

# MATERIAL SAFETY DATA SHEET

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

## SUPERIOR'S DSF-5000 GREASE SERIES

MSDS # 35345

REVISION DATE: November 27, 2012

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Superior's DSF-5000 Grease Series

PRODUCT NUMBER (S): 05065, 05067

SYNONYM: Superior's DSF-5000 #0, DSF-5000 #1

#### COMPANY IDENTIFICATION

Superior Industries, Inc.  
6180 Airways Blvd  
Chattanooga, TN 37421

#### EMERGENCY TELEPHONE NUMBERS

HEALTH (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 DSF-5000 Grease Series.

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

100% SUPERIOR'S DSF-5000 GREASE SERIES

#### CONTAINING

COMPONENTS	AMOUNT	LIMIT/QTY	AGENCY/TYPE
SYNTHETIC HYDROCARBON BASE OIL Chemical Name: 1-DECENE, HOMOPOLYMER, HYDROGENATED CAS68037014		NONE	NA

#### 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/m<sup>3</sup>, the OSHA PEL is 5mg/m<sup>3</sup>.

### 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 petroleum-based mineral 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

### FIRE CLASSIFICATION:

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

### FLAMMABLE PROPERTIES:

FLASH POINT (COC) 372-399°C (700-750°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:  
Blue, Semi-Solid, Bland 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:	.88-.89 @ (15.6/15.6C)
EVAPORATION RATE:	NA
VISCOSITY:	100 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 MAETERIALS:  
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 1910.1200), 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 Grease – 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	19=Sentinel TWA	
10=PA RTK	20=EPA Carcinogen	

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

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 (Grease)

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.  
Chattanooga, Tennessee

## DSF-5000®

Version 1.0  
Effective Date: 06/15/2015  
Regulation: 1907/2006/EC  
In accordance with the provisions of Article  
41, Industrial Safety & Health Act

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

### 1.1 PRODUCT IDENTIFIER

**Material Name** : DSF-5000® | Synthetic High Temperature  
**Product Code** Grease : 95067

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

**Product Use** : Automotive and Industrial Grease  
**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

: (423) 899-0467

**2. HAZARDS IDENTIFICATION**

**2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE**

<b>1999/45/EC</b>	
<b>Hazard Characteristics</b>	<b>R-phrase(s)</b>
Not classified as dangerous under EC Criteria	

**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** : H412: Harmful to aquatic life with long lasting effects.
- GHS Precautionary Statements**
  - Prevention** : Avoid release to environment.
  - Response** : No Precautionary phrases.
  - Storage** : No Precautionary phrases.
  - Disposal** : Dispose of contents and container to appropriate waste site or reclaimed in accordance with local and national regulations.

**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 including local necrosis. Used grease 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 grease consisting of synthetic oil and additives.

Chemical Identity	Synonyms	CAS	Hazard Class (Category)	Hazard Statement	Conc.

#### Other Substances

Chemical Identity	CAS	Conc.

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

### 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. 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** : 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** : Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection. 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. Local anesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anesthetics, and wide exploration is essential.

### 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

: Shovel into a suitable clearly marked container for disposal or reclamation in accordance with local regulations.

### 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.

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

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

**Unsuitable Materials** : PVC.

**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.

**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 <sup>3</sup>	Notation
Oil mist	ACGIH	TWA (Inhalable fraction)		5	
	OEL (BE)	TWA (Mist)		5	
	OEL (BE)	STEL (Mist)		10	

**Additional Information** : Due to the product’s semi-solid consistency, generation of mists and dusts is unlikely to occur.

**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/>

Occupational Safety and Health Administration (OSHA), USA:  
Sampling and Analytical Methods <http://www.osha.gov/>

Health and Safety Executive (HSE), UK: Methods for the  
Determination of Hazardous Substances <http://hse.gov.uk/>

Institut für Arbeitsschutz Deutschen Gesetzlichen  
Unfallversicherung (IFA), Germany  
<http://www.dguv.de/inhalt/index.jsp>

L'Institut National de Recherche et de Sécurité, (INRS), France  
<http://www.inrs.fr/accueil>

## 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.

<b>Eye Protection</b>	: Wear safety glasses or full face shield if splashes are likely to occur. Approved to EU Standard EN166.
<b>Hand Protection</b>	: 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 of glove resistance to a chemical as it is dependent on the exact composition of the glove material.
<b>Body Protection</b>	: Skin protection not ordinarily required beyond standard issue work clothes.
<b>Respiratory Protection</b>	: 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.
<b>Thermal Hazards</b>	: Not applicable.
<b>Environmental Exposure Controls</b>	
<b>Environmental Exposure Control Measures</b>	: 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.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION	: Blue, semi-solid, bland odor
pH	: NDA
BOILING POINT	: N/A
DROPPING POINT	: NONE
FLASH POINT	: NDA
WATER SOLUBILITY	: Insoluble
AUTO-IGNITION TEMPERATURE	: NONE
VAPOR PRESSURE	: N/A
RELATIVE DENSITY	: Typical 0.9 @ 15°C/59°F
DENSITY	: Typical 0.9 kg/m <sup>3</sup> at 15°C/59°F
UPPER/LOWER FLAMMABILITY	: Typical 1-10% (V)
N-OCTANOL/WATER PARTITION Coefficient (log Pow)	: > 6 (based on information on similar products)
DYNAMIC VISCOSITY	: Data not available
KINEMATIC VISCOSITY	: Not Applicable
VAPOR DENSITY (Air = 1)	: > 1 (estimated value)
EVAPORATION RATE (nBuAc = 1)	: Data not available
DECOMPOSITION	: Data not available
TEMPERATURE FLAMMABILITY	: Data not available
OXIDIZING PROPERTIES	: Data not available
EXPLOSIVE PROPERTIES	: Not classified

## 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** : No hazardous reaction is expected when handled and stored according to provisions.
- 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.

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 grease 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 grease should be handled with caution and skin contact avoided as far as possible. High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed. Classification by other authorities under carrying regulatory frameworks may exist.

## 12. ECOLOGICAL INFORMATION

**Basis of Assessment** : Ecotoxicological 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/1 (to aquatic organisms) LL/EL50 expressed as the nominal amount of product required to prepare aqueous extract.

### 12.2 PERSISTENCE & DEGRADABILITY

: Expected to not be readily biodegradable.

### 12.3 BIOACCUMULATIVE POTENTIAL

: Not expected to bioaccumulate significantly.

### 12.4 MOBILITY IN SOIL

: Semi-solid under most environmental conditions. If it enters soil, it will adsorb to soil particles and will not be mobile. Sinks 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

<b>Material Disposal</b>	: 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.
<b>Container Disposal</b>	: Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.
<b>Local Legislation</b>	: 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 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 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.

### Inland Waterways Transport (AND)

: This product is not classified as dangerous for this mode of transport. Therefore 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 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 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 Section 1, without first seeking the advice of the supplier.

**Chemical Inventory Status**

**EINECS** : All components listed on polymer exempt.  
**TSCA** : All components listed.

### 15.2 CHEMICAL SAFETY ASSESSMENT

: No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

## 16. OTHER INFORMATION

**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  
ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road  
AICS = Australian Inventory of Chemical Substances  
ASTM = American Society for Testing and Materials  
BEL = Biological Exposure Limits  
BTEX = Benzene, Toulene, Eythlbenzene, Xylenes  
CAS = Chemical Abstract Service  
CEFIC = European Chemical Industrial Council  
CLP = Classification Packaging and Labeling  
COC = Cleveland Open-Cup  
DIN = Deutsches Institut fur Normung  
DMEL = Derived Minimal Effect Level  
DNEL = Derived No Effect Level  
DSL = Canada Domestic Substance List  
EC = European Commission  
EC50 = Effective Concentration Fifty  
ECETOC = European Center on Ecotoxicology and Toxicology of Chemicals  
ECHA = European Chemicals Agency  
EINECS = The European Inventory of Existing Commercial Chemical Substances  
EL50 = Effective Loading Fifty  
ENCS = Japanese Existing and New Chemical Substances Inventory  
EWC = European Waste Code  
GHS = Globally Harmonized System of Classification and Labeling of Chemicals  
IARC = International Agency for Research on Cancer  
IATA = International Air Transport Association  
IC50 = Inhibitory Concentration Fifty  
IL50 = Inhibitory Level Fifty  
IMDG = International Maritime Dangerous Goods  
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  
LC50 = Lethal Concentration Fifty  
LD50 = Lethal Dose Fifty Percent  
LL/EL/IL = Lethal Loading/Effective Loading/Inhibitory Loading  
LL50 = Lethal Loading Fifty  
MARPOL = International Convention for the Prevention of Pollution from Ships  
NOEC/NOEL = No Observed Effect Concentration/ No Observed Effect Level

OE\_HP V = Occupational Exposure-High Pollution Volume  
PBT = Persistent, Bioaccumulative and Toxic  
PICCS = Philippine Inventory of Chemicals and Chemical Substances  
PNEC = Predicted No Effect Concentration  
REACH = Registration Evaluation & Authorization of Chemicals  
RID = Regulations Relating to International Carriage of Dangerous Goods by Rail  
SKIN\_DES = Skin Designation  
STEL = Short Term Exposure Limit  
TRA = Targeted Risk Assessment  
TSCA = US Toxic Substances Control Act  
TWA = Time Weighted Average  
vPvB = very Persistent and very Bioaccumulative

**Additional Abbreviations and Acronyms**

:  
Acute Tox. = Acute Toxicity  
Asp Tox. = Aspiration Toxicity  
Aquatic Acute = Acute hazards to the aquatic environment  
Aquatic Chronic = Long-term hazard to the aquatic environment  
Eye Dam. = Serious eye damage/eye irritation  
Flam. Liq. = Flammable liquids  
Skin Corr. = Skin corrosion irritation  
Skin Sens. = Skin sensitization

**SDS Distribution**

STOT Se = Specific target organ toxicity- single exposure  
STOT Re = Specific target organ toxicity- repeated exposure  
: The information in this document should be made available to all who may handle the product.

**SDS Version Number**

: 1.0

**SDS Effective Date**

: 01/01/2013

**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.

**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.