

# SAFETY DATA SHEET

## FERROCOTE™ 5856 BF T1

SDS according to the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200), Revision 2012

### Section 1. Identification

**Product code** : 013315-05  
**Product name** : FERROCOTE™ 5856 BF T1  
**Other means of identification** : Not available.

#### Relevant identified uses of the substance or mixture and uses advised against

**Relevant uses** : Corrosion inhibitor  
**Uses advised against** : Any other purpose.

**Supplier** : Quaker Houghton PA, Inc.  
901 E. Hector Street  
Conshohocken, PA 19428 USA  
T: 610-832-4000

Wallover Oil Company  
21845 Drake Road  
Strongsville, OH 44149 USA  
www.wallover.com  
T: (440) 238-9250

ProductStewardship@quakerhoughton.com  
www.quakerhoughton.com

**Emergency telephone number (with hours of operation)** : CHEMTREC US/Canada:1-800-424-9300 or 1-703-527-3887 (24 hours)

### Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 4  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

#### GHS label elements

## Section 2. Hazards identification

<b>Hazard pictograms</b>	:	
<b>Signal word</b>	:	Warning
<b>Hazard statements</b>	:	Combustible liquid. Causes skin irritation. Causes serious eye irritation. May cause damage to organs through prolonged or repeated exposure. (gastrointestinal tract, immune system, liver)
<b><u>Precautionary statements</u></b>		
<b>Prevention</b>	:	Wear protective gloves, protective clothing and eye or face protection. Keep away from flames and hot surfaces. No smoking. Do not breathe vapor. Wash thoroughly after handling.
<b>Response</b>	:	Get medical advice or attention if you feel unwell. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.
<b>Storage</b>	:	Store in a well-ventilated place. Keep cool.
<b>Disposal</b>	:	Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazards not otherwise classified</b>	:	None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	%	CAS number
Distillates (petroleum), hydrotreated light	≥50 - ≤75	64742-47-8
Distillates (petroleum), hydrotreated light naphthenic	≥10 - ≤25	64742-53-6
Mineral oil **	≥10 - ≤25	-
Mineral oil	≤5	-
calcium bis(dinonylnaphthalenesulphonate)	≤3	57855-77-3
hexadecylamine	<3	143-27-1

**\*\* May contain** : 64742-52-5

Product containing mineral oil with less than 3% DMSO extract as measured by IP 346.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

## Section 4. First aid measures

### Description of necessary first aid measures

<b>General advice</b>	:	Get medical attention. If medical advice is needed, have product container or label at hand. Use personal protective equipment as required. Remove contaminated clothing and wash it before reuse. Wash skin surfaces thoroughly after contact.
<b>Inhalation</b>	:	Move affected person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention.

## Section 4. First aid measures

- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and wash it before reuse. Get medical attention if symptoms occur.
- Eye contact** : Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to do. Get medical attention if symptoms occur.
- Ingestion** : Ingestion may cause gastrointestinal irritation and diarrhea. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

### Most important symptoms and effects, both acute and delayed

- Inhalation** : Not expected under normal use.
- Skin contact** : pain or irritation, redness
- Eye contact** : pain or irritation, redness, watering
- Ingestion** : Not expected under normal use.

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Use personal protective equipment as required.

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : Combustible liquid. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

**Hazardous thermal decomposition products** : In a fire, hazardous decomposition products may be produced. carbon oxides (CO, CO<sub>2</sub>) nitrogen oxides sulfur oxides metal oxide/oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Eliminate all ignition sources. No action shall be taken involving any personal risk or without suitable training. Put on appropriate personal protective equipment (see Section 8). Keep unnecessary personnel away. Avoid breathing vapor or mist. Provide adequate ventilation.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". Evacuate area.
- Environmental precautions** : Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Do not allow any potentially contaminated water, including rain water, runoff from fire fighting or spills, to enter any waterway, sewer or drain.

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Absorb with an inert material and place in an appropriate waste disposal container. Use non-sparking tools. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dike large spills and use a non-sparking or explosion-proof means to transfer material to an appropriate container for disposal. To reduce potential for static discharge, use proper bonding and grounding procedures. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Storage temperature** : Store between the following temperatures: 4 to 40°C (39.2 to 104°F).
- Shelf life** : 12 months

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Distillates (petroleum), hydrotreated light	<b>ACGIH TLV (United States, 1/2022). [Kerosene as total hydrocarbon vapor] Absorbed through skin.</b> TWA: 200 mg/m <sup>3</sup> , (as total hydrocarbon vapor) 8 hours.
Distillates (petroleum), hydrotreated light naphthenic	<b>OSHA PEL (United States, 5/2018). [Oil mist, mineral]</b> TWA: 5 mg/m <sup>3</sup> 8 hours. <b>ACGIH TLV (United States, 1/2022). [Mineral Oil, pure, highly and severely refined]</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction
Mineral oil **	<b>NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]</b> TWA: 5 mg/m <sup>3</sup> 10 hours. Form: Mist STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Mist <b>NIOSH REL (United States, 10/2016).</b> TWA: 5 mg/m <sup>3</sup> 10 hours. Form: Mist STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Mist <b>ACGIH TLV (United States).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. STEL: 10 mg/m <sup>3</sup> 15 minutes.
Mineral oil	<b>NIOSH REL (United States, 10/2016).</b> TWA: 5 mg/m <sup>3</sup> 10 hours. Form: Mist STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Mist <b>ACGIH TLV (United States).</b> TWA: 5 mg/m <sup>3</sup> 8 hours.
calcium bis(dinonylnaphthalenesulphonate) hexadecylamine	None. None.

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Keep equipment clean.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

## Section 8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers.
- Other skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : A respirator is not needed under normal and intended conditions of product use. Use appropriate respiratory protection if there is a risk of exceeding any exposure limits.
- Thermal hazards** : Not expected under normal use. Not relevant/applicable due to nature of the product.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Clear. Amber.
- Odor** : Pleasant.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : 148°C (298.4°F)
- Flash point** : Open cup: 80°C (176°F)
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Density** : 0.828 g/cm<sup>3</sup> [15°C (59°F)]
- Solubility** :

Media	Result
water	Not soluble

**Partition coefficient: n-octanol/water** : Not applicable.

**Auto-ignition temperature** : Not available.

**Decomposition temperature** : Not available.

### VOC content

**Product** : 3.48 lbs/gal EPA Method 24

### Particle characteristics

**Median particle size** : Not applicable.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
<b>Incompatible materials</b>	: oxidizing materials
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

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

#### Acute toxicity estimates

Not available.

#### Numerical measures of toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Distillates (petroleum), hydrotreated light naphthenic calcium bis (dinonylnaphthalenesulphonate)	LC50 Inhalation Dusts and mists	Rat	2180 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	>4000 mg/kg	-

**Irritation/Corrosion** : Causes severe eye irritation. Causes skin irritation.

Product/ingredient name	Result	Species	Score	Exposure	Observation
Distillates (petroleum), hydrotreated light naphthenic calcium bis (dinonylnaphthalenesulphonate)	Skin - Moderate irritant	Rabbit	-	24 hours 0.5 MI	-
	Skin - Severe irritant	Rabbit	-	500 mg	-
	Skin - Moderate irritant	Rabbit	-	0.5 MI	-

**Sensitization** : Based on available data, the classification criteria are not met.

**Mutagenicity** : Based on available data, the classification criteria are not met.

**Carcinogenicity** : Based on available data, the classification criteria are not met.

**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)** : May cause damage to organs through prolonged or repeated exposure.

## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
hexadecylamine	Category 2	-	gastrointestinal tract, immune system, liver

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

Name	Result
Distillates (petroleum), hydrotreated light	ASPIRATION HAZARD - Category 1
Distillates (petroleum), hydrotreated light naphthenic	ASPIRATION HAZARD - Category 1
hexadecylamine	ASPIRATION HAZARD - Category 1

**Other information** : None identified.

### Information on the likely routes of exposure

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Causes skin irritation.

**Eye contact** : Causes serious eye irritation.

**Ingestion** : No known significant effects or critical hazards.

### Delayed and immediate effects and also chronic effects from short and long term exposure

May cause damage to organs through prolonged or repeated exposure.

### Symptoms related to the physical, chemical and toxicological characteristics

**Inhalation** : Not expected under normal use.

**Skin contact** : pain or irritation, redness

**Eye contact** : pain or irritation, redness, watering

**Ingestion** : Not expected under normal use.

## Section 12. Ecological information

This material is harmful to aquatic life with long lasting effects.

### Toxicity

Product/ingredient name	Result	Species	Exposure
Distillates (petroleum), hydrotreated light  hexadecylamine	Acute EC50 1000 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours
	Acute EC50 1000 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 2200 µg/l Fresh water	Fish - <i>Lepomis macrochirus</i>	4 days
	Acute EC50 0.0036 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours

### Persistence and degradability

### Bioaccumulative potential

Not available.

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

## Section 12. Ecological information

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Empty containers or liners may retain some product residues. Empty containers retain product residue and can be hazardous. Care should be taken when handling emptied containers that have not been cleaned or rinsed out.

## Section 14. Transport information

	DOT Classification	IMDG	IATA
<b>UN number</b>	NA1993	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	Combustible liquid, n.o.s. (Distillates (petroleum), hydrotreated light naphthenic)	-	-
<b>Transport hazard class(es)</b>	Combustible liquid.	-	-
<b>Packing group</b>	III	-	-
<b>Environmental hazards</b>	No.	No.	No.

### Additional information

**DOT Classification** : Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials.

**Limited quantity** Yes.

**Packaging instruction** Exceptions: 150. Non-bulk: 203. Bulk: 241.

**Quantity limitation** Passenger aircraft/rail: 60 L. Cargo aircraft: 220 L.

**Special provisions** 148, IB3, T1, TP1

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

### U.S. Federal regulations

#### Clean Water Act (CWA) 311

None of the components are listed.

#### Clean Water Act (CWA) 307

None of the components are listed.

#### Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)

None of the components are listed.

### CERCLA: Hazardous substances.

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this regulation, Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

#### SARA 302/304

None of the components are listed.

#### SARA 311/312

**Classification** : See GHS Classification in section 2 for hazard class information

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

### State regulations

**Massachusetts** : The following components are listed: MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED LIGHT NAPHTHENIC

**New York** : None of the components are listed.

**New Jersey** : None of the components are listed.

**Pennsylvania** : None of the components are listed.

#### **California**

##### California Prop. 65

This product does not contain any Proposition 65 chemicals.

##### SCAQMD Rule 1144

This product has not been tested for VOC content by the ASTM E-1868-10 (2021) method and is not approved for sale or distribution in the SCAQM District of California if the product is used as a metal forming, metal removal, metal treating, metal protection fluid

### International regulations

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

## Section 15. Regulatory information

### Inventory list

- United States** : All components are active or exempted.  
**Canada** : All components are listed or exempted.

## Section 16. Other information

**Date of issue/Date of revision** : 7/6/2023

**Version** : 8

Quaker Houghton Product Stewardship

**Key to abbreviations** : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
N/A = Not available  
SGG = Segregation Group  
UN = United Nations  
VOC = Volatile Organic Compound

**References** : **Safety data sheets of raw materials, global regulatory body information, scientific literature, and testing data .**

🔹 Indicates information that has changed from previously issued version.

### Notice to reader

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 correct to the best of our knowledge, information and belief at the date of its publication. 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. The company referenced in this Safety Data Sheet 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 such company.