



Material Safety Data Sheet

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1. COMPANY AND PRODUCT IDENTIFICATION

Product name: QUAKERAL® 381
Product code: 014413-02

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	40 - 50%		5mg/m ³		5 mg/m ³	None
Isopropanolamine	78-96-6	5 - 10%		None		None	3 ppm
Alcohols, C16-18 and C18-unsatd., ethoxylated	68920-66-1	1 - 5%		None		None	
Amines, N-tallow alkyltrimethylenedi-, ethoxylated	61790-85-0	1 - 5%		None		None	
Substituted Amine	Proprietary	1 - 5%		None		None	
Triethanolamine	102-71-6	1 - 5%		None		5 mg/m ³	

* May include one or more of the following CAS #: 64741-88-4, 64741-89-5, 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 and 64742-65-0, 72623-84-8, 72623-85-9, 72623-86-0, 72623-87-1.

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:	WARNING
Principle routes of exposure:	Eyes, skin and inhalation.
Eye contact:	Irritating to eyes.
Skin contact:	Moderately irritating to the skin. Repeated or prolonged contact with base product may cause irritation leading to various skin disorders such as dermatitis, oil acne, or folliculitis. Components of the product may be absorbed into the body through the skin.
Inhalation:	May cause irritation of the mucous membranes. 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 diarrhoea.
Physico-chemical properties:	No hazards resulting from material as supplied.

4. FIRST AID MEASURES

General advice:	Wash off with soap and water. If symptoms persist, call a physician.
Eye contact:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin contact:	Wash off immediately with soap and plenty of water. If a person feels unwell or symptoms of skin irritation appear, consult a physician..
Ingestion:	If swallowed, seek medical advice immediately and show this container or label. Never give anything by mouth to an unconscious person.
Inhalation:	Move to fresh air in case of accidental inhalation of vapors. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.
Notes to physician:	Treat symptomatically.
Medical condition aggravated by exposure:	Dermatitis and asthma.

5. FIRE-FIGHTING MEASURES

Flash point (°C): NA	Flash point (°F): NA	Flash Point Method: None to boiling.
Flammable limits in air - upper (%): Not determined	Flammable limits in air - lower (%): Not determined	
Suitable extinguishing media:	Use dry chemical, CO ₂ , water spray or 'alcohol' foam.	
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:

Evacuate personnel to safe areas. 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.

Methods for cleaning up:

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

7. HANDLING AND STORAGE

Handling**Technical measures/precautions:**

Provide sufficient air exchange and/or exhaust in work rooms.

Safe handling advice:

Avoid contact with skin and eyes. In case of insufficient ventilation, wear suitable respiratory equipment. Wear personal protective equipment. 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

Shelf life:

6 months

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components	ACGIH Ceiling Limits	ACGIH Exposure Limits:	OSHA Ceiling Limits	OSHA TWA (final):	NIOSH - Pocket Guide - TWAs:	Vendor Exposure Limits:
Mineral Oil*		5 mg/m ³		5mg/m ³	5mg/m ³	None
Isopropanolamine		None		None	None	3 ppm
Alcohols, C16-18 and C18-unsatd., ethoxylated		None		None	None	None
Amines, N-tallow alkyltrimethylenedi-, ethoxylated		None		None	None	None
Substituted Amine		None		None	None	None
Triethanolamine		5 mg/m ³		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/MSHA certified respirator with organic vapor/HEPA filters should be worn.
Hand protection:	Neoprene gloves
Skin and body protection:	Long sleeved clothing
Eye protection:	Safety glasses with side-shields.
Hygiene measures:	Avoid contact with skin, eyes and clothing.



9. PHYSICAL AND CHEMICAL PROPERTIES:

Physical state:	Liquid
Color:	Amber Clear to Hazy
Odour:	Amine-like
Boiling point/boiling range (°C):	>100
Boiling point/range (°F):	>212
Vapour pressure:	Not determined
Vapour density:	Not determined
VOC Content Product (g/L)	1.22 lb/gal (EPA Method 24)
Solubility:	Emulsifiable
Evaporation rate:	Not determined
pH:	10.78
Flash point (°C):	NA
Flash point (°F):	NA
Decomposition temperature:	Not determined
Auto-ignition temperature:	Not determined
Density @ 15.5 ° C (g/cc) :	0.94
Bulk density @ 60 ° F (lb/gal):	7.84
Partition coefficient (n-octanol/water, log Pow):	Not determined
Explosive properties:	
- 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 acids and oxidising agents

Hazardous decomposition products:

Carbon oxides, Nitrogen oxides (nox)

Polymerization:

Not applicable

11. TOXICOLOGICAL INFORMATION

WARNING! Do not add nitrites to this metalworking fluid under penalty of federal law. Addition of nitrites leads to formation of a substance known to cause cancer. This product is designed to be used without nitrites.

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	NTP:	IARC:	OSHA - Select Carcinogens	NIOSH - Selected LD50s and LC50s
Mineral Oil*	This product does not contain any material shown to be a carcinogen by the National Toxicology Program (NTP).	This product does not contain any material shown to be a carcinogen by the International Agency for Research on Cancer (IARC).	This product does not contain any material shown to be a carcinogen by OSHA.	22g/kgOral LD50Mouse
Isopropanolamine	This product does not contain any material shown to be a carcinogen by the National Toxicology Program (NTP).	This product does not contain any material shown to be a carcinogen by the International Agency for Research on Cancer (IARC).	This product does not contain any material shown to be a carcinogen by OSHA.	1560mg/kgDermal LD50Rabbit 1715mg/kgOral LD50Rat
Alcohols, C16-18 and C18-unsatd., ethoxylated	This product does not contain any material shown to be a carcinogen by the National Toxicology Program (NTP).	This product does not contain any material shown to be a carcinogen by the International Agency for Research on Cancer (IARC).	This product does not contain any material shown to be a carcinogen by OSHA.	
Amines, N-tallow alkyltrimethylenedi-, ethoxylated	This product does not contain any material shown to be a carcinogen by the National Toxicology Program (NTP).	This product does not contain any material shown to be a carcinogen by the International Agency for Research on Cancer (IARC).	This product does not contain any material shown to be a carcinogen by OSHA.	
Substituted Amine	This product does not contain any material shown to be a carcinogen by the National Toxicology Program (NTP).	This product does not contain any material shown to be a carcinogen by the International Agency for Research on Cancer (IARC).	This product does not contain any material shown to be a carcinogen by OSHA.	373mg/kgOral LD50Rat 500mg/kgOral LD50Mouse 200-316mg/kgDermal LD50Rabbit
Triethanolamine	Evidence of Carcinogenicity	This product does not contain any material shown to be a carcinogen by the International Agency for Research on Cancer (IARC).	This product does not contain any material shown to be a carcinogen by OSHA.	4190mg/kgOral LD50Rat 2000mg/kgDermal LD50Rabbit

12. ECOLOGICAL INFORMATION

Persistence and degradability: No information available

Mobility: No data available

Bioaccumulation: No data available

Ecotoxicity effects: No data available

Aquatic toxicity: Not Determined

Isopropanolamine

Ecotoxicity - Fish Species Data LC50 (Leuciscus idus - 96h) = 220 mg/L
LC50 (Pimephales promelas - 96h) = 2520 mg/L

Substituted Amine

Ecotoxicity - Fish Species Data LC50 (Brachydanio rerio - 96h) = 62 mg/L

Triethanolamine

Ecotoxicity - Fish Species Data LC50 (Lepomis macrochirus - 96h) 450 - 1000 mg/L
LC50 (Pimephales promelas - 96h) = 11800 mg/L

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: Take up mechanically and collect in suitable container 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

CLASSIFICATION AND LABELING

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

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.

Product Classification: Class D2B - Poisonous and Infectious Material: Other toxic effects - includes irritants, skin sensitizers and/ or chronic health effects

Product Classification Graphic(s):



Component Classification Data:

Mineral Oil* - 8012-95-1

WHMIS hazard class: Listed
Uncontrolled product according to WHMIS classification criteria

Isopropanolamine - 78-96-6

WHMIS hazard class: Listed

Substituted Amine -

WHMIS hazard class: Listed
D1B, E

Triethanolamine - 102-71-6

WHMIS hazard class: Listed
D2B

**Canadian National Pollution
Inventory Data:**

Substituted Amine -

**Canada - National Pollution
Release Inventory** Listed

Triethanolamine - 102-71-6

**Canada - National Pollution
Release Inventory** Listed

U.S. REGULATIONS:

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

RCRA Status Not Regulated

STATE REGULATIONS (RTK):

California Proposition 65 Status: No components are listed

Mineral Oil* - 8012-95-1

MARTK: Listed

PARTK: Listed

Isopropanolamine - 78-96-6

MARTK: Listed

PARTK:

Listed

Substituted Amine -

MARTK:

Listed

NJRTK:

Listed

PARTK:

Listed

Triethanolamine - 102-71-6

MARTK:

Listed

PARTK:

Listed

INVENTORY STATUS:

United States TSCA - Sect. 8(b) Inventory:

This product complies with TSCA

Canada DSL Inventory List -

This product complies with DSL

EC EINECS/ELINCS/NLP 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: New modification

HMIS classification:

Health:

2

Flammability:

0

Reactivity:

0

Personal Protection:

G

NFPA rating:

Health:

2

Flammability:

0

Reactivity:

0

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