International SDS Documents

*FOR INFORMATION REFERENCE ONLY. A product specific SDS is included with each shipment. Use the SDS sent with each sample for information related to the product supplied per program cycle.
Safety Data Sheet Gear Oil

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

1.1 Product Identifier

Material Name: Residual oils (petroleum), solvent-dewaxed (64742-62-7)
REACH Registration No.: 01-2119480472-38-0004

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product Use: Laboratory use

1.3 Details of the supplier of the substance or mixture

Manufacturer/Supplier: Clark Laboratories
1801 Route 51 South
Jefferson Hills, PA 15025
412-387-1001

1.4 Emergency Telephone Number

Chemtrec - 24 hour emergency response:
(800) 424-9300
International Collect: +1 703 741 5970
SDS Assistance Email: sds@clarktesting.com

2. HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

<table>
<thead>
<tr>
<th>Regulation (EC) No 1272/2008 (CLP)</th>
<th>Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not classified</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>67/548/EEC or 1999/45/EC</th>
<th>R-phrase(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not classified as dangerous under EC</td>
<td></td>
</tr>
</tbody>
</table>
2.1 Classification of the substance or mixture
Classification (REGULATION (EC) No 1272/2008)
Not a hazard substance or mixture.

2.2 Label elements
Hazardous Pictograms: None Required
Signal Word: Not Hazardous
Hazardous Statement: None Required
Precautionary Statements:
P273- Avoid release to the environment
P501- Dispose of contents/container in accordance with local, regional, national, and international regulations

2.3 Other Hazards: The mixture consists of substances capable of producing an aspiration hazard. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure, and even death.

2.4 Unknown Acute Toxicity: Percent of the mixture consists of ingredients of unknown acute toxicity/

3. COMPOSITION/INFORMATION ON

INGREDIENTS 3.1 Substance
Not Applicable

3.2 Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>% (W/W)</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polybutene (Isobutylene/utane copolymer)</td>
<td>CAS 9003-29-6/EC 500-004-7</td>
<td>64-85/0-10</td>
<td>Not Classified</td>
</tr>
<tr>
<td>Petroleum distillates, hydrotreated heavy Naphthenic</td>
<td>CAS 64742-52-5/EC 265-155-0</td>
<td>0-10</td>
<td>Not Classified</td>
</tr>
<tr>
<td>Dec-1-enc, homopolymer hydrogenated</td>
<td>CAS 68037-01-4/EC 500-183-1</td>
<td>0-11/10-17/27-39</td>
<td>Aspiration Hazard 1, H304</td>
</tr>
<tr>
<td>Phosphorodithioic acid</td>
<td>CAS 68649-42-3/EC 272-028-3</td>
<td>0-2.7</td>
<td>Aquatic Chronic 3, H402</td>
</tr>
</tbody>
</table>

The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

More than one of the ranges of concentration prescribed by controlled products regulations has been used where necessary, due to varying composition.
4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Information : Not expected to be a health hazard when used under normal conditions.

Inhalation : No treatment necessary under normal conditions of use.
If symptoms persist, obtain medical advice.

Skin Contact : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.

Eye Contact : Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

Ingestion : If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Give nothing by mouth.

4.2 Most important symptoms/effects, acute & delayed

4.3 Indication of immediate medical attention and special treatment

: Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas.
Ingestion may result in nausea, vomiting and/or diarrhea. : Treat symptomatically.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

5.1 Extinguishing Media : Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable Extinguishing Media : Do not use water in a jet.

5.2 Special hazards arising from substance or mixture

inorganic

: Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and compounds.

5.3 Advice for fire-fighters : Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe the relevant local and international regulations.

6.1 Personal Precautions, Protective Equipment and Emergency Procedures : Avoid contact with skin and eyes.

6.2 Environmental Precautions : Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.

6.3 Methods and Material : Slippery when spilt. Avoid accidents, clean up immediately.
for Containment and Clean Up
Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.

Additional Advice
Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

General Precautions
Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

If the American Conference of Governmental Industrial Hygienists (ACGIH) value is provided on this document, it is provided for information only.

8.1 Control Parameters

Occupational Exposure Limits

None established.

7.1 Precautions for Safe Handling
Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Storage Temperature: 0 - 50°C / 32 - 122°F Store separately from oxidising agents. The storage of this product may be subject to the Control of Pollution (Oil Storage) (England) Regulations. Further guidance may be obtained from the local environmental agency office.

7.3 Specific End Uses
Not applicable

Additional Information
Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion. Exposure to this product should be reduced as low as reasonably practicable. Reference should be made to the Health and Safety Executive's publication "COSHH Essentials". For containers or container linings, use mild steel or high density polyethylene.

Recommended Materials

Unsuitable Materials
PVC.

Biological Exposure Index
(BEI) Data not available
PNEC related information: Substance is a hydrocarbon with a complex, unknown or variable composition. Conventional methods of deriving PNECs are not appropriate and it is not possible to identify a single representative PNEC for such substances.

8.2 Exposure Controls

General Information: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

Occupational Exposure Controls

Personal Protective Equipment: Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
Eye Protection: Wear safety glasses or full face shield if splashes are likely to occur. Approved to EU Standard EN166.
Hand Protection: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Body protection: Skin protection not ordinarily required beyond standard issue work clothes.

Respiratory Protection: No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65 °C (149 °F)] meeting EN14387.

Thermal Hazards: Not applicable.

Monitoring Methods: Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and
adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

**Environmental Exposure Controls**

**Environmental exposure** : Minimize release to the environment. An environmental control assessment must be made to ensure compliance with local environmental legislation.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

- **Appearance** : Amber. Liquid at room temperature.
- **Odor** : Slight hydrocarbon.
- **pH** : Not applicable.
- **Initial Boiling Point and Flash point** : 280 °C / 400°F
- **Upper / lower Flammability** : Typical 1 - 10 % (V) (based on mineral oil)
- **Auto-ignition temperature** : Data not available
- **Vapour pressure** : > 280 °C / 400°F
- **Density** : Typical 898 - 930 kg/m³ at 15 °C / 59 °F
- **Water solubility** : Negligible.
- **Solubility in other solvents** : Data not available
- **n-octanol/water partition coefficient (log Pow)** : > 6 (based on information on similar products)
- **Dynamic viscosity** : Data not available
- **Kinematic viscosity** : > 21 mm²/s at 40 °C / 104 °F
- **Vapour density (air=1)** : > 1 (estimated value(s))
- **Evaporation rate (nBuAc=1)** : Data not available
- **Decomposition** : Data not available
- **Flammability** : Data not available

**9.2 Other Information**

**Other Information** : Not applicable.

**10. STABILITY AND REACTIVITY**

**10.1 Reactivity** : The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.

**10.2 Chemical Stability** : Stable.

**10.3 Possibility of Hazardous Reactions** : Reacts with strong oxidising agents.

**10.4 Conditions to Avoid** : Extremes of temperature and direct sunlight.

**10.5 Incompatible Materials** : Strong oxidising agents.

**10.6 Hazardous Decomposition Products** : Hazardous decomposition products are not expected to form during normal storage.

**11. TOXICOLOGICAL**

**INFORMATION 11.1 Information on Toxicological effects**

**Basis for Assessment** : Information given is based on data on the components and the
toxicology of similar products.

Likely Routes of Exposure: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.

Acute Oral Toxicity: Low toxicity; LD50 > 5000 mg/kg, Rat

Acute Dermal Toxicity: Low toxicity; LD50 > 5000 mg/kg, Rabbit

Acute Inhalation Toxicity: Low toxicity; LC50 >5 mg/l/ 4 h, Rat

Skin Corrosion/Irritation: Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

Serious Eye irritation.

Damage/Irritation

Respiratory Irritation: Inhalation of vapours or mists may cause irritation to the respiratory system.

Respiratory or Skin sensitiser.

Sensitisation

Aspiration Hazard: Not considered an aspiration hazard.

Germ Cell Mutagenicity: Not considered a mutagenic hazard.

Carcinogenicity: Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Reproductive and Developmental Toxicity: Not expected to be a hazard.

Specific target organ toxicity - single exposure: Not expected to be a hazard.

Specific target organ toxicity - repeated exposure: Not expected to be a hazard.

Additional Information: Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible.

12. ECOLOGICAL INFORMATION

Basis for Assessment: Incomplete ecotoxicological data are available for this product. The information given below is based partly on a knowledge of the components and the ecotoxicology of similar products.

12.1 Toxicity

Acute Toxicity: Poorly soluble mixture. May cause physical fouling of aquatic organisms. (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract).

Fish: Practically non toxic: LL/EL/IL50 > 100 mg/l

Aquatic Invertebrates: Practically non toxic: LL/EL/IL50 > 100 mg/l

Algae: Practically non toxic: LL/EL/IL50 > 100 mg/l

Microorganisms: Practically non toxic: LC/EC/IC50 > 100 mg/l

Chronic Toxicity

Fish: NOEC/NOEL > 100 mg/l (based on test data)
Aquatic Invertebrates: NOEC/NOEL > 1.0 - <=10 mg/l (based on test data)

12.2 Persistence and degradability: Major constituents are expected to be readily biodegradable, but the product contains components that may persist in the environment.

12.3 Bioaccumulative Potential: Contains components with the potential to bioaccumulate.

12.4 Mobility: Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.

: The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB.

: Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL

CONSIDERATIONS 13.1

Waste Treatment Methods

Material Disposal: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.

12.5 Result of the PBT and vPvB assessment: Do not dispose into the environment, in drains or in water courses.

Container Disposal: Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.

12.6 Other Adverse Effects: Local Legislation: Disposal should be in accordance with applicable regional, national, and local laws and regulations. EU Waste Disposal Code (EWC): 13 08 99 oil waste not otherwise specified. Classification of waste is always the responsibility of the end user.

14. TRANSPORT INFORMATION
Land transport
(ADR/RID): ADR
This material is not classified as dangerous under ADR regulations.

RID
This material is not classified as dangerous under RID regulations.

Inland waterways transport (ADN):
This material is not classified as dangerous under ADNR regulations.

Sea transport (IMDG Code):
This material is not classified as dangerous under IMDG regulations.

Air transport (IATA):
This material is not classified as dangerous under IATA regulations.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Other regulatory Information
Authorisation and/or : Product is not subject to Authorisation under REACH.
Restrictions in Use

Chemical Inventory Status

EINECS : All components listed or polymer exempt.
TSCA : All components listed.


15.2 Chemical Safety : A Chemical Safety Assessment was performed for this
Assessment substance.

16. OTHER INFORMATION

NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet. Adequate training and instruction should be given by you to your employees and affected personnel. Appropriate warnings and safe handling procedures should be provided by you to handlers and users. Additionally, the user should review this information, satisfy itself as to its suitability and completeness, and pass on the information to its employees or customers in accordance with the applicable federal, state, provincial or local hazard communication requirements. This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the fitness for use of the material, or the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, vendor neither assumes nor retains any responsibility for any damage or injury resulting from abnormal use, from any failure to adhere to appropriate practices, or from any hazards inherent in the nature of the material. Moreover, unless an employee or a customer accesses or receives a SDS directly from the company, there is no assurance that a document obtained from alternate sources is the most currently available SDS. The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Completed by Clark PTP Staff
Domestic SDS Documents

*FOR INFORMATION REFERENCE ONLY*. A product specific SDS is included with each shipment. Use the SDS sent with each sample for information related to the product supplied per program cycle.
Safety Data Sheet  Gear Oil

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

1.1 Product Identifier

Material Name : Residual oils (petroleum), solvent-dewaxed (64742-62-7)
REACH Registration No. : 01-2119480472-38-0004

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product Use : Laboratory use

1.3 Details of the supplier of the substance or mixture

Manufacturer/Supplier : Clark Laboratories
1801 Route 51 South
Jefferson Hills, PA 15025
412-387-1001

1.4 Emergency Telephone Number

Chemtrec - 24 hour emergency response:
(800)424-9300
International Collect: +1 703 741 5970
SDS Assistance Email: sds@clarktesting.com

2. HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

<table>
<thead>
<tr>
<th>Regulation (EC) No 1272/2008 (CLP)</th>
<th>Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard classes / Hazard categories</td>
<td>Hazard</td>
</tr>
<tr>
<td>Not classified</td>
<td></td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>67/548/EEC or 1999/45/EC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard Characteristics</td>
</tr>
<tr>
<td>Not classified as dangerous under EC</td>
</tr>
</tbody>
</table>
2.1 Classification of the substance or mixture
   Classification (REGULATION (EC) No 1272/2008)
   Not a hazard substance or mixture.

2.2 Label elements
   Hazardous Pictograms: None Required
   Signal Word: Not Hazardous
   Hazardous Statement: None Required
   Precautionary Statements:
   P273- Avoid release to the environment
   P501- Dispose of contents/container in accordance with local, regional, national, and international regulations

2.3 Other Hazards: The mixture consists of substances capable of producing an aspiration hazard. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure, and even death.

2.4 Unknown Acute Toxicity: Percent of the mixture consists of ingredients of unknown acute toxicity

3. COMPOSITION/INFORMATION ON

INGREDIENTS 3.1 Substance

Not Applicable

3.2 Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>% (W/W)</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polybutene (Isobutylene/utane copolymer)</td>
<td>CAS 9003-29-6</td>
<td>64-85</td>
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<td>Napthenic</td>
<td>EC 265-155-0</td>
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<td>CAS 68037-01-4</td>
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<td>EC 500-183-1</td>
<td>10-17</td>
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</tbody>
</table>

The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

More than one of the ranges of concentration prescribed by controlled products regulations has been used where necessary, due to varying composition.
4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Information: Not expected to be a health hazard when used under normal conditions.

Inhalation: No treatment necessary under normal conditions of use.
   If symptoms persist, obtain medical advice.

Skin Contact: Remove contaminated clothing. Flush exposed area with water
   and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.

Eye Contact: Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

Ingestion: If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Give nothing by mouth.

4.2 Most important symptoms/effects, acute & delayed: Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas.

4.3 Indication of immediate medical attention and special treatment: Ingestion may result in nausea, vomiting and/or diarrhea. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

5.1 Extinguishing Media: Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable Extinguishing Media: Do not use water in a jet.

5.2 Special hazards arising from substance or mixture: Hazardous combustion products may include:
   - A complex mixture of airborne solid and liquid particulates and gases (smoke).
   - Carbon monoxide.
   - Unidentified organic and inorganic compounds.

5.3 Advice for fire-fighters: Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe the relevant local and international regulations.

6.1 Personal Precautions, Protective Equipment and Emergency Procedures: Avoid contact with skin and eyes.

6.2 Environmental Precautions: Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.

6.3 Methods and Material: Slippery when spilt. Avoid accidents, clean up immediately.
for Containment and Clean Up
Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.

Additional Advice
Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

General Precautions
Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

If the American Conference of Governmental Industrial Hygienists (ACGIH) value is provided on this document, it is provided for information only.

8.1 Control Parameters

Occupational Exposure Limits

None established.

7.1 Precautions for Safe Handling
Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Storage Temperature: 0 - 50°C / 32 - 122°F Store separately from oxidising agents. The storage of this product may be subject to the Control of Pollution (Oil Storage) (England) Regulations. Further guidance may be obtained from the local environmental agency office.

7.3 Specific End Uses
Not applicable

Additional Information
Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion. Exposure to this product should be reduced as low as reasonably practicable. Reference should be made to the Health and Safety Executive's publication "COSHH Essentials". For containers or container linings, use mild steel or high density polyethylene.

Recommended Materials
PVC.

Unsuitable Materials

Biological Exposure Index
(BEI) Data not available
PNEC related information: Substance is a hydrocarbon with a complex, unknown or variable composition. Conventional methods of deriving PNECs are not appropriate and it is not possible to identify a single representative PNEC for such substances.

8.2 Exposure Controls

General Information: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances.

Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

Occupational Exposure Controls

Personal Protective Equipment: Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Eye Protection: Wear safety glasses or full face shield if splashes are likely to occur. Approved to EU Standard EN166.

Hand Protection: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Body protection: Skin protection not ordinarily required beyond standard issue work clothes.

Respiratory Protection: No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65 °C (149 °F)] meeting EN14387.

Thermal Hazards: Not applicable.

Monitoring Methods: Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and
adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Environmental Exposure Controls
Environmental exposure: Minimize release to the environment. An environmental control measure assessment must be made to ensure compliance with local environmental legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
Appearance: Amber. Liquid at room temperature.
Odor: Slight hydrocarbon.
pH: Not applicable.
Initial Boiling Point and Flash point: 280 °C / 400°F
Upper / lower Flammability or Explosion limits: Typical 1 - 10 % (V) (based on mineral oil)
Auto-ignition temperature: Data not available
Vapour pressure: > 280 °C / 400°F
Density: Typical 898 - 930 kg/m³ at 15 °C / 59 °F
Water solubility: Negligible
Solubility in other solvents: Data not available

n-octanol/water partition coefficient (log Pow): > 6 (based on information on similar products)
Dynamic viscosity: Data not available
Kinematic viscosity: > 21 mm²/s at 40 °C / 104 °F
Vapour density (air=1): > 1 (estimated value(s))
Evaporation rate (nBuAc=1): Data not available
Decomposition Temperature: Data not available
Flammability: Data not available

9.2 Other Information
Other Information: Not applicable.

10. STABILITY AND REACTIVITY

10.1 Reactivity: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.

10.2 Chemical Stability: Stable.

10.3 Possibility of Hazardous Reactions: Reacts with strong oxidising agents.
10.4 Conditions to Avoid: Extremes of temperature and direct sunlight.

10.5 Incompatible Materials: Strong oxidising agents.
10.6 Hazardous Decomposition Products: Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL

INFORMATION 11.1 Information on Toxicological effects

Basis for Assessment: Information given is based on data on the components and the
toxicology of similar products.

Likely Routes of Exposure: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.

Acute Oral Toxicity: Low toxicity; LD50 > 5000 mg/kg, Rat
Acute Dermal Toxicity: Low toxicity; LD50 > 5000 mg/kg, Rabbit
Acute Inhalation Toxicity: Low toxicity; LC50 >5 mg/l/4 h, Rat
Skin Corrosion/Irritation: Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

Serious Eye irritation. 
Damage/Irritation: Inhalation of vapours or mists may cause irritation to the respiratory system.

Respiratory Irritation: Not expected to be a skin sensitiser.

Sensitisation: Not expected to be a skin sensitisser.

Aspiration Hazard: Not considered an aspiration hazard.

Germ Cell Mutagenicity: Not considered a mutagenic hazard.
Carcinogenicity: Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Reproductive and Developmental Toxicity: Not expected to be a hazard.
Specific target organ toxicity - single exposure: Not expected to be a hazard.
Specific target organ toxicity - repeated exposure: Not expected to be a hazard.

Additional Information: Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible.

12. ECOLOGICAL INFORMATION

Basis for Assessment: Incomplete ecotoxicological data are available for this product. The information given below is based partly on a knowledge of the components and the ecotoxicology of similar products.

12.1 Toxicity
Acute Toxicity: Poorly soluble mixture. May cause physical fouling of aquatic organisms. (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract).

Fish: Practically non toxic: LL/EL/IL50 > 100 mg/l
Aquatic Invertebrates: Practically non toxic: LL/EL/IL50 > 100 mg/l
Algae: Practically non toxic: LL/EL/IL50 > 100 mg/l
Microorganisms: Practically non toxic: LC/EC/IC50 > 100 mg/l
Chronic Toxicity
Fish: NOEC/NOEL > 100 mg/l (based on test data)
Aquatic Invertebrates: NOEC/NOEL > 1.0 - <=10 mg/l (based on test data)

12.2 Persistence and degradability:
Major constituents are expected to be readily biodegradable, but the product contains components that may persist in the environment.

12.3 Bioaccumulative Potential:
Contains components with the potential to bioaccumulate.

12.4 Mobility:
Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.

- The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB.

- Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL

CONSIDERATIONS 13.1
Waste Treatment Methods

Material Disposal:
Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.

Container Disposal:
Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.

12.5 Result of the PBT and vPvB assessment environment:

12.6 Other Adverse Effects:

Local Legislation:
Disposition should be in accordance with applicable regional, national, and local laws and regulations.
EU Waste Disposal Code (EWC): 13 08 99 oil waste not otherwise specified. Classification of waste is always the responsibility of the end user.

14. TRANSPORT INFORMATION

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Land transport
(ADR/RID): ADR
This material is not classified as dangerous under ADR regulations.

RID
This material is not classified as dangerous under RID regulations.

Inland waterways transport (ADN):
This material is not classified as dangerous under ADNR regulations.

Sea transport (IMDG Code):
This material is not classified as dangerous under IMDG regulations.

Air transport (IATA):
This material is not classified as dangerous under IATA regulations.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Other regulatory Information
Authorisation and/or : Product is not subject to Authorisation under REACH.
Restrictions in Use

Chemical Inventory Status

EINECS : All components listed or polymer exempt.

TSCA : All components listed.


15.2 Chemical Safety : A Chemical Safety Assessment was performed for this
16. OTHER INFORMATION

NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet. Adequate training and instruction should be given by you to your employees and affected personnel. Appropriate warnings and safe handling procedures should be provided by you to handlers and users. Additionally, the user should review this information, satisfy itself as to its suitability and completeness, and pass on the information to its employees or customers in accordance with the applicable federal, state, provincial or local hazard communication requirements. This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the fitness for use of the material, or the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, vendor neither assumes nor retains any responsibility for any damage or injury resulting from abnormal use, from any failure to adhere to appropriate practices, or from any hazards inherent in the nature of the material. Moreover, unless an employee or a customer accesses or receives a SDS directly from the company, there is no assurance that a document obtained from alternate sources is the most currently available SDS. The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Completed by Clark PTP Staff