

SAFETY DATA SHEET

Section 1 - Identification

Product Name: TWIN-GRIND 110 Product Code: 13U012

Company Information:

Twin Specialties Corp.
15 East Ridge Pike
Conshohocken, PA 19428

Phone: 610-834-7900
Fax: 610-834-7903
Emergency: 800-424-9300

Product Use: Water-extendable metalworking fluid
Not recommended for: No restrictions known

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Section 2 - Hazard(s) Identification

This Safety Data Sheet conforms with the OSHA Hazard Communication Standard (29 CFR 1910.1200) as revised in 2012.

Classifications:

Skin corrosive	2	Reversible adverse effects in dermal tissue, Draize score: $\geq 2.3 < 4.0$ or persistent inflammation
Eye corrosive	2A	Eye irritant: Subcategory 2A, Reversible in 21 days
Skin sensitizer	1	Skin sensitizer

Signal Word: Warning

Hazard Symbols



Hazard Statements:

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation

Precautionary Statements:

P261	Avoid breathing mists and vapors
P264	Wash hands and other contacted areas thoroughly after handling
P272	Contaminated work clothing should not be allowed out of the workplace
P280	Wear chemical/oil resistant gloves, and eye/face protection
P362	Take off contaminated clothing and wash before reuse
P302+P352	IF ON SKIN: Wash with soap and water
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P333+P313	If skin irritation or a rash occurs: Get medical advice/attention
P337+P313	If eye irritation persists: Get medical advice/attention
P501	Dispose of contents/container in accordance with governmental regulations

Hazards Not Otherwise Classified: None known

Section 3 - Composition / Information on Ingredients

Chemical Name	CAS Number	Percent
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Fatty acid salts		1.0 - 5.0%
Monoethanolamine	141-43-5	1.0 - 5.0%
2,2',2''-(hexahydro-1,3,5-triyl)triethanol	4719-04-4	1.0 - 5.0%

Section 4 - First Aid Measures

Inhalation: Overexposure by inhalation is unlikely, but should it occur, immediately remove from exposure and seek medical attention. If breathing is irregular or has stopped, start resuscitation; administer oxygen, if available. If overexposed to mist, remove from further exposure until excessive mist condition subsides. If respiratory discomfort persists, seek medical attention.

Eye Contact: Remove contact lenses if present. Immediately flush eyes with water for at least 15 minutes. If irritation occurs, obtain medical assistance.

Skin Contact: Remove any contaminated clothing and thoroughly wash contact areas with soap and water. Launder clothing be

Ingestion: Do not induce vomiting. If vomiting occurs, have victim lean forward to reduce risk of aspiration. Obtain emergency medical attention.

Most important symptoms/effects, acute and delayed: Prolonged or repeated skin contact may cause drying, cracking, or irritation.

Notes to Physician: Provide general supportive measures and treat symptomatically. Symptoms may be delayed.

Section 5 - Fire Fighting Measures

Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide to extinguish flames. Do not use straight streams of water.

Specific Hazards Arising from the Chemical: This product will not burn (no flash point). However, it will burn if fire and heat evaporate the water content, leaving the non-volatile components behind. Toxic fumes, gases, or vapors may then evolve.

Hazardous Combustion Products: Smoke, fumes, carbon monoxide, carbon dioxide, and oxides of nitrogen after the water evaporates.

Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard equipment and in enclosed spaces, self-contained breathing apparatus. Use water spray to cool fire-exposed surfaces and to protect personnel.

Fire-Fighting Equipment: Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, and face mask.

Section 6 - Accidental Release Measures

Personal Precautions: Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing/equipment (Section 8). In case of spill, beware of slippery floors and surfaces.

Environmental Precautions: Contain spills with sand, earth, or any suitable adsorbent material. Prevent spillage from entering soil, waterways, drains and sewers. Notify relevant authorities in accordance with all applicable regulations.

Small Spill: Stop leak if you can do so without risk. Absorb with earth, sand, or other non-combustible material and transfer to containers for later disposal.

Large Spills: Stop leak if you can do so without risk. Dike the spilled material where possible. Remove with vacuum trucks or by pumping into containers. Absorb with inert materials such as dry clay, sand, or diatomaceous earth. Dispose of waste in accordance with all applicable laws.

Section 7 - Handling and Storage

Precautions for Safe Handling: Avoid prolonged or repeated contact with skin. Prevent small spills and leakage to avoid slip hazard.

Conditions for Safe Storage: Store in a cool, dry place. Keep away from incompatible materials and high temperature conditions. Do not store in open or unlabelled containers. Bring product to room temperature before use.

Section 8 - Exposure Control / Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Fatty acid salts	None established	None established	
Monoethanolamine 141-43-5	TWA = 3 ppm STEL = 6 ppm	TWA = 3 ppm STEL = 6 ppm	
2,2',2''-(hexahydro-1,3,5-triyl) triethanol 4719-04-4	None established	None established	

Engineering Controls: Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal Protective Equipment

Eye/Face Protection: Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.

Skin Protection: Chemical/oil resistant gloves are recommended. Neoprene, nitrile, polyvinyl alcohol(PVA), and Viton are recommended. Normal work clothing (long sleeved shirts and long pants) is recommended. Use a chemical-resistant apron to avoid contaminating regular clothing.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate.

General Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

Section 9 - Physical and Chemical Properties

<p>Appearance: Clear yellow liquid</p> <p>Vapor Pressure: <.1 mm Hg (20 C)</p> <p>Vapor Density: >2</p> <p>Density (lb/gal): 8.51</p> <p>Melting point: Not applicable</p> <p>Solubility in water: Miscible</p> <p>Flash point (minimum): None</p> <p>Flammability: Not applicable</p> <p>Partition coefficient: No data available</p> <p>Decomposition temperature: Not available</p> <p>Grams VOC less water: Nil</p>	<p>Odor: Mild</p> <p>Odor threshold: Not available</p> <p>pH (5% in water): 9 - 10</p> <p>Specific Gravity (@60 F): 1.021</p> <p>Freezing point: Not applicable</p> <p>Boiling point (initial): 100°C</p> <p>Evaporation rate: Not available</p> <p>Explosive Limits: Not applicable</p> <p>Autoignition temperature: Not available</p> <p>Viscosity @ 40C: Not applicable</p> <p>Pour Point: Not applicable</p>
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Section 10 - Stability and Reactivity

Reactivity: Non-reactive under normal conditions.

Chemical Stability: Stable under normal temperature conditions.

Conditions to Avoid: None known.

Incompatible Materials: Strong oxidizing agents, strong acids, and magnesium.

Possibility of Hazardous Reactions: Will not occur under normal conditions of use.

Hazardous Decomposition Products: None known.

Section 11 - Toxicological Information

Routes / Signs / Symptoms of Exposure:

Ingestion: Not likely to occur. No harmful effects expected in amounts likely to be ingested by accident. Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

Inhalation: Inhalation of mist from coolant dilutions or vapors formed during heating may irritate the respiratory system and provoke coughing. A sore throat may result.

Skin Contact: Prolonged or repeated contact with the concentrate or the use dilution may defat and dry the skin, leading to irritation and dermatitis. Symptoms may include redness, drying and cracking of the skin. Permanent damage is unlikely.

Eye Contact: Direct contact of the concentrate or the use dilution may cause temporary irritation. Permanent damage is unlikely.

Information on Toxicological Effects:

All information below is based on component data. This product has not been tested as a whole.

Acute toxicity: Based on available data, this product is judged to have a low level of acute toxicity by oral, dermal or inhalation routes of exposure. However, this product may cause eye irritation.

Chronic Toxicity: Prolonged or repeated skin and eye contact may produce irritation. Symptoms may include redness, drying, and cracking of the skin. However, based on available data, this product is not "corrosive" by OSHA criteria.

Skin corrosion/irritation: Prolonged contact may cause temporary irritation.

Serious eye damage/irritation: Direct contact may cause irritation.

Respiratory sensitization: Not classified

Skin sensitization: May cause an allergic skin reaction.

Germ cell mutagenicity: Not classified

Reproductive toxicity: Not classified

Specific target organ toxicity - single exposure: Not classified

- repeated exposure: Not classified

Aspiration hazard: Not classified

Carcinogenicity: The components of this product are not classified as a human carcinogen according to ACGIH, IARC, NTP, and OSHA.

Section 12 - Ecological Information

Ecotoxicity: This product is not expected to be harmful to aquatic organisms.

Persistence/Degradability: This product is expected to be inherently biodegradable.

Bioaccumulation: No data available.

Soil Mobility: No data available.

Section 13 - Disposal Considerations

Waste Disposal: Reclaim material if possible. Waste must be handled in accordance with all federal, state and local regulations. Do not flush product to a drain and/or a storm sewer. Contract to an authorized disposal service.

Contaminated Packaging: Empty containers may contain residue and can be dangerous. Empty containers should be completely drained and safely stored until appropriately reconditioned or disposed. They should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. **DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.**

Section 14 - Transport Information

This material is classified for transport as follows:

<u>Agency</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT	Not regulated as a hazardous material			
IATA	Not regulated as a dangerous good			
IMDG	Not regulated as a dangerous good			

Section 15 - Regulatory Information

All components of this product are listed in the TSCA inventory.

SARA 311/312 Hazard Categories:

Acute Health Hazard: Yes
 Chronic Health Hazard: No
 Fire Hazard: No
 Sudden Release of Pressure Hazard: No
 Reactive Hazard: No

U. S. Federal Regulations: This material contains the following chemicals that are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4):

141-43-5 Monoethanolamine 1 to 5 % CERCLA

U. S. State Regulations: This material contains the following chemicals that are listed under various state Right to Know hazardous substance lists:

141-43-5 Monoethanolamine PA, NJ

Section 16 - Other Information

Hazardous Material Information System (HMIS)

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	C

HMIS & NFPA Hazard Rating

Legend

* = Chronic Health Hazard

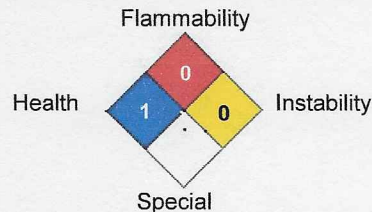
0 = INSIGNIFICANT

1 = SLIGHT

2 = MODERATE

3 = HIGH

National Fire Protection Association (NFPA)



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Reviewer Revision 1

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