



# MATERIAL SAFETY DATA SHEET

CERMET - Ceramic-Metal Friction Modifier and Metal Conditioner

MSDS: CERMET - Ceramic-Metal Friction Modifier and Metal Conditioner

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### CERMET - Ceramic-Metal Friction Modifier and Metal Conditioner

Synonyms:  
CERMET

### Company Identification

CerMet Lab Company, 33290 W.14 Mile Rd., Suite 420, West Bloomfield, MI 48322  
PHONE: (800) 372-7580 WEBSITE: www.cermetlab.com

|  |                                 |
|--|---------------------------------|
| <b>CAS Registry Number</b>               | Not Applicable                  |
| <b>Synonyms</b>                          | CerMet                          |
| <b>Generic/Chemical Name</b>             | Mixture                         |
| <b>Product Type</b>                      | Petroleum Based Lubricating Oil |
| <b>Preparation Date</b>                  | 9/5/05                          |
| <b>Transportation Emergency Response</b> | (800) 372-7580                  |
| <b>FAX Number</b>                        | (206) 350-7880                  |

### Product Information

Product Information and MSDS Requests: (800) 372-7580 and www.cermetlab.com

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

| Component                            | CAS №   | Weight Percent Range | Hazardous in Blend |
|--------------------------------------|---------|----------------------|--------------------|
| Synthetic or Mineral Lubricating Oil | Mixture | 97-99                | No                 |
| CERMET Proprietary Mixture           | Mixture | 1-3                  | No                 |

This Product is **NOT HAZARDOUS** according to OSHA 29 CFR 1910.1200

## 3. HAZARD IDENTIFICATION

### Emergency and Hazards Overview

CAUTION: Contains synthetic lubricant. Spills may create a slipping hazard.

### IMMEDIATE HEALTH EFFECTS

**Eye:** Not expected to cause prolonged or significant eye irritation.

**Skin:** This product is minimally irritating to the skin upon direct contact. Prolonged or repeated contact may result in slight skin irritation.

**Ingestion:** This product is regarded as having a low order of toxicity. There are no known adverse effects based on current references.

**Inhalation:** This product has a low vapor pressure and is not expected to present an inhalation hazard at ambient conditions. Caution should be taken to prevent aerosolization or misting of this product.

On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. Signs of respiratory effects vary with concentration and length of exposure and include nasal discharge, sore throat, coughing, bronchitis, pulmonary edema and difficulty breathing. Shortness of breath and cough are the most common symptoms.

## 4. FIRST AID MEASURES

**Eye Contact:** Immediately flush eyes with large amounts of water and continue flushing until irritation subsides. If material is hot, treat for thermal burns and seek immediate medical attention.

**Skin Contact:** No treatment is necessary under ordinary circumstances. Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If material is hot, submerge injured area in cold water. If victim is severely burned, remove to a hospital immediately.

**Inhalation:** This material has a low vapor pressure and is not expected to present an inhalation exposure at ambient conditions. If vapor or mist is generated when the material is heated, and the victim experiences signs of respiratory tract irritation, remove to fresh air.

**Ingestion:** No treatment is necessary under ordinary circumstances. Do not induce vomiting. This material does not present any known ingestion hazard.

**Notes to Physician:** No information available

**Other:** No information available

## 5. FIRE FIGHTING MEASURES

### **FIRE CLASSIFICATION:**

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

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

### **FLAMMABLE PROPERTIES:**

**Flashpoint:** >210 °C (>410 °F)

**Autoignition:** NDA

Flammability (Explosive) Limits (% by volume in air): Lower: NA Upper: NA

**EXTINGUISHING MEDIA:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

### **PROTECTION OF FIRE FIGHTERS:**

**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:** Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

## 6. ACCIDENTAL RELEASE INFORMATION

**Protective Measures:** Eliminate all sources of ignition in vicinity of spilled material.

**Spill Management:** Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in **Exposure Controls/Personal Protection**. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

**Reporting:** Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

## 7. HANDLING AND STORAGE

**Precautionary Measures:** 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. Keep out of the reach of children.

**General Handling Information:** Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

**Static Hazard:** Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating an accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

**Container Warnings:** Container is not designed to contain pressure. Do not use pressure to empty container or it 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 containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly

## 8. EXPOSURE CONTROL/PERSONAL PROTECTIVE EQUIPMENT

### **GENERAL CONSIDERATIONS:**

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.

Special note: Do not use in breathing air apparatus or medical equipment.

#### **ENGINEERING CONTROLS:**

Use in a well-ventilated area.

#### **PERSONAL PROTECTIVE EQUIPMENT**

**Eye/Face 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 in the workplace.

Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

**Respiratory Protection:** No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component Agency TWA STEL

Highly refined mineral oil (C15 - C50) CAS MIXTURE ACGIH 5 mg/m3 10 mg/m3

Highly refined mineral oil (C15 - C50) CAS MIXTURE OSHA PEL 5 mg/m3

Zinc dialkyl dithiophosphate CAS 68649-42-33 OSHA\_PEL 5 mg/m3 5 mg/m3

Diphenylamine CAS 122-39-4 ACGIH 10 mg/m3

Diphenylamine CAS 122-39-4 OSHA\_PEL 10 mg/m3

2,5-di-tert-butylphenol CAS 128-39-2 ACGIH 5 mg/m3

2,5-di-tert-butylphenol CAS 128-39-2 OSHA\_PEL 10 mg/m3

The BASE OIL may be a mixture of any of the following: CAS 64741884, CAS 64741895, CAS 64741964,

CAS 64741975, CAS 64742014, CAS 64742525, CAS 64742536, CAS 64742547, CAS 64742558, CAS 64742570,

CAS 64742627

The ADDITIVES are a mixture of confidential ingredients permitted by 29 CFR 1910.1200 and various State Right to Know Laws. In the event of medical emergency, specific chemical information will be disclosed to a treating physician or nurse.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

**Attention: the data below are typical values and do not constitute a specification.**

Appearance and Odor: Amber, oil odor

pH: NA

Vapor Pressure: <0.01 mmHg @ 100 °F

Vapor Density (Air = 1): >1

Boiling Point: >265 °F @ 760 mmHg

Solubility: Soluble in hydrocarbons; insoluble in water

Freezing Point: NA

Melting Point: NA

Specific Gravity: 0.868 @ 15.6 °C / 15.6 °C

Viscosity: 68.2 cSt @ 40°C (104°F)

## **10. STABILITY AND REACTIVITY**

**Chemical Stability:** This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Incompatibility With Other Materials:** May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Hazardous Decomposition Products:** Hydrogen Sulfide (Temperatures >149 °F (65 °C))

**Hazardous Polymerization:** Hazardous polymerization will not occur.

## **11. TOXICOLOGICAL INFORMATION**

### **IMMEDIATE HEALTH EFFECTS**

**Eye Irritation:** The eye irritation hazard is based on evaluation of data for similar materials or product components.

**Skin Irritation:** The skin irritation hazard is based on evaluation of data for similar materials or product components.

**Skin Sensitization:** No product toxicology data available.

**Acute Dermal Toxicity:** The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

**Acute Oral Toxicity:** The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

**Acute Inhalation Toxicity:** The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

**ADDITIONAL TOXICOLOGY INFORMATION:**

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

During use in engines, contamination of oil with low levels of cancer-causing combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water.

## 12. ECOLOGICAL INFORMATION

### ECOTOXICITY

The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

### ENVIRONMENTAL FATE

This material is not expected to be readily biodegradable.

## 13. DISPOSAL INFORMATION

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. (See B.C. Reg. GY/92 Waste Management Act; R.R.O. 1990, Reg. 347 General-Waste Management; C.C.S.M.c. W40 The Waste Reduction and Prevention Act; N.S. Reg. 51/95 and N.S. Reg. 179/96 for examples of Provincial legislation.)

## 14. TRANSPORTATION INFORMATION

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

### U.S. Department of Transportation

NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR

### Land transport ADR/RID (cross-border)

NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER ADR/RID

### Maritime transport IMDG:

NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER IMO/IMDG

### Air transport ICAO-TI and IATA-DGR:

NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER ICAO/IATA

## 15. REGULATORY INFORMATION

### EPCRA 311/312 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

### CHEMICAL INVENTORIES:

AUSTRALIA: This material contains components that may require notification before sale or importation into Australia.

CANADA: One or more components of this product are not on the Domestic Substances List (DSL). Volume tracking

or notification by the Canadian Importer of Record may be required.

EUROPEAN UNION: All the components of this material are in compliance with the EU Seventh Amendment Directive 92/32/EEC.

JAPAN: This material may contain components that require notification before sale or importation into Japan.

KOREA: This material may contain components that require notification before sale or importation into Korea.

PHILIPPINES: This material may contain components that require notification before sale or importation into the Philippines.

UNITED STATES: All of the components of this material are on the Toxic Substances Control Act (TSCA) Chemical Inventory.

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 (Lubricating oil)

WHMIS CLASSIFICATION:

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

## 16. DISCLAIMER

**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: Revision updates many sections and the MSDS should be read in its entirety.

**ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:**

TLV - Threshold Limit Value TWA - Time Weighted Average

STEL - Short-term Exposure Limit PEL - Permissible Exposure Limit

NDA - No Data Available NA - Not Applicable

<= - Less Than or Equal To >= - Greater Than or Equal To

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by CerMet Lab Company, 33290 W.14 Mile Rd., West Bloomfield, MI 48322.

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