

SAFETY DATA SHEET

METALINA™ D 400

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

Section 1. Identification

Product code : 202266-01
Product name : METALINA™ D 400
Other means of identification : Not available.

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

Relevant uses : Metalworking fluid
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 : SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : Causes skin irritation.
Causes serious eye irritation.
May cause damage to organs through prolonged or repeated exposure.

Section 2. Hazards identification

Precautionary statements

Prevention	: Wear eye or face protection. Do not breathe vapor. Wash thoroughly after handling.
Response	: 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 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.
Storage	: Not applicable.
Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
2,2',2"-nitrilotriethanol	≤10	102-71-6
glycerol	≤10	56-81-5
2,2' -oxybisethanol	≤3	111-46-6
Amine neutralized organic acid	≤3	-
2-aminoethanol	<3	141-43-5

The exact percentage (concentration) of composition has been withheld as a trade secret

Section 4. First aid measures

Description of necessary first aid measures

General advice	: 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.
Inhalation	: 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.
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.

Section 4. First aid measures

- 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 an extinguishing agent suitable for the surrounding fire. Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : In a fire, hazardous decomposition products may be produced. carbon oxides (CO, CO₂) nitrogen 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.

- 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** : 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. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. For large spills, dike spilled material or otherwise contain it to ensure runoff does not reach a waterway. Absorb with an inert material and place in an appropriate waste disposal container. 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.
- Storage temperature** : Not available.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
2,2',2"-nitrilotriethanol	ACGIH TLV (United States, 3/2019). TWA: 5 mg/m ³ 8 hours.
glycerol	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust
2,2' -oxybisethanol	OSHA PEL (United States, 5/2018). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust
Amine neutralized organic acid	AIHA WEEL (United States, 7/2018). TWA: 10 mg/m ³ 8 hours.
2-aminoethanol	None. ACGIH TLV (United States, 3/2019). TWA: 3 ppm 8 hours. TWA: 7.5 mg/m ³ 8 hours. STEL: 6 ppm 15 minutes. STEL: 15 mg/m ³ 15 minutes. OSHA PEL 1989 (United States, 3/1989). TWA: 3 ppm 8 hours. TWA: 8 mg/m ³ 8 hours. STEL: 6 ppm 15 minutes. STEL: 15 mg/m ³ 15 minutes. NIOSH REL (United States, 10/2016). TWA: 3 ppm 10 hours. TWA: 8 mg/m ³ 10 hours. STEL: 6 ppm 15 minutes. STEL: 15 mg/m ³ 15 minutes. OSHA PEL (United States, 5/2018). TWA: 3 ppm 8 hours. TWA: 6 mg/m ³ 8 hours.

- 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.

Section 8. Exposure controls/personal protection

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.
- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- 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** : Light, Yellow.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 9.8
- Melting point** : Not available.
- Boiling point** : >100°C (>212°F)
- Flash point** : Not available.
- Evaporation rate** : <1 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : 1.09
- Solubility** : Easily soluble in the following materials: cold water.
- Solubility in water** : Not available.

Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

VOC content

Product : 80 g/l ASTM E1868-10

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific measures identified.

Incompatible materials : Strong oxidizing materials. strong acids. strong alkalis

Hazardous decomposition products : 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

Route	ATE value
Oral	18422.31 mg/kg
Dermal	68599.77 mg/kg
Inhalation (dusts and mists)	93.55 mg/l

Numerical measures of toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2,2',2"-nitrioltriethanol	LD50 Oral	Rat	7.39 g/kg	-
	LD50 Oral	Rat	12600 mg/kg	-
glycerol	LD50 Oral	Rabbit	11890 mg/kg	-
	LD50 Dermal	Rabbit	12000 mg/kg	-
2,2' -oxybisethanol	LD50 Oral	Rat	12000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	1.5 mg/l	4 hours
2-aminoethanol	LD50 Oral	Rat	1720 mg/kg	-

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

Product/ingredient name	Result	Species	Score	Exposure	Observation
2,2',2"-nitrioltriethanol	Eyes - Mild irritant	Rabbit	-	10 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Skin - Mild irritant	Human	-	72 hours 15 mg l	-
	Skin - Severe irritant	Mouse	-	50 %	-
	Skin - Mild irritant	Rabbit	-	24 hours 560 mg	-
glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

Section 11. Toxicological information

2,2' -oxybisethanol	Eyes - Mild irritant Skin - Mild irritant	Rabbit Human	- -	mg 50 mg 72 hours 112	- -
2-aminoethanol	Skin - Mild irritant Eyes - Severe irritant Skin - Moderate irritant	Rabbit Rabbit Rabbit	- - -	mg l 500 mg 250 ug 505 mg	- - -

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.

Product/ingredient name	OSHA	IARC	NTP
2,2',2"-nitrioltriethanol	-	3	-

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.

Name	Category	Route of exposure	Target organs
2-aminoethanol	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure) : May cause damage to organs through prolonged or repeated exposure.

Name	Category	Route of exposure	Target organs
2,2' -oxybisethanol	Category 2	-	-

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

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

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
2,2',2''-nitrioltriethanol	Acute EC50 609.98 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
2,2' -oxybisethanol	Acute LC50 11800000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 16000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
2-aminoethanol	Acute EC50 1000 mg/l	Algae - Skeletonema costatum	72 hours
	Acute LC50 75200000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
2-aminoethanol	Acute EC50 2.8 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute LC50 >100000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 170 mg/l Fresh water	Fish - Carassius auratus	96 hours

Persistence and degradability

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2,2',2''-nitrioltriethanol	-1	<3.9	low
glycerol	-1.76	-	low
2,2' -oxybisethanol	-1.98	100	low
2-aminoethanol	-1.31	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

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
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.

Section 14. Transport information

Additional information

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)

Ingredient name	CAS number
2,2'-iminodiethanol	111-42-2

CERCLA: Hazardous substances.

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Reportable quantity : 1,4-dioxane: 100 lbs. (45.4 kg); ethylene oxide: 10 lbs. (4.54 kg); propylene oxide: 100 lbs. (45.4 kg); bis(2-chloroethyl) ether: 10 lbs. (4.54 kg); ethanediol: 5000 lbs. (2270 kg); 2,2'-iminodiethanol: 100 lbs. (45.4 kg);

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: TRIETHANOLAMINE; GLYCERINE MIST; ETHANOLAMINE; 2-AMINOETHANOL
- New York** : The following components are listed: Diethanolamine
- New Jersey** : The following components are listed: TRIETHANOLAMINE; ETHANOL, 2,2',2"-NITRILOTRIS-; DIETHANOLAMINE; ETHANOL, 2,2'-IMINOBIS-; GLYCERIN; 1,2,3-PROPANETRIOL; ETHANOLAMINE; ETHANOL, 2-AMINO-
- Pennsylvania** : The following components are listed: ETHANOL, 2,2',2"-NITRILOTRIS-; ETHANOL, 2,2'-IMINOBIS-; 1,2,3-PROPANETRIOL; ETHANOL, 2,2'-OXYBIS-; ETHANOL, 2-AMINO-
- California**
California Prop. 65

Section 15. Regulatory information

Ingredient name	Concentration	
Diethanolamine	<1	Cancer
Ethylene Glycol	Trace	Developmental
1,4-Dioxane	Trace	Cancer
Bis(2-chloroethyl)ether	Trace	Cancer
Ethylene oxide	Trace	Cancer, Developmental, Reproductive female, Reproductive male
Propylene oxide	Trace	Cancer

SCAQMD Rule 1144

The sale or distribution in the SCAQM District of California for metal working fluids or direct-contact lubricants is allowed if EITHER the VOC of the product itself OR the VOC of the diluted product at the point of use is less than the following limits: (1) 75 g VOC/L for metal forming, metal removal, metal treating; (2) 50 g VOC/L for metal protection, direct-contact lubricant. The VOC of this product as sold is:

Product as-supplied : 80 g/l ASTM E1868-10

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.

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 : 2/15/2021

Version : 1

Key to abbreviations : Quaker Houghton Product Stewardship
 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

Section 16. Other information

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.