIH TLV TWA: 5 mg/m³; STEL: 10 mg/m³.
Appropriate engineering controls: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Environmental exposure controls

Individual protection measures

Hygiene measures

Eye/face protection

Skin protection

Hand protection

Body protection

Other skin protection

Respiratory protection

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Physical state: Liquid.
Color: Yellow. [Light]
Odor: Mild / Hydrocarbon.
Odor threshold: Not available.
pH: Not available.
Melting point / Pour point: -54°C (-65.2°F)
Boiling point: Not available.
Flash point: Open cup: 254°C (489.2°F) [Cleveland.]
Evaporation rate: Not available.
Flammability (solid, gas): Not available.
Lower and upper explosive (flammable) limits: Not available.
Vapor pressure: Not available.
Vapor density: Not available.
Relative density: 0.9646
Solubility: Not available.
Partition coefficient: n-octanol/water: Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Kinematic: 0.074 cm²/s (7.4 cSt) (100°C)
          Kinematic: 0.406 cm²/s (40.6 cSt) (40°C)

10. STABILITY AND REACTIVITY

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid: No specific data.
Incompatible materials: Reactive or incompatible with the following materials: oxidizing materials and acids.
Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/Ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,6-Di-tert-butylphenol</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;10 g/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1320 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/Ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,6-Di-tert-butylphenol</td>
<td>Skin-Moderate irritant</td>
<td>Rat</td>
<td>-</td>
<td>0.5 mL</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitization: There is no data available.

Carcinogenicity: There is no data available.

Specific target organ toxicity (single exposure): There is no data available.
Specific target organ toxicity (repeated exposure): There is no data available.

Aspiration hazard: There is no data available.

Information on the likely routes of exposure:
Potential acute health effects:
   Eye contact: No known significant effects or critical hazards.
   Inhalation: No known significant effects or critical hazards.
   Skin contact: No known significant effects or critical hazards.
   Ingestion: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics:
   Eye contact: No known significant effects or critical hazards.
   Inhalation: No known significant effects or critical hazards.
   Skin contact: No known significant effects or critical hazards.
   Ingestion: No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Short term exposure:
Potential immediate effects: No known significant effects or critical hazards.
Potential delayed effects: No known significant effects or critical hazards.

Long term exposure:
Potential immediate effects: No known significant effects or critical hazards.
Potential delayed effects: No known significant effects or critical hazards.
Potential chronic health effects:
   General: No known significant effects or critical hazards.
   Carcinogenicity: No known significant effects or critical hazards.
12. ECOLOGICAL INFORMATION

Toxicity
There is no data available.

Persistence and degradability
There is no data available.

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogPow</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,6-DI-tert-butylphenol</td>
<td>4.5</td>
<td>-</td>
<td>High</td>
</tr>
</tbody>
</table>

Mobility in soil
There is no data available.

13. DISPOSAL CONSIDERATIONS

Disposal methods
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>UN number</th>
<th>DOT Classification</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>Additional information</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

AERG : Not applicable.
Special precautions for user

Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

: Not available.

15. REGULATORY INFORMATION

U.S. Federal regulations

TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.
Clean Water Act (CWA) 307: Benzene; Toluene; Arsenic
Clean Water Act (CWA) 311: Propylene oxide; Benzene; Toluene

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)
Clean Air Act Section 602 Class I Substances
Clean Air Act Section 602 Class II Substances
DEA List I Chemicals (Precursor Chemicals)
DEA List II Chemicals (Essential Chemicals)
SARA 302/304

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>EHS</th>
<th>SARA 302 TPQ (lbs)</th>
<th>SARA 304 RQ (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Etyhlene oxide</td>
<td>0 – 0.1</td>
<td>Yes</td>
<td>1000</td>
<td>10</td>
</tr>
<tr>
<td>Propylene oxide</td>
<td>0 – 0.1</td>
<td>Yes</td>
<td>10000</td>
<td>1444.3</td>
</tr>
</tbody>
</table>

SARA 304 RQ
SARA 311/312

Classification

Immediate (acute) health hazard

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,6-Di-tert-butylphenol</td>
<td>0.1-1</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
</tbody>
</table>

State regulations
Massachusetts: None of the components are listed.
New York: None of the components are listed.
New Jersey: None of the components are listed.
Pennsylvania: None of the components are listed.

California Prop. 65
WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.
WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.
Ingredient name | Cancer | Reproductive | No significant risk level | Maximum acceptable dosage level
--- | --- | --- | --- | ---
1,4-Dioxane | Yes. | No. | Yes. | No.
Ethylene oxide | Yes. | Yes. | Yes. | Yes.
Benzene | Yes. | Yes. | Yes. | No.
Toluene | No. | Yes. | Yes. | No.
Arsenic | Yes. | No. | Yes. | 0.06 μg/day (inhalation)

International regulations
Chemical Weapon Convention List Schedules I, II & III Chemicals

| Ingredient name | List name | Status |
--- | --- | ---
Not listed. |

Montreal Protocol (Annexes A, B, C, E)

| Ingredient name | List name | Status |
--- | --- | ---
Not listed. |

Stockholm Convention on Persistent Organic Pollutants

| Ingredient name | List name | Status |
--- | --- | ---
Not listed. |

Rotterdam Convention on Prior Inform Consent (PIC)

| Ingredient name | List name | Status |
--- | --- | ---
Not listed. |

UNECCE Aarhus Protocol on POPs and Heavy Metals

| Ingredient name | List name | Status |
--- | --- | ---
Not listed. |

16. OTHER INFORMATION

History
Date of issue mm/dd/yyyy : 03/15/2014
Date of previous issue : 09/15/2013
Version : 5
Prepared by : US Lubricants

Notice to reader
To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

End of Safety Data Sheet