



SAFETY DATA SHEET

Print date: 05/21/2013

Version: 4

Revision date: 05/21/2013

1. COMPANY AND PRODUCT IDENTIFICATION

Product name: FERROCOTE ® 61 MAL HCL 1
Product code: 011527-11 03

Supplier:
Quaker Chemical Corporation
Quaker Park One
901 Hector Street
Conshohocken, PA 19428
610-832-4000
E-mail: she@quakerchem.com

Emergency telephone number:
* 24 HOUR TRANSPORTATION:
**CHEMTREC: 1-800-424-9300
+703-527-3887 (Call collect outside of US)
* 24 HOUR EMERGENCY HEALTH & SAFETY:
**QUAKER CHEMICAL CORPORATION: (800) 523-7010 (Within
US only) Outside of US call (703) 527-3887

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

Components	CAS No.	Weight %	OSHA Ceiling Limits	OSHA TWA (final)	ACGIH Ceiling Limits	ACGIH Exposure Limits	Vendor Exposure Limits
Mineral Oil*	8012-95-1	60 - 70%		5mg/m ³		5 mg/m ³	None
Sulfonic acids, petroleum, calcium salts	68783-96-0	5 - 10%					
Sodium sulfonate	68608-26-4	1 - 5%					

* May include one or more of the following CAS #: 64741-88-4, 64741-89-5, 64741-44-2, 64741-96-4, 64741-97-5, 64742-46-7, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-62-7, 64742-65-0, 72623-84-8, 72623-85-9, 72623-86-0, 72623-87-1, 69029-75-0, 64742-01-4, and 64741-95-3

3. HAZARDS IDENTIFICATION

Emergency Overview

Irritating to eyes.
May cause skin irritation and/or dermatitis.
May cause irritation of respiratory tract.
May be harmful if swallowed.

Signal word:	CAUTION
Principle routes of exposure:	Eyes, skin and inhalation.
Eye contact:	Irritating to eyes.
Skin contact:	Repeated or prolonged contact with base product may cause irritation leading to various skin disorders such as dermatitis, oil acne, or folliculitis.
Inhalation:	Inhalation of vapor (generated at high temperatures only) or oil mist from this product may cause mild irritation of the upper respiratory tract.
Ingestion:	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Physico-chemical properties:	No hazards resulting from material as supplied.

4. FIRST AID MEASURES

General advice:	If symptoms persist, call a physician. Wash contaminated clothing before re-use. Wash off with soap and water.
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.
Skin contact:	Wash off with soap and plenty of water. Remove and wash contaminated clothing before re-use.
Ingestion:	If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.
Inhalation:	Move to fresh air in case of accidental inhalation of vapors or decomposition products. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician if necessary.
Note to physician:	Treat symptomatically.
Medical condition aggravated by exposure:	Dermatitis.

5. FIRE-FIGHTING MEASURES

Flash Point (°C): 204	Flash Point (°F): 400	Flash Point Method: COC
Flammable limits in air - lower (%): Not determined	Flammable limits in air - upper (%): Not determined	
Suitable extinguishing media:	Use dry chemical, CO ₂ , water spray or `alcohol` foam.	
Specific hazards:	Do not allow material to contaminate ground water system.	
Unusual hazards:	None known	
Special protective equipment for fire-fighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.	

Specific methods:

Water mist may be used to cool closed containers.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapour/dust.
- Environmental precautions:** Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so.
- Methods for cleaning up:** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Handling

- Technical measures/precautions:** Provide sufficient air exchange and/or exhaust in work rooms.
- Safe handling advice:** In case of insufficient ventilation, wear suitable respiratory equipment. Do not breathe vapors or spray mist. Wear personal protective equipment. Avoid contact with skin and eyes. Wash thoroughly after handling.

Storage

- Technical measures/storage conditions:** Store at room temperature in the original container
- Incompatible products:** Strong oxidizing agents
- Safe storage temperature:** 40 - 100 ° F
4 - 35 ° C
- Shelf life:** 6 months

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components	OSHA Ceiling Limits	OSHA TWA (final)	ACGIH Ceiling Limits	ACGIH Exposure Limits	NIOSH - Pocket Guide	Vendor Exposure Limits
Mineral Oil*	None	5mg/m ³	None	5 mg/m ³	5mg/m ³	None
Sulfonic acids, petroleum, calcium salts	None	None	None	None	None	None
Sodium sulfonate	None	None	None	None	None	None

Engineering measures: Ensure adequate ventilation.

Personal Protective Equipment:

General: Eye Wash and Safety Shower

Respiratory protection:	If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, a NIOSH-certified respirator with organic vapor/P100 filter should be worn.
Eye protection:	Safety glasses with side-shields.
Hand protection:	Neoprene gloves
Skin and body protection:	Long sleeved clothing
Hygiene measures:	Avoid contact with skin, eyes and clothing.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color	Clear to Translucent Dark green
Odor	Mild, Bland
Boiling point/range (°C):	> 149
Boiling point/range (°F):	> 300
Vapour density:	Not determined
Vapor pressure (kPa):	0.22 mm Hg @ 25 C
VOC Content Product (lb/gal)	0.23 lb/gal (27.68 g/L) using ASTM Method D-2369 run at 110 C +/- 5 C.
VOC	SCAQMD VOC: 36.38 g/L
Solubility in water	Insoluble
Evaporation rate:	Not determined
pH:	NA
Flash Point (°C):	204
Flash Point (°F):	400
Decomposition temperature (°C):	Not determined
Auto-ignition temperature (°C):	Not determined
Density @ 15.5 °C (g/cc):	0.953
Bulk density @ 60 ° F (lb/gal):	7.95
Partition coefficient (n-octanol/water):	Not determined
Explosive Limits:	
- upper limit:	No data available
- lower limit:	No data available

10. STABILITY AND REACTIVITY

Stability:

Stable under recommended storage conditions.

Conditions to avoid:

None known

Materials to avoid:

Strong oxidizing agents

Hazardous decomposition products:

Carbon oxides, Sulphur oxides.

Hazardous Polymerization:

Not applicable

11. TOXICOLOGICAL INFORMATION

MINERAL OIL INFORMATION: Any product containing a substance for which OSHA has established a permissible exposure limit (PEL) is considered hazardous. OSHA has established a PEL of 5 mg/m³ for worker exposure to air borne mists of mineral oils. Therefore, the presence of mineral oils brings this product within the provisions of the OSHA Hazard Communication Standard where the PEL reaches or exceeds 5 mg/m³. Health studies have shown that many petroleum hydrocarbons pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

No toxicological information is available on the product. Data obtained on components are summarized below.

Components	IARC Carcinogens	NTP:	OSHA - Select Carcinogens	Acute Toxicity
Mineral Oil*	Not listed as carcinogenic or possibly carcinogenic to humans	Not listed as known or reasonably anticipated to be a human carcinogen	Not listed as a select carcinogen	Mouse Oral LD50 = 22 g/kg
Sulfonic acids, petroleum, calcium salts	Not listed as carcinogenic or possibly carcinogenic to humans	Not listed as known or reasonably anticipated to be a human carcinogen	Not listed as a select carcinogen	Rabbit Dermal LD50 > 20000 mg/kg Rat Oral LD50 > 20000 mg/kg
Sodium sulfonate	Not listed as carcinogenic or possibly carcinogenic to humans	Not listed as known or reasonably anticipated to be a human carcinogen	Not listed as a select carcinogen	No data

12. ECOLOGICAL INFORMATION

Persistence and degradability: No information available

Mobility: No data available

Bioaccumulation: Not available

Ecotoxicity effects: No data available

Aquatic toxicity: Not Determined

Component Information

Components	Ecotoxicity - Fish Species Data:	Ecotoxicity - Freshwater Algae Data:	Ecotoxicity - Water Flea Data:
Mineral Oil*	No data	No data	No data
Sulfonic acids, petroleum, calcium salts	40	>1000mg/L 1001	EC50 (Daphnia magna - 48h) = 1000 mg/L
Sodium sulfonate	No data	No data	No data

13. DISPOSAL CONSIDERATIONS

Waste from residues/unused products:

Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

Contaminated packaging:

Do not re-use empty containers

Methods for cleaning up:

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

14. TRANSPORT INFORMATION

U. S. DEPARTMENT OF TRANSPORTATION:

Proper shipping name: Not Regulated

TDG (CANADA):

Proper shipping name: Not Regulated

IMDG/IMO:

Proper shipping name: Not Regulated

IATA/ICAO:

Proper shipping name: Not Regulated

15. REGULATORY INFORMATION

CANADIAN REGULATIONS:

Canada - WHMIS Classification Information:

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Canadian Product Classification: Not Regulated

Product Classification Graphic(s):

Component Classification Data:

Components	WHMIS hazard class	CEPA Schedule I	Challenge Substances
Mineral Oil*	1% Uncontrolled product according to WHMIS classification criteria.	Not listed	Not listed
Sulfonic acids, petroleum, calcium salts	None	Not listed	Not listed
Sodium sulfonate	None	Not listed	Not listed

U.S. FEDERAL REGULATIONS:

OSHA Hazard Communication Standard: This product is considered to be hazardous under the OSHA Hazard Communication Standard.

CERCLA/SARA Information:

SARA (311, 312) hazard class: This product possesses the following SARA Hazard Categories:

Immediate Health (Acute): Yes
Delayed Health (Chronic): No
Flammability: No
Pressure: No
Reactivity: No

Components	Hazardous Substances and RQs	Extremely Hazardous Substances and TPQs	SARA 313 Emission Reporting
Mineral Oil*	Not listed	Not listed	Not listed
Sulfonic acids, petroleum, calcium salts	Not listed	Not listed	Not listed
Sodium sulfonate	Not listed	Not listed	Not listed

Clean Air and Clean Water Acts:

Components	Hazardous Air Pollutants	CWA - Hazardous Substances	CWA - Toxic Pollutants	CWA - Priority Pollutants
Mineral Oil*	Not listed	Not listed	Not listed	Not listed
Sulfonic acids, petroleum, calcium salts	Not listed	Not listed	Not listed	Not listed
Sodium sulfonate	Not listed	Not listed	Not listed	Not listed

RCRA Status: Not regulated

U.S. STATE REGULATIONS (RTK):

Components	California Proposition 65	PARTK	MI Critical Materials	NJRTK	MARTK
Mineral Oil*	Not Listed	Present	Not Listed	1437	Present
Sulfonic acids, petroleum, calcium salts	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Sodium sulfonate	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

SCAQMD Rule 1144

South Coast Air Quality Management District (SCAQMD) Rule 1144: Rule 1144 applies to all persons who manufacture or who use metalworking fluids and direct-contact lubricants in all or parts of the Southern California Counties: Los Angeles, Orange, Riverside and San Bernadino.

Effective 01/01/2012 The Fluid Categories and VOC Limits are:

Direct Contact Lubricant.....50 g/l (0.42 lb/gal)

Metalworking Fluid*

1. Metal Forming.....75 g/l (0.63 lb/gal)

2. Metal Removal.....75 g/l (0.63 lb/gal)

3. Metal Protecting.....50 g/l (0.42 lb/gal)

See Section 9 for the VOCs for this product.

Product is classified as Metal Protecting

INVENTORY STATUS:

United States TSCA - Sect. 8(b) Inventory: This product complies with TSCA

Canada DSL/NDSL Inventory List Compliance has not been determined

16. OTHER INFORMATION

Sources of key data used to compile the data sheet: Material safety data sheets of the ingredients.

Prepared by: Quaker Chemical Corporation -Safety, Health and Environmental Affairs Group - US

Reason for revision: This data sheet contains changes from the previous version in section(s) 9 and 15.

HMIS classification:

HMIS Use Dilution

NFPA rating:

Health:

1

Health

–

Health:

1

Flammability:

1

Flammability

–

Flammability:

1

Reactivity:

0

Reactivity

–

Reactivity:

0

Personal Protection:

B

Personal Protection

–

Special:

NA

* Indicates possible chronic health effect

Personal protection recommendations should be reviewed by purchasers. Workplace conditions are important factors in specifying adequate protection.

Disclaimer

This product's safety information is provided to assist our customers in assessing compliance with safety/health/environmental regulations. The information contained herein is based on data available to us and is believed to be accurate. However, no warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of this data, the results to be obtained from the use thereof, or the hazards connected with the use of the product. Since the use of this product is within the exclusive control of the user, it is the user's obligation to determine the conditions for safe use of the product. Such conditions should comply with all regulations concerning the product. Quaker Chemical Corporation ("Quaker") assumes no liability for any injury or damage, direct or consequential, resulting from the use of this product unless such injury or damage is attributable to the gross negligence of Quaker.

[End of Safety Data Sheet](#)