



Material Safety Data Sheet

May be used to comply with
OSHA's Hazard Communication Standard 29 CFR 1910.1200.
This standard must be consulted for specific requirements.

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name : Type S2 Grease
Product Numbers:
14-46-1193, 14-46-1194, 14-46-5338,
14-46-5362, 14-46-5363, 14-46-5368,
14-46-9070, 14-46-9075, 14-46-9065,
14-46-9265, 14-46-9266, 14-46-9276
49-08-5240, 49-08-5265, 49-08-5267

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Milwaukee Electric Tool Corporation
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Brookfield, Wisconsin 53005
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Company Phone Number: 262-781-3600 or
1-800-729-3878
Emergency Contact Number: 1-800-424-9300
(United States Only) (Chemtrec)

EMERGENCY OVERVIEW

- This product is a semi-solid that is insoluble in water.
- Direct eye contact may cause minor, short term irritation.
- Short term skin exposure is not expected to be irritating.
- Inhalation and ingestion are not anticipated routes of exposure during normal conditions of use.

HMIS Rating:	Health – 1	Flammability – 1	Reactivity – 0	PPE – X	
Hazard Ratings:	0 = Minimum Hazard	1 = Slight Hazard	2 = Moderate Hazard	3 = Serious Hazard	4 = Severe Hazard
A = Goggles	B = Goggles & Gloves	C = Face Shield, Gloves & Apron	X = Special, See Sections 7, 8		

SECTION 2: COMPONENT DATA

Components listed in this section may contribute to the potential hazards associated with exposure to the concentrate. The product may contain additional non-hazardous or trade-secret components.

INGREDIENT	% by Weight	OSHA Reg. Y/N	CAS #	OSHA PEL	ACGIH STEL	ACGIH TLV	California Prop 65 Reg. Y/N	IARC/NT P Y/N
Mineral Oil	< 5	N	Proprietary	5mg/m3	10mg/m3	5mg/m3		N
NOTE: Exposure limit for oil mist in air								
Synthetic Ester	< 10	N	Proprietary	N/A		N/A		N
NOTE: Mfg. limit 5mg/m3								
Non-Hazardous Materials	Balance							

Carcinogenic Components: This product contains no carcinogens.

SECTION 3: HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS and SYMPTOMS from SHORT TERM/ACUTE EXPOSURE

- **EYE EXPOSURE**

This product is not expected to cause eye irritation under normal conditions of use. Symptoms of slight eye irritation may result when direct contact occurs, or when exposed to high mist levels in poorly ventilated areas.

- **SKIN EXPOSURE**

Short term skin contact is not expected to cause skin irritation. Prolonged or repeated direct exposure to the skin may result in symptoms of irritation and redness.

- **INHALATION:**

This product has low volatility and so is not expected to cause respiratory tract irritation during normal conditions of use. Exposure to high mist levels in poorly ventilated areas may cause temporary irritation to the upper respiratory tract.

- **INGESTION**

Ingestion may cause slight stomach irritation and discomfort.

POTENTIAL CHRONIC HEALTH EFFECTS:

No further data known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

No further data known.

CARCINOGENICITY:

This product is not listed as a known or suspected carcinogen by IARC, OSHA, or the NTP.

SECTION 4: FIRST AID MEASURES

EYE EXPOSURE:

Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. If the symptoms persist, contact a physician.

SKIN EXPOSURE:

Remove product from the skin by washing with a mild soap and water. Contaminated clothing should be removed to prevent prolonged exposure. If product is injected under the skin, seek treatment immediately. If symptoms of exposure persist, contact a physician.

INHALATION:

If signs or symptoms of overexposure occur, remove the employee to fresh air. If symptoms persist, seek medical attention.

INGESTION:

If ingested, dilute stomach contents with two glasses of milk or water. (NOTE: Do NOT give anything by mouth to an unconscious person.) Do not induce vomiting without medical supervision. If vomiting occurs spontaneously, keep airway clear. If symptoms of ingestion persist seek medical attention.

POTENTIAL CHRONIC HEALTH EFFECTS:

No further data known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

No further data known.

CARCINOGENICITY:

This product is not listed as a known or suspected carcinogen by IARC, OSHA, or the NTP.

SECTION 5: FIRE FIGHTING MEASURES

FIRE AND EXPLOSIVE PROPERTIES:

Flashpoint.....	450.0 °F	COC
Flammability Limits	LEL	-N/A
	UEL	-N/A

EXTINGUISHING MEDIA:

In accordance with NFPA guidance, dry chemical, foam or CO2 fire extinguishers are all acceptable. Note that while water fog extinguishers are also acceptable, do NOT apply a direct stream of water onto burning product because it may cause spreading and increase fire intensity.

UNUSUAL FIRE & EXPLOSION HAZARDS:

No further data known.

FIRE-FIGHTING PROCEDURES AND EQUIPMENT:

Emergency responders in the danger area should wear bunker gear and self-contained breathing apparatus for fires beyond the incipient stage. See Section 8 of the MSDS for other PPE to be worn as conditions warrant.

SECTION 6: ACCIDENTAL RELEASE MEASURES

CLEAN-UP MEASURES:

Important: As with any spill or lead, before responding ensure that you are familiar with the potential hazards and recommendations of the MSDS. Appropriate personal protective equipment must be worn. See Section 8 of this MSDS for PPE recommendations.

If possible, safely contain the spill with dikes or other spill response equipment appropriate for petroleum or organic material releases. Take measures to prevent spreading of product. Note that while product will ignite it will not readily burn. However, as a precaution eliminate ignition sources. Prevent from entering sewers and waterways. Large volumes may be transferred to an appropriate container for proper disposal. Small volumes of residues may be soaked up with absorbents. Spill response materials should be collected for proper disposal.

SECTION 7: HANDLING AND STORAGE

HANDLING:

As with any industrial chemical, handle the product in a manner that minimizes exposure to practicable levels. Prior to handling, consult Section 8 of this MSDS to evaluate personal protective equipment needs.

Open containers slowly to relieve any pressure. Follow all other standard industrial hygiene practices.

Empty containers may contain product residue. All safety precautions taken when handling this product should also be taken when handling empty drums and containers. Keep containers closed when not in use.

Product residue in empty containers is combustible but will not readily burn. NOTE however, that excessive heating or cutting of empty containers may create an ignition source sufficient to start a fire and in extreme cases, cause an explosion.

STORAGE:

Protect product quality by storing indoors and away from extreme temperatures. Close all containers when not in use.

SPECIAL COMMENTS:

No further data known.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal Protective Equipment:

Selection of personal protective equipment should be based upon the anticipated exposure and made in accordance with OSHA’s Personal Protective Equipment Standard found in 29 CFR 1910 Subpart I. The following information may be used to assist in PPE selection.

Eye Protection:

Wear eye protection appropriate to prevent eye exposure. Where splashing is not likely, chemical safety glasses with side shields are recommended. Where splashing may occur, chemical goggles or full face shield is recommended.

Skin Protection:

Gloves are not normally needed during normal conditions of use. If health effects are experienced, oil or chemical resistant gloves such as butyl or nitrile are recommended.

Where splashing or soaking is likely, wear oil or chemical resistant clothing to prevent exposure.

Respiratory Protection:

A respirator may be worn to reduce exposure to vapors, dust, or mist. Select a NIOSH/MSHA approved respirator appropriate for the type and physical character of the airborne material. A self-contained breathing apparatus is recommended in all situations where airborne contaminant concentration has not been confirmed to be below safe levels. Respirator use should comply with the OSHA Respirator Protection Standard found in 29 CFR 1910. 134.

Engineering Controls:

Normal general ventilation is expected to be adequate. It is recommended that ventilation be designed in all instances to maintain airborne concentrations at lowest practicable levels. Ventilation should at a minimum, prevent airborne concentrations from exceeding any exposure limits listed in Section 2 of this MSDS.

The user may wish to refer to 29 CFR 1910.1000 (d) (2) and the ACGIH “Threshold Limit Values for Chemical substances and Physical Agents Biological Expert Indices”) (Appendix C) for the determination of exposure limits of mixtures. An industrial hygienist or similar professional may be consulted to confirm that the calculated exposure limits apply.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical AppearanceGreen
OdorPetroleum
Physical StateSemi Solid
Water Solubility.....Insoluble
Specific Gravity..... .870

SECTION 10: STABILITY AND REACTIVITY

INCOMPATIBILITIES:

This product is incompatible with strong oxidizing agents.

DECOMPOSITION PRODUCTS MAY INCLUDE:

Thermal decomposition products are dependent on combustion conditions. A complex mixture of airborne solid, liquid, particulates and gasses may evolve when the material burns. Combustion by-products may include:

oxides of carbon,
oxides of sulfur,
traces of hydrogen sulfide,
incompletely burned hydrocarbons as fumes and smoke.

CONDITIONS TO AVOID:

Avoid contact with incompatible materials and exposure to extreme temperatures.

POLYMERIZATION:

This product is not expected to polymerize.

STABILITY:

This product is stable.

SECTION 11: TOXICOLOGY INFORMATION

EYE EFFECTS:

No further toxicological data known.

SKIN EFFECTS:

No further toxicological data known.

ORAL EFFECTS:

No further toxicological data known.

INHALATION EFFECTS:

No further toxicological data known.

OTHER:

No further data known.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION:

This product has not been evaluated for ecotoxicity. As with any industrial chemical, exposure to the environment should be prevented and minimized wherever possible.

ENVIRONMENTAL FATE:

The degree of biodegradability and persistence of this product has not been determined.

SECTION 13: DISPOSAL CONSIDERATIONS:

WASTE DISPOSAL:

Ensure that collection, transport, treatment, and disposal of waste product, containers and rinsate complies with all applicable laws and regulations. Note that use, mixture, processing, or contamination of the product may cause the material to be classified as a hazardous waste. It is the responsibility of the product user or owner to determine at the time of disposal, whether the product is regulated as a hazardous waste.

SECTION 14: TRANSPORTATION INFORMATION

DOT HAZARDOUS MATERIAL INFORMATION:

- Not otherwise DOT regulated.

SECTION 15: REGULATORY INFORMATION

FEDERAL REGULATIONS:

SARA 313:

This product contains NONE of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Clean Water Act / Oil Pollution Act:

This product contains mineral oil and is subject to regulation by Section 311 of the Clean Water Act and the Oil Pollution Act. Releases of the product into or leading to surface waters must be reported to the National Response Center at 1-800-424-8802.

CERCLA Reportable Quantity:

Any components listed below have been assigned a reportable quantity (RQ) by the Federal EPA. Releases of the product into the environment that exceed the RQ for a particular component must be reported to the National Response Center at 1-800-424-8802.

<u>Component</u>	<u>RQ</u>
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Toxic Substance Control Act:

The components of this product are listed on the TSCA Inventory.

Ozone Depleting Substances:

This product contains no ozone depleting substances as defined by the Clean Air Act.

Hazardous Air Pollutants:

Any components listed below are defined by the Federal EPA as hazardous air pollutants.

<u>Component</u>

STATE REGULATIONS:

This product contains mineral oil, and as used, may be regulated by the state used oil regulations. Check with the appropriate state agency to determine whether such a regulation exists.

No further data known.

SECTION 16: OTHER INFORMATION

Abbreviations:

TSCA	Toxic Substance Control Act
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous
OSHA	Occupational Safety and Health
IARC/NTP	International Agency for Research on Cancer/National Toxicology Program
SARA	Superfund Amendments and Reauthorization Act of 1986
ACGIH	American Conference of Governmental Industrial Hygienists
NIOSH/MSHA	National Institute for Occupational Safety Health/ Mine Safety and Health Administration
WHMIS	Workplace Hazardous Materials Information System

Prepared by: Milwaukee Electric Tool Corporation

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