

MATERIAL SAFETY DATA SHEET

MSDS FORMAT MEETS ANSI Z400.1 -1993 AND OSHA 1910.1200

**Superior's Synthetic
GEAR OIL SERIES**

REVISION# 0

MSDS #

REVISION DATE: 01-15-17

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Superior's Gear Oil Series

PRODUCT NUMBER (S): 07149, 07110, 07050, 07070, 07130, 07170, 07190, 07210, 07230, 07150

SYNONYM: Superior's S-75, S-80, S-75/80, S-75/90, S-80/90, S85/140, S-90, S-90/140, S-140, S-250, S-85/140

COMPANY IDENTIFICATION

EMERGENCY TELEPHONE NUMBERS

Superior Industries, Inc.
6180 Airways Blvd.
Chattanooga, TN37421HEALTH (24 hr) : (800) 476-2072 or (423) 899-0467
TRANSPORTATION (24 hr) : (800) 476-2072
or (423) 899-0467 Int'l collect calls accepted

PRODUCT INFORMATION:

MSDS Requests: (800) 476-2072
Environmental, Safety, & Health Info: (800) 476-2072
Product Information: (800) 476-2072

SPECIAL NOTES: This MSDS is for the entire line of Superior's Gear Oil Series.

2. COMPOSITION/INFORMATION ON INGREDIENTS

100% SUPERIOR'S GEAR OIL SERIES

CONTAINING

COMPONENTS	AMOUNT	LIMIT/QTY	AGENCY/TYPE
SYNTHETIC HYDROCARBON BASE OIL Chemical Name: 1-DECENE, HOMOPOLYMER, HYDROGENATED CAS68037014		NONE	NA
MOLYBDENUM DISULFIDE Chemical Name: MOLYBDENUM DISULFIDE CAS1317335		10 mg/m3	ACGIH TWA

COMPOSITION COMMENT

All the components of this material are in the Toxic Substances Control Act Chemical Substances Inventory.

This product fits the ACGIH definition for mineral oil mist. The ACGIH TLV is 5 mg/m3, the OSHA PEL is 5mg/m3.

3. HAZARD IDENTIFICATION AND EMERGENCY AND FIRST AID PROCEDURES

POTENTIAL HEALTH EFFECTS

EYE:

Not expected to cause prolonged or significant eye irritation.

SKIN

Contact with skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but if left untreated could result in disfigurement or amputation of the affected part.

INGESTION

Not expected to be harmful if swallowed.

INHALATION

Contains a synthetic-based oil that may cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended exposure limit.

4. FIRST AID MEASURES

EYE:

No specific first aid measures are required because this material is not expected to cause eye irritation. As a precaution remove contact lenses if worn, and flush eyes with water.

SKIN

No specific first aid measures are required because this material is not expected to be harmful if it contacts the skin. As a precaution, remove clothing and shoes if contaminated. Use a waterless hand cleaner, mineral oil, or petroleum jelly to remove the material. Then wash skin with soap and water. Wash or clean contaminated clothing and shoes before reuse.

INGESTION

No specific first aid measures are required because this material is not expected to be harmful if swallowed. Do not induce vomiting. As a precaution, give the person a glass of water or milk to drink and get medical advice. Never give anything by mouth to an unconscious person.

INHALATION

If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

NOTE TO PHYSICIANS

In an accident involving high-pressure systems, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

5. FIRE FIGHTING MEASURES

SPECIAL NOTES:

Leaks/ ruptures in high-pressure systems using materials of this type can create a fire hazard when in the vicinity of ignition sources (e.g. Open flame, pilot lights, sparks, or electric arcs).

FIRE CLASSIFICATION:

Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible

FLAMMABLE PROPERTIES:

FLASH POINT (COC) 231-288°C (448-550°F) Min.

AUTOIGNITION: NDA

FLAMMABILITY LIMITS (% by volume in air): Lower: NA UPPER: NA

EXTINGUISHING MEDIA: CO₂, Dry Chemical, Foam, Water Fog

NFPA RATINGS: Health 1; Flammability 1; Reactivity; 0.

FIRE FIGHTING INSTRUCTIONS:

This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

COMBUSTION PRODUCTS:

Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

EMERGENCY NUMBER (24hr) : (800) 476-2072 or (423) 899-0467, International Collect Calls Accepted.

ACCIDENTAL RELEASE MEASURES:

Stop the source of the leak or release. Clean up releases as soon as possible. Contain liquid to prevent further contamination of soil, surface water or leading to surface water or groundwater. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases.

Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-802 as appropriate or required.

This material does not contain any CERCLA Hazardous Substances.

This material does not contain any SARA Title III Section 302 – Extremely Hazardous Substances.

This material does not contain any SARA Title III Section 313 – Toxic Chemicals.

7. HANDLING AND STORAGE

DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

Drum is not designed to contain pressure. Do not use pressure to empty drum or drum may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty drums should be completely drained, properly bunged, and promptly returned to a drum re-conditioner, or properly disposed of. Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATION

Consider the potential hazards of this material (see section 3), 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.

ENGINEERING CONTROLS

Use in a well-ventilated area. If user operations generate an oil mist, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended mineral exposure limits.

PERSONAL PROTECTIVE EQUIPMENT:

Where splashing is possible, wear safety glasses with side shields as a good safety practice.

EYE PROTECTION:

No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

SKIN PROTECTION:

No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances. Suggested materials for protective gloves include: <Viton> <Nitrile> <Silver Shield>

RESPIRATORY PROTECTION

No respiratory protection is normally required. If user operations generate an oil mist exposure limits. If not wear a NIOSH approved respirator that provides adequate protection from measured concentrations of this material. Use the following elements for air purifying respirators: particulate.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:

Dark Metallic, Tacky Fluid, Typical Odor

pH:	NDA
VAPOR PRESSURE:	NA
VAPOR DENSITY (AIR = 1):	NA
BOILING POINT:	NA
FREEZING POINT:	NA
MELTING POINT:	NA
SOLUBILITY:	Solubility in hydrocarbon solvents; insoluble in water.
SPECIFIC GRAVITY:	0.86 – 0.88 @ (15.6/15.6C)
EVAPORATION RATE:	NA
VISCOSITY:	6 - 48 cSt @ 100°C
PERCENT VOLATILE (VOL):	NA

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:

No data available.

CHEMICAL STABILITY:

Stable.

CONDITIONS TO AVOID:

No data available.

INCOMPATIBILITY WITH OTHER MATERIALS:

May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

HAZARDOUS POLYMERIZATION:

Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS:

The eye irritation hazard is based on data for a similar material.

SKIN EFFECTS:

The skin irritation hazard is based on data for a similar material.

EYE EFFECTS:

The eye irritation hazard is based on data for a similar material.

SKIN EFFECTS:

The skin irritation hazard is based on data for a similar material.

ACUTE ORAL EFFECTS:

The acute oral toxicity is based on data for a similar material.

ACUTE INHALATION EFFECTS:

The acute respiratory toxicity is based on data for a similar material.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains synthetic base oils not refined from petroleum base stocks. The potential of base oil prepared by this process to cause cancer has not been specifically addressed by the OSHA Hazard Communication Standard (29 CFR 1910.200), the International Agency for Research on Cancer (IARC), nor the National Toxicology Program (NTP) Annual Report. However, the process conditions, chemical analysis, and the results of mutagenicity tests all support our opinion that these oils should not cause skin cancer.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

No data available.

ENVIRONMENTAL FATE:

This material is considered inherently biodegradable. Small accidental leaks or releases of this material are not expected present an environmental problem. See section 6 for Accidental Release Measures.

13. DISPOSAL CONSIDERATIONS

Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods

14. TRANSPORTATION AND OSHA RELATED LABEL INFORMATION

The description shown may not apply to all shipping situations. Consult 49 CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT SHIPPING NAME: NOT DESIGNATED AS A HAZARDOUS MATERIAL BY THE FEDERAL DOT
 DOT HAZARD CLASS: NOT APPLICABLE
 DOT IDENTIFICATION NUMBER: NOT APPLICABLE
 DOT PACKING GROUP: N/A

ADDITIONAL INFORMATION: Lubricating Oil, N.O.I.B.N. – Not hazardous by U.S. DOT.
 ADR/RID Hazard Class – Not Applicable

15. REGULATORY INFORMATION

SARA 311 CATEGORIES:

1. Immediate (Acute) Health Effects: NO
2. Delayed (Chronic) Health Effects: NO
3. Fire Hazard: NO
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

01=SARA 313	11=NJ RTK	22=TSCA Sect 5(a) (2)
02=MASS RTK	12=Cercla 302.4	23=TSCA Sect 6
03=NTP Carcinogen	13=MN RTK	24=TSCA Sect 12 (b)
04=CA Prop 65-Carcin	14=ACGIH TWA	25=TSCA Sect 8 (d)
05=CA Prop 65-Repro Tox	15=ACGIH STEL	26=TSCA Sect 8 (a)
06=IARC Group 1	16=ACGIH Calc TLV	27=TSCA Sect 4 (a)
07=IARC Group 2A	17=OSHA PEL	28=Canadian WHMIS
08=IARC Group 2B	18=DOT Marine Pollutant	29=OSHA CEILING
09=SARA 302/304		
10=PA RTK	20=EPA Carcinogen	

The following components of this material are found on the regulatory lists indicated.

MOLYBDENUM DISULFIDE
 is found on lists: 02, 11, 14

EU RISK AND SAFETY LABEL PHRASES:

May cause long-term adverse effects in the aquatic environment

NEW JERSEY RTK CLASSIFICATION:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A.
 34:5A-1 et. Seq., the product is to be identified as follows:
 PETROLEUM OIL

WHMIS CLASSIFICATION:

This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

16. OTHER INFORMATION

NFPA RATINGS: Health 1; Flammability 1; Reactivity 0;

HMIS RATINGS: Health 1; Flammability 1; Reactivity 0;

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator).

These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (For HMIS ratings)

REVISION STATEMENT:

This is a new Material Safety Data Sheet.

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV	-	Threshold Limit Value	TWA	-	Time Weighted Average
STEL	-	Short-term Exposure Limit	TPQ	-	Threshold Planning Quantity
RQ	-	Reportable Quantity	PEL	-	Permissible Exposure Limit
C	-	Ceiling Limit	CAS	-	Chemical Abstract Service Number
A1-5	-	Appendix A Categories	()	-	Change Has Been Proposed
NDA	-	No Data Available	NA	-	Not Applicable

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1)

The above information is based on the data of which we are aware and is believed to be correct as of data 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 modification 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.

SAFETY DATA SHEET

Superior Industries, Inc.
SDS SERIES

Ultra-Matic | Synthetic Gear Oil

Revision A
Effective Date: 01/15/2017
Regulation: 1907/2006/EC, In accordance with the provisions of Article 41, Industrial Safety & Health Act.
OSHA Hazard Communication Standard (29 CFR 1910.1200).

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

1.1 PRODUCT IDENTIFIER

Material Name : Ultra-Matic
Product Code : 07149

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Product Use : Gear Lubricant
Uses Advised Against : This product must not be used in applications other than those recommended in Section 1, without first seeking the advice of the supplier.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Manufacturer/Supplier : Superior Industries, Inc.
6180 Airways Blvd.
Chattanooga, TN 37421
Telephone : Marketing Technician Department
1(800) 476-2072, (423) 899-0467
Fax : (423) 899-0421

1.4 EMERGENCY TELEPHONE NUMBER : 1.800.476.2072 International – 423.899.0467

2. HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

1999/45/EC and OSHA 29 CFR 1910.1200	
Hazard Characteristics	R-phrases(s)
Not classified as dangerous under EC Criteria Hazard Not Otherwise Classified (HNOC)	

2.2 EC LABEL ELEMENTS Labeling according to Directive 1999/45/EC

EC Classification : Not classified as dangerous substance.
EC Symbols : No Hazard Symbol required.
EC Risk Phrases : Not classified.
EC Safety Phrases : Not classified.
Health Hazard : Not expected to be a health hazard when used under normal conditions.
Environmental Hazards : Not classified as dangerous for the environment.

2.3 GHS LABEL ELEMENTS

GHS Classification	: Not classified as dangerous substance.
GHS Symbol(s)	: No symbol.
GHS Signal Words	: No signal word.
Physical Hazards	: Not classified.
Health Hazards	: Not classified.
Environmental Hazards	: Not classified as dangerous for the environment.
GHS Precautionary Statements	
Prevention	: No Precautionary phrases.
Response	: No Precautionary phrases.
Storage	: No Precautionary phrases.
Disposal	: No Precautionary phrases.

2.4 OTHER HAZARDS

Unclassified Hazards-Health : Prolonged or repeated skin contact without proper cleaning can clog pores of skin resulting in disorders such as oil acne/folliculitis. High-pressure injection under the skin may cause serious damage. Used oil may contain harmful impurities.

Safety : Not classified as flammable, but will burn.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 SUBSTANCE

Material Name : Not applicable.

3.2 MIXTURES

Mixture Description : A lubricating gear oil consisting of synthetic mineral oils and additives.

Chemical Identity	Name	CAS		Hazard Class (Category)
Synthetic Hydrocarbon Base Oil	1-Decene, Homopolymer, Hydrogenated	68037014		None
Moly	Molybdenum Disulfide	1317335		None

Additional Information : This mixture does not contain any REACH registered substances that are assessed to be PBT or a vPvB.

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage of composition may have been withheld.

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 coughing or respiratory discomfort occurs, obtain medical advice.
Skin Contact	: Remove contaminated clothing. Flush exposed area with waterless cleaner and follow by washing with soap and water if available. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. If persistent irritation occurs, obtain medical attention. Obtain medical attention even in absence of apparent wounds.
Eye Contact	: Remove contact lenses. Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Ingestion	: In general no treatment is necessary unless large quantities are swallowed; however, seek medical advice.

**Self-protection
of the first aider**

: When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS

Acute and Delayed : 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.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Note to Physician : Treat symptomatically. High pressure injection injuries require prompt surgical intervention and possibly steroid therapy to minimize tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary.

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. Do not use water in a jet.

5.2 SPECIAL HAZARDS ARISING FROM THE 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 FIREFIGHTERS:

Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product. Self-contained breathing apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant standards (e.g. Europe: EN469).

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet. Observe the relevant local and international regulations.

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

For non-emergency personnel : Avoid contact with skin and eyes.

For emergency responders : 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 FOR CONTAINMENT AND CLEANING UP:

Slippery when spilt. Avoid accidents, clean up immediately. 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 absorbent such as clay, sand or other suitable material and dispose of properly. Local authorities should be advised if significant spillages cannot be contained.

6.4 REFERENCE TO OTHER SECTIONS:

For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.

7. HANDLING AND STORAGE

7.1 GENERAL PRECAUTIONS:

Use local exhaust ventilation if there is risk of inhalation of vapors, mists or aerosols. 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.

7.2 PRECAUTIONS FOR SAFE HANDLING:

Avoid prolonged or repeated contact with skin. Avoid inhaling vapors and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Keep container tightly closed and in a cool, well-ventilated place. Use properly labeled and closeable containers.

7.3 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage : Store at ambient temperature.

Recommended Materials : For containers or container linings, use mild steel or high density polyethylene.

Unsuitable Materials : PVC.

Refer to Section 15 for any additional specific legislation covering the packaging and storage of this product.

7.4 SPECIFIC END USE(S) : Not applicable.

Additional Information : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

Refer to Section 15 for any additional specific legislation covering the packaging and storage of this product.

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

Material	Source	Type	PPM	mg/m ³	Notation
Oil mist	ACGIH	TWA (Inhalable fraction)		5	
	OEL (BE)	TWA (Mist)		5	
	OEL (BE)	STEL (Mist)		10	
Moly	ACGIH	TWA (Inhalable fraction)		10	

Biological Exposure Index (BEI) : No biological limit allocated.

PNEC Related Information : Data not available.

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. Validated exposure measurement methods should be applied by a competent person and samples analyzed by an accredited laboratory. Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/	Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.dguv.de/inhalt/index.jsp
Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/	L'Institut National de Recherche et de Sécurité, (INRS), France http://www.inrs.fr/accueil
Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://hse.gov.uk/	

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. Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation. Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending disposal or for subsequent recycle. Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Occupational Exposure Controls

Personal Protective Equipment:

The provided information is made in consideration of the PPE directive (Council Directive 89686EEC) and the CEN European Committee for Standardization (CEN) standards. 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, 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. For continuous contact we recommend gloves with breakthrough time or more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time may be acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor or glove resistance to a chemical as it is dependent on the exact composition of the glove material.

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 vapors [boiling point > 65°C (149°F)] meeting EN14387.

Thermal Hazards

: Not applicable.

Environmental Exposure Controls Measures:

Minimize release to the environment. An environment assessment must be made to ensure compliance with local environmental legislation. Information on accidental release measures are to be found in Section 6. If necessary, prevent material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge or exhaust air containing vapor.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical Description : Dark metallic, tacky fluid, bland odor	N-Octanol/Water Partition : > 6 (based on information on similar products) Coefficient (log Pow)
pH : Essentially neutral	Upper/Lower Flam. : Typical 1-10% (V)
Boiling Point : >550°F	Dynamic Viscosity : NDA
Pour Point : -20°F	Kinematic Viscosity : 23-24 cSt @ 100°C
Flash Point : 250-288°C (488-550°F) Min.	Vapor Density (Air = 1) : > 1 (estimated value)
Water Solubility : Insoluble	Evaporation Rate (nBuAc=1) : < 0.01
Auto-Ignition Temp. : NDA	Decomposition : NDA
Vapor Pressure : < 0.01 mm Hg @ 20°C	Temperature Flammability : NDA
Relative Density : Typical 0.86-0.88 @ 15°C/59°F	Oxidizing Properties : NDA
Density : Typical 0.9 kg/m3 @ 15°C/59°F	Explosive Properties : Not classified
Specific Gravity : 0.90 @ (15.6/15.6C)	

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 oxidizing agents.
- 10.4 CONDITIONS TO AVOID** : Extremes of temperature and direct sunlight.
- 10.5 INCOMPATIBLE MATERIALS** : Strong oxidizing agents.
- 10.6 HAZARDOUS DECOMPOSITION PRODUCTS** : Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION TOXICOLOGICAL EFFECTS

- Basis for Assessment** : Information given is based on data on the components and the toxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
- Likely Routes of Exposure** : Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
- Acute Oral Toxicity** : Expected to be of low toxicity: LD50 > 5000mg/kg, Rat.
- Acute Dermal Toxicity** : Expected to be of low toxicity: LD50 > 5000mg/kg, Rabbit.
- Acute Inhalation Toxicity** : Not considered to be an inhalation hazard under normal conditions of use.
- Skin Corrosion/Irritation** : Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog pores of the skin resulting in disorders such as oil acne/folliculitis.
- Serious Eye Damage/Irritation** : Expected to be slightly irritating.
- Respiratory Irritation** : Inhalation of vapors or mists may cause irritation.
- Respiratory/Skin Sensitization** : Not expected to be a sensitizer.
- Aspiration Hazard** : Not considered an aspiration hazard.
- Germ Cell Mutagenicity** : Not considered a mutagenic hazard.
- Carcinogenicity** : Not expected to be carcinogenic. 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).

Material	Carcinogenicity Classification
PCA-Content (IP346 <3%)	ACGIH Group A4: Not classifiable as human carcinogen
PCA-Content (IP346 <3%)	IARC 3: Not classifiable as to carcinogenicity to humans
PCA- Content (IP346 <3%)	GHS/CLP: No carcinogenicity classification

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

Summary on Evaluation of the CMR Properties:

- Carcinogenicity** : This product does not meet the criteria for classification in categories 1A/1B.
- Mutagenicity** : This product does not meet the criteria for classification in categories 1A/1B.
- Reproductive Toxicity (fertility)** : This product does not meet the criteria for classification categories 1A/1B.
- Specific Target Organ (Single exposure)** : Not expected to be a hazard.
- Specific Target Organ (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 harmful 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 of Assessment : Eco toxicological data have not been determined specifically for this product. Information given is based on knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

12.1 TOXICITY

Acute Toxicity : Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically nontoxic: LL/EL/IL50 > 100mg/l (to aquatic organisms) LL/EL50 expressed as the nominal amount of product required to prepare aqueous extract. Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1mg/L.

12.2 PERSISTENCE & DEGRADABILITY : Expected to not be readily biodegradable. Major constituents are expected to be inherently biodegradable, but product contains components that may persist in the environment.

12.3 BIO ACCUMULATIVE POTENTIAL : Contains components with the potential to bioaccumulate.

12.4 MOBILITY IN SOIL : Liquid under most environmental conditions. If it enters soil, it will adsorb to soil particles and will not be mobile. Floats in water.

12.5 RESULT OF PBT & vPvB ASSESSMENT : This mixture does not contain any REACH registered substances that are assessed to be a PBT or a vPvB.

12.6 OTHER ADVERSE EFFECTS : 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 to 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.

Local Legislation : Disposal should be in accordance with applicable regional, national, and local laws and regulations. EU Waste Disposal Code (EWC): 12 01 12 spent waxes and fats. Classification of water is always the responsibility of the end user.

14. TRANSPORTATION AND OSHA RELATED LABEL INFORMATION

Land Transport (ADR/RID)

ADR: This product is not classified as dangerous for this mode of transport. Therefore REACH requirements of 14.1 UN Number, 14.2 UN Proper shipping name, 14.3 Transport hazard class(es), 14.4 Packing group, 14.5 Environmental hazards, and 14.6 Special precautions for use do not apply.

RID: This product is not classified as dangerous for this mode of transport. Therefore REACH requirements of 14.1 UN Number, 14.2 UN Proper shipping name, 14.3 Transport hazard class(es), 14.4 Packing group, 14.5 Environmental hazards, and 14.6 Special precautions for use do not apply.

DOT: Not regulated for land transportation.

TDG: Not regulated for land transportation.

Inland Waterways Transport (AND):

This product is not classified as dangerous for this mode of transport. Therefore REACH requirements of 14.1 UN Number, 14.2 UN Proper Shipping name, 14.3 Transport hazard class(es), 14.4 Packing group, 14.5 Environmental hazards, and 14.6 Special precautions for use do not apply. CDNI Inland Water Waste: NST 3411 Greases Agreement.

Sea Transport (IDMG CODE):

This product is not classified as dangerous for this mode of transport. Therefore REACH requirements of 14.1 UN Number, 14.2 UN Proper Shipping name, 14.3 Transport hazard class(es), 14.4 Packing group, 14.5 Environmental hazards, and 14.6 Special precautions for use do not apply.

Air Transport (IATA):

This product is not classified as dangerous for this mode of transport. Therefore REACH requirements of 14.1 UN Number, 14.2 UN Proper shipping name, 14.3 Transport hazard class(es), 14.4 Packing group, 14.5 Environmental hazards, and 14.6 Special precautions for use do not apply.

Transport in Bulk According to Annex II of MARPOL 73/78 and IBC Code

Pollution Category : N/A **Ship Type** : N/A

Product Name : N/A **Special Precaution** : N/A

Additional Information : MARPOL Annex 1 rules apply for bulk shipments by sea.

15. REGULATORY INFORMATION

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

15.1 SAFETY, HEALTH & ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Other Regulatory Information : Product is not subject to Authorization under REACH.

Authorizations and/or Restrictions on Use Recommended Restrictions on Use (Advice Against)

This product must not be used in applications other than those recommended in Sec. 1, without first seeking the advice of the supplier.

Chemical Inventory Status

EINECS : All components listed on polymer exempt.

TSCA : All components listed.

CERCLA (Sec 103) : This product is not subject to reporting requirements under CERCLA.

SARA 313 : N/A

SARA 302 : N/A

15.2 CHEMICAL SAFETY ASSESSMENT

Industrial Safety Health Act : N/A

Toxic Chemical Control Act : N/A

Dangerous Goods Safe Control Act : Non-Dangerous Goods (Avoid fire source)

Waste Management Act : Treat with article 4/5/24/25 of disposal considerations sections

16. OTHER INFORMATION

NFPA Hazard ID : Health – 1 Flammability – 1 Reactivity – 0

HMIS Hazard ID : Health – 1 Flammability – 1 Reactivity – 0

Additional Information : No Exposure Scenario annex is attached to this Safety Data Sheet as it is a non-classified mixture containing no hazardous substances.

Abbreviations and Acronyms : The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g., scientific dictionaries) and/or websites.

ACGIH = American Conference of Governmental Industrial Hygienists

AICS = Australian Inventory of Chemical Substances

BEL = Biological Exposure Limits

CAS = Chemical Abstract Service

CLP = Classification Packaging and Labeling

DIN = Deutsches Institut für Normung

DNEL = Derived No Effect Level

EC = European Commission

ECETOC = European Center on Ecotoxicology and Toxicology of Chemicals

EINECS = European Inventory of Existing Commercial Chemical Substances

ENCs = Japanese Existing and New Chemical Substances Inventory

GHS = Globally Harmonized System of Classification and Labeling of Chemicals

IATA = International Air Transport Association

IL50 = Inhibitory Level Fifty

INV = Chinese Chemicals Inventory

IP346 = Institute of Petroleum test method N°346 for the determination of polycyclic aromatics DMSO extractables

KECI = Korea Existing Chemicals Inventory

LD50 = Lethal Dose Fifty Percent

LL50 = Lethal Loading Fifty

NOEC/NOEL = No Observed Effect Concentration/ No Observed Effect Level

PBT = Persistent, Bio accumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = Regulations Relating to International Carriage of Dangerous Goods by Rail

STEL = Short Term Exposure Limit

TSCA = US Toxic Substances Control Act

vPvB = very Persistent and very Bio accumulative

ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road

ASTM = American Society for Testing and Materials

BTEX = Benzene, Toluene, Ethylbenzene, Xylenes

CEPIC = European Chemical Industrial Council

COC = Cleveland Open-Cup

DMEL = Derived Minimal Effect Level

DSL = Canada Domestic Substance List

EC50 = Effective Concentration Fifty

ECHA = European Chemicals Agency

EL50 = Effective Loading Fifty

EWC = European Waste Code

IARC = International Agency for Research on Cancer

IC50 = Inhibitory Concentration Fifty

IMDG = International Maritime Dangerous Goods

Additional Abbreviations and Acronyms:

Acute Tox. = Acute Toxicity

Aquatic Acute = Acute hazards to the aquatic environment

Eye Dam. = Serious eye damage/eye irritation

Skin Corr. = Skin corrosion irritation

STOT Se = Specific target organ toxicity- single exposure

Asp Tox. = Aspiration Toxicity

Aquatic Chronic = Long-term hazard to the aquatic environment

Flam. Liq. = Flammable liquids

Skin Sens. = Skin sensitization

STOT Re = Specific target organ toxicity- repeated exposure

SDS Distribution : The information in this document should be made available to all who may handle the product.

SDS Revision Number : A

SDS Effective Date : 01/15/2017

SDS Regulation : Regulation 1907/2006/EC as amended by Regulation (EU) 453/2000. In accordance with the provisions of Article 41, Industrial Safety & Health Act and OSHA Hazard Communication Standard (29 CFR 1910.1200).

Disclaimer : The information is based on our current knowledge and is intended to describe the product for the purpose of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.