

SAFETY DATA SHEET

1. Identification

Product identifier	FRIGOMET 81 N
Other means of identification	
Article-No.	40923010
Recommended use	Water-miscible metal working fluid. Industrial use.
Recommended restrictions	None known.
Manufacturer/Supplier	Oemeta, Inc. 5655 West 610 South Salt Lake City, UT 84104 Phone: (+1) 801 953-0134 Fax: (+1) 801 953-0446
Further information obtainable from	Oemeta Service Phone: (+49) 4122-924-132 Fax: (+49) 4122-924-157
Emergency Telephone Number	Toll Free Access within USA, Canada, Mexico: 1.866.519.4752 (24h) Outside of the US please call: (+1) 760 476 3962 (24h) Please provide the following code: 333910

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Skin corrosion/irritation Category 2 Serious eye damage/eye irritation Category 2A Reproductive toxicity (the unborn child) Category 2
OSHA defined hazards	Not classified.
Label elements	



Signal word	Warning
Hazard statement	Causes skin irritation. Causes serious eye irritation. Suspected of damaging the unborn child.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not classified as hazardous according to GHS when diluted to 20% or less.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Ethanol, 2,2',2''-nitrilotris-		102-71-6	1 - < 5
Ethanol, 2-amino-		141-43-5	1 - < 3
Sodium 4(or 5)-methyl-1H-benzotriazole		64665-57-2	0.1 - < 1
Other components below reportable levels			90 - < 100

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up

This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

Environmental precautions

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Recommended storage temperature: between 10 and 30 °C.

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

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

Components	Type	Value
Ethanol, 2-amino- (CAS 141-43-5)	PEL	6 mg/m ³
		3 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Ethanol, 2,2',2''-nitrilotris- (CAS 102-71-6)	TWA	5 mg/m ³
Ethanol, 2-amino- (CAS 141-43-5)	STEL	6 ppm
	TWA	3 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Ethanol, 2-amino- (CAS 141-43-5)	STEL	15 mg/m ³
		6 ppm
	TWA	8 mg/m ³
		3 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

Eye/face protection

Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Recommendation: 706 Lapren (KCL, Germany) with a layer thickness of at least 0.6 mm. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Where breathable aerosols/dust are formed, use suitable combination filter for gases/vapours of organic compounds and toxic particles (e.g. type A2-P2; EN 14387).
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Physical state	Liquid.
Color	Dark yellow.
Odor	Mild.
Odor threshold	Not available.
pH	8.5 - 9.5 DIN 51369
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility (water)	Soluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1070.00 - 1100.00 kg/m ³ DIN 51757
Explosive properties	Not explosive.
Kinematic viscosity	11 - 19 mm ² /s DIN EN 16896 (104 °F (40 °C))
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Contact with incompatible materials.

Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Based on available data, the classification criteria are not met.

Symptoms related to the physical, chemical and toxicological characteristics Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity Not known.

Components	Species	Test Results
Ethanol, 2,2',2''-nitrilotris- (CAS 102-71-6)		
Acute		
Dermal		
<i>Liquid</i>		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
<i>Vapor</i>		
LC0	Rat	> 1.8 mg/l, 8 hours
Oral		
<i>Liquid</i>		
LD50	Rat	6400 mg/kg
Ethanol, 2-amino- (CAS 141-43-5)		
Acute		
Dermal		
<i>Liquid</i>		
LD50	Rabbit	2504 mg/kg
Inhalation		
<i>Mist</i>		
LC50	Rat	1487 mg/m ³ , 4 hours
Oral		
<i>Liquid</i>		
LD50	Rat	1515 mg/kg
Sodium 4(or 5)-methyl-1H-benzotriazole (CAS 64665-57-2)		
Acute		
Dermal		
<i>Liquid</i>		
LD50	Rabbit	> 2000
Oral		
<i>Liquid</i>		
LD50	Rat	930 mg/kg

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Ethanol, 2,2',2''-nitrilotris- (CAS 102-71-6) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	Suspected of damaging the unborn child.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful. May be harmful if absorbed through skin.

12. Ecological information

Ecotoxicity	Not available.
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13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are identified as active on the U.S. EPA TSCA Inventory List.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

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

Issue date 04-23-2015
Revision date 08-03-2022
Version # 4.1
HMIS® ratings Health: 2*
Flammability: 0
Physical hazard: 0
NFPA ratings Health: 2
Flammability: 0
Instability: 0

NFPA ratings



Ratings of aqueous dilution HMIS® ratings when diluted to 20% or less: Health: 0, Flammability: 0, Physical Hazard: 0.
NFPA ratings when diluted to 20% or less: Health: 0, Flammability: 0, Instability: 0.

List of abbreviations AICIS: Australian Inventory of Industrial Chemicals.

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available. The editor cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

Revision information

Product and Company Identification: Alternate Trade Names
Hazard(s) identification: Supplemental information
Composition / Information on Ingredients: Disclosure Overrides
Exposure controls/personal protection: Respiratory protection
Physical & Chemical Properties: Multiple Properties
Physical and chemical properties: Odor
Regulatory Information: United States
Other information, including date of preparation or last revision: Surplus

Approved.

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