SAFETY DATA SHEET

1. Identification

Product identifier **USED OIL - MACHINERY LUBRICANTS**

Other means of identification

SDS number KWAR-10

Version # 01

Revision date Not Applicable

Other means of identification

Synonyms Contaminated filter * Oil contaminated wastes * Residual oil on metal scrap * Contaminated personal protection equipment

Recommended use Waste

Recommended restrictions For industrial use only.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Kaiser Aluminum Warrick LLC
4000 W. State Route 66
Newburgh, IN 47629

Emergency Information CHEMTREC: +1-703-527-3887 +1-800-424-9300 (24 Hour Emergency Telephone, multiple languages spoken); Kaiser Warrick: +1-877-335-9886 (24 Hour Emergency Telephone, only English spoken)

Website For a current Safety Data Sheet, refer to Kaiser Aluminum: https://www.kaiseraluminum.com/customer-portal/safety-data-sheets/

2. Hazard(s) identification

Classification

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

The following statements summarize the health effects generally expected in cases of overexposures. User specific situations should be assessed by a qualified individual. Additional health information can be found in Section 11.

Physical hazards Not classified.

Health hazards Carcinogenicity Category 1B

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement May cause cancer.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing.

Response If exposed or concerned: Get medical advice/attention.

Storage Store in accordance with local/regional/national/international regulation.

Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	Direct contact: Can cause irritation of the eyes and skin. Prolonged or repeated skin contact may cause defatting of the skin and dermatitis. Vapors and mists: Can cause irritation of the respiratory tract. Acute overexposure: Can cause bronchitis and central nervous system effects (nausea, dizziness and loss of coordination). While not considered "flammable" or "combustible" as defined by regulatory or governmental agencies, the material will burn if ignited.

3. Composition/information on ingredients

Composition comments Complete composition is provided below and may include some components classified as non-hazardous.

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Petroleum hydrocarbon base oil		64742-52-5	Variable
Additives			Variable
Ammonium alkyl acid phosphates		Various	-
Sulfurized isobutylenes		Various	-
Methacrylate polymers		Various	-
Carbonyl esters		Various	-
Overbased magnesium sulfonates		Various	-
Zinc alkylthiophosphates		Various	-
Sodium sulfonates		Various	-
Water		7732-18-5	0 - 5
Suspended solids			0 - 5

Additional Information Used machinery lubricants are complex mixtures of petroleum hydrocarbons and additives. These lubricants may contain one or more of the following types: R&O, gear, crank case or soluble oils.

4. First-aid measures

Eye contact	Rinse eyes with plenty of water or saline for at least 15 minutes. Consult a physician.
Skin contact	Wash with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists. Wash contaminated clothing before reuse.
Inhalation	Remove to fresh air. Check for clear airway, breathing, and presence of pulse. If breathing is difficult, provide oxygen. Loosen any tight clothing on neck or chest. Provide cardiopulmonary resuscitation for persons without pulse or respirations. Consult a physician.
Ingestion	If swallowed, dilute by drinking water. Recommend quantities up to 30 mL (~1 oz.) in children and 250 mL (~9 oz.) in adults. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Consult a physician.
Most important symptoms/effects, acute and delayed	Direct contact: Can cause irritation of the eyes and skin. Prolonged or repeated skin contact may cause defatting of the skin and dermatitis. Vapors and mists: Can cause irritation of the respiratory tract. Acute overexposure: Can cause bronchitis and central nervous system effects (nausea, dizziness and loss of coordination). See Section 11 of the SDS for additional information on health hazards.
Medical conditions aggravated by exposure	Asthma, chronic lung disease, and skin rashes.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Dry chemical, foam, carbon dioxide, water fog.

Unsuitable extinguishing media	Heavy streams of water, when directed into burning liquid, will cause frothing and spread of burning material.
Specific hazards arising from the chemical	Closed containers may burst or explode when exposed to extreme heat.
Hazardous combustion products	Combustion can generate carbon monoxide, carbon dioxide, nitrogen oxides, Nitrates, sulfur dioxide, sulfates, aldehydes, ketones and smoke.
Special protective equipment and precautions for firefighters	Firefighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.
Fire fighting equipment/instructions	Use water spray to minimize vapors. Use water spray to cool exposed containers. Move undamaged containers away from heat or flame, if possible.
General fire hazards	While not considered "flammable" or "combustible" as defined by regulatory or governmental agencies, the material will burn if ignited.

Explosion data

Sensitivity to mechanical impact	Not sensitive.
Sensitivity to static discharge	Not sensitive.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Avoid contact with skin and eyes. Use personal protection recommended in Section 8 of the SDS.

Personal precautions, protective equipment and emergency procedures

For emergency responders	Avoid contact with skin and eyes. Use personal protection recommended in Section 8 of the SDS.
Evacuation procedures	Keep unnecessary personnel away.
Methods and materials for containment and cleaning up	Notify spill coordinator. Dike ahead of spill. Return to containers using shovels, buckets or brooms. Absorb remainder with absorbent material. Clean surface thoroughly to remove residual contamination. Spills may be slippery and potentially hazardous to personnel or mobile equipment due to reduced traction. Do not allow this material to drain into sewers/water supplies.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Handling	Avoid generating mists or vapors. Avoid contact with skin and eyes. Wash thoroughly after handling. Use personal protection recommended in Section 8 of the SDS. Empty containers may contain residual product. Do not cut or weld on containers.
Storage	Store in tightly closed containers in a cool, dry area. Store in a well-ventilated place. Store away from heat, sparks, flames, oxidizers, and other incompatible substances.

8. Exposure controls/personal protection

Occupational exposure limits

U.S. - OSHA

Compounds Formed During Processing	Type	Value	Form
Oil mist, mineral (CAS 8012-95-1)	TWA	5 mg/m3	Mist.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Petroleum hydrocarbon base oil (CAS 64742-52-5)	PEL	5 mg/m3 2000 mg/m3	Mist.
	TWA	5 mg/m3	Mist.

Compounds Formed During Processing	Type	Value	Form
Oil mist, mineral (CAS 8012-95-1)	PEL	5 mg/m3	Mist.

US ACGIH Threshold Limit Values: Time Weighted Average (TWA): mg/m3, non-standard units

Components	Type	Value	Form
Carbonyl esters	TWA	10 mg/m3	
Petroleum hydrocarbon base oil (CAS 64742-52-5)	TWA	5 mg/m3	Inhalable fraction.

Compounds Formed During Processing	Type	Value	Form
Oil mist, mineral (CAS 8012-95-1)	TWA	5 mg/m3	Inhalable fraction.

Components	Type	Value
Petroleum hydrocarbon base oil (CAS 64742-52-5)	TWA	0.5 mg/m3

Compounds Formed During Processing	Type	Value	Form
Oil mist, mineral (CAS 8012-95-1)	TWA	0.5 mg/m3	(8 Hour)

General The need for personal protective equipment should be based upon a hazard assessment and recommendations from health / safety professionals.

Minimize breathing oil vapors and mist. Remove oil contaminated clothing; launder or dry-clean before reuse. Remove oil contaminated shoes and thoroughly clean and dry before reuse. Cleanse skin thoroughly after contact, before breaks and meals, and at the end of the work period. Oil coating is readily removed from skin with waterless hand cleaners followed by a thorough washing with soap and water.

Appropriate engineering controls If vapors and mists are generated during processing: Use with adequate ventilation to meet the limits listed in Section 8.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety goggles or face shield to avoid direct eye contact.

Skin protection

Hand protection Wear impervious gloves to avoid repeated or prolonged skin contact with residual oils and to avoid any skin injury. Suitable materials: Neoprene of Nitrile
The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Other Wear suitable protective clothing.

Respiratory protection If vapors and mists are generated during processing: Use NIOSH-approved respiratory protection as specified by an Industrial Hygienist or other qualified professional if concentrations exceed the limits listed in Section 8. Suggested respiratory protection: P95, Organic vapor cartridge.

Thermal hazards None known.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

Control parameters Follow standard monitoring procedures.

Environmental exposure controls Avoid release to the aquatic environment.

9. Physical and chemical properties

Form Liquid.

Color Various colors.

Odor Mild oil to moderate sulfur odor.

Odor threshold Not determined

pH Not applicable

Density 7.19 - 7.61 lb/gal

Melting point/freezing point 80.6 °F (27 °C) estimated / Not determined

Initial boiling point and boiling range > 460 °F (> 237.78 °C)

Flash point > 200.0 °F (> 93.3 °C)

Evaporation rate Not available.

Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - upper (%)	Not determined
Flammability limit - lower (%)	Not determined
Explosive properties	Not available.
Vapor pressure	< 0.01 mm Hg @ 20°C
Vapor density	Not determined
Relative density	Not determined
Solubility(ies)	Insoluble
Auto-ignition temperature	> 600 °F (> 315.56 °C)
Decomposition temperature	Not available.
Viscosity	Not determined

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal conditions of use, storage, and transportation.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong acids, Strong bases and Strong oxidizers (chlorine, perchlorates, permanganates, peroxides, nitric acid, chromates, etc.).
Hazardous decomposition products	Decomposition can generate: carbon monoxide, carbon dioxide, nitrogen oxides, nitrates, sulfur dioxide, sulfates, aldehydes, ketones, fumes and smoke.

11. Toxicological information

Health effects associated with ingredients

Oil: Can cause irritation of skin. Skin contact (prolonged or repeated): Can cause dermatitis.

Untreated or mildly refined mineral oils: IARC/NTP: Listed as "known to be a human carcinogen" by the NTP. Listed as carcinogenic to humans by IARC (Group 1). Additional information: Studies (skin contact) with experimental animals have found skin tumors.

If the product is heated well above ambient temperatures, oil vapor or mist may be generated. Oil vapor or mist: Can cause irritation of respiratory tract. Acute overexposures: Can cause bronchitis, headache, central nervous system effects (nausea, dizziness and loss of coordination) and drowsiness (narcosis).

During use, oils can become contaminated with bacterial growths which can produce endotoxins. Inhalation of oils contaminated with endotoxins can cause hypersensitivity pneumonitis (asthma-like respiratory irritation).

Health effects associated with compounds formed during processing

No new/additional compounds are expected to be formed during processing.

Information on likely routes of exposure

Eye contact	Direct contact: Can cause irritation.
Skin contact	Direct contact: Can cause irritation. Prolonged or repeated skin contact may cause defatting of the skin and dermatitis.
Inhalation	Vapors and mists: Can cause irritation of the respiratory tract. Acute overexposure: Can cause bronchitis and central nervous system effects (nausea, dizziness and loss of coordination).
Ingestion	Can cause irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact: Can cause irritation of the eyes and skin. Vapors and mists: Can cause irritation of the respiratory tract. Acute overexposure: Can cause bronchitis and central nervous system effects (nausea, dizziness and loss of coordination).

Information on toxicological effects

Components	Species	Test Results
Carbonyl esters		
Acute		
Oral		
LD50	Rat	32 g/kg

Acute toxicity Based on available data, the classification criteria are not met.

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Respiratory sensitization Based on available data, the classification criteria are not met.

Skin sensitization Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Pre-existing conditions aggravated by exposure Asthma, chronic lung disease, and skin rashes.

Carcinogenicity May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

US OSHA Hazard Categories (10)

Not regulated.

US OSHA Hazard Categories (9)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Oil mist, mineral (CAS 8012-95-1)	Known To Be Human Carcinogen.
Petroleum hydrocarbon base oil (CAS 64742-52-5)	Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Sodium sulfonates			
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	4.14 - 4.95 mg/l, 48 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Mobility in soil No data available.

Other adverse effects None known.

13. Disposal considerations

Disposal instructions Reuse or recycle material whenever possible. If reuse or recycling is not possible, disposal must be made according to local or governmental regulations.

Waste codes RCRA Status: Used product may be regulated as "used oil" under 40 CFR 279 or state equivalent in the U.S.
RCRA waste codes other than described here may apply depending on use of the product. Status must be determined at the point of waste generation. Refer to 40 CFR 261 or state equivalent in the U.S. Used product may be regulated as "used oil" under 40 CFR 279 or state equivalent in the U.S.

Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Dispose of in accordance with local regulations.

14. Transport information

General Shipping Information

Basic Shipping Information

ID number	-
Proper shipping name	Not regulated
Hazard class	-
Packing group	-

General Shipping Notes

• When "Not regulated", enter the proper freight classification, SDS Number and Product Name onto the shipping paperwork.

Disclaimer

This section provides basic classification information and, where relevant, information with respect to specific modal regulations, environmental hazards and special precautions. Otherwise, it is presumed that the information is not available/not relevant

15. Regulatory information

US federal regulations In reference to Title VI of the Clean Air Act of 1990, this material does not contain nor was it manufactured using ozone-depleting chemicals.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Zinc alkylthiophosphates (CAS Various) Listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US OSHA Hazard Categories (9)

Not regulated.

US OSHA Hazard Categories (10)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Zinc alkylthiophosphates	Various	-

US state regulations

US. California Proposition 65

Not Listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

SDS Status Origination date: April 1, 2021.

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available.

Other information

- Guide to Occupational Exposure Values 2015, Compiled by the American Conference of Governmental Industrial Hygienists (ACGIH).
- NIOSH Pocket Guide to Chemical Hazards, U.S. Department of Health and Human Services, September 2005.
- expub, Expert Publishing, LLC., www.expub.com,
- Ariel, 3E Company, www.3Ecompany.com

Key/Legend:

AICS	Australian Inventory of Chemical Substances
CAS	Chemical Abstract Services
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CPR	Cardio-pulmonary Resuscitation
DOT	Department of Transportation
DSL	Domestic Substances List (Canada)
EC	Effective Concentration
ED	Effective Dose
EINECS	European Inventory of Existing Commercial Chemical Substances
ENCS	Japan - Existing and New Chemical Substances
EWC	European Waste Catalogue
EPA	Environmental Protective Agency
IARC	International Agency for Research on Cancer
LC	Lethal Concentration
LD	Lethal Dose
MAK	Maximum Workplace Concentration (Germany) "maximale Arbeitsplatz-Konzentration"
NDSL	Non-Domestic Substances List (Canada)
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PIN	Product Identification Number
PMCC	Pensky Marten Closed Cup
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
SIMDUT	Système d'Information sur les Matières Dangereuses Utilisées au Travail
STEL	Short Term Exposure Limit
TCLP	Toxic Chemicals Leachate Program
TDG	Transportation of Dangerous Goods
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act TWA Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System
m	meter,
cm	centimeter,
mm	millimeter,
in	inch,
g	gram,
kg	kilogram,
lb	pound,
µg	microgram,
ppm	parts per million,
ft	feet

*** End of SDS ***

USED OIL - MACHINERY LUBRICANTS

KWAR-10

Hazard statement

May cause cancer.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing.

Response

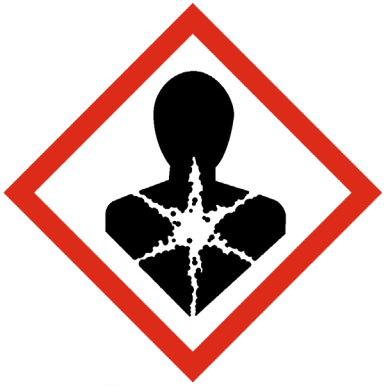
IF exposed or concerned: Get medical advice/attention.

Storage

Store in accordance with local/regional/national/international regulation.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.



Danger

Supplemental information

Direct contact: Can cause irritation of the eyes and skin. Prolonged or repeated skin contact may cause defatting of the skin and dermatitis.
Vapors and mists: Can cause irritation of the respiratory tract. Acute overexposure: Can cause bronchitis and central nervous system effects (nausea, dizziness and loss of coordination).

While not considered "flammable" or "combustible" as defined by regulatory or governmental agencies, the material will burn if ignited.

FIRE FIGHTING MEASURES:
Use water spray to minimize vapors. Use water spray to cool exposed containers. Move undamaged containers away from heat or flame, if possible.
Heavy streams of water, when directed into burning liquid, will cause frothing and spread of burning material.

IN CASE OF SPILL:
Dike ahead of spill. Return to containers using shovels, buckets or brooms. Absorb remainder with absorbent material. Clean surface thoroughly to remove residual contamination. Spills may be slippery and potentially hazardous to personnel or mobile equipment due to reduced traction. Do not allow to enter drains, sewers or watercourses.

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KAISER ALUMINUM WARRICK