

TETRA Technologies, Inc.

MATERIAL SAFETY DATA SHEET



CORSAF™ SF

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1. PRODUCT AND COMPANY IDENTIFICATION

TETRA Technologies, Inc. 25025 I-45 North The Woodlands, TX 77380	CHEMTREC (24-Hr Emergency Response):	(800) 424-9300
	Poison Control:	(800) 222-1222
	Non emergency Customer Service:	(281) 367-1983
Substance:	CORSAF™ SF	
Synonyms:	None	
Chemical Family	Aqueous solution of amines in methanol and glycol	
MSDS Creation Date:	23 May 02	
MSDS Revision Date:	23 Jul 04	

2. COMPOSITION, INFORMATION ON INGREDIENTS

CAS Number	Wt %	Component Name	RTECS Number
Proprietary	25-50%	Misc. Amines/Quaternary Ammonium Salts	Proprietary
67-56-1	1-5%	Methanol	PC1400000
107-41-5	1-5%	Hexylene Glycol	SA0810000

The composition information on this product is proprietary. This product or one of its components is hazardous as defined in 29 CFR 1910.1200. In the event of a medical emergency, spill or fire, compositional information will be revealed to a physician, nurse, or responding emergency personnel.

3. HAZARDS IDENTIFICATION

NFPA Ratings (Scale 0-4):	Health – 3 Fire – 1 Reactivity – 0
Emergency Overview:	Black liquid with an amine odor. Causes burns to skin and eyes. Do not get in eyes, on skin, or on clothing. Wear goggles, face shield and protective gloves. May cause an allergic reaction. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Do not take internally.
Potential Health Effects:	
Inhalation:	Can cause severe respiratory irritation.
Skin Contact:	Corrosive to the skin, possibly resulting in third-degree burns, depending on the length of exposure and on the first-aid action given. Can be harmful if absorbed. Can cause allergic contact dermatitis in susceptible individuals.
Eye Contact:	Corrosive to the eyes with possible permanent damage depending on the length of exposure and on the first-aid action given.
Ingestion:	Can be harmful.
Carcinogen Status:	OSHA – No NTP – No IARC – No

4. FIRST AID MEASURES

Eye Contact:	Flush eyes immediately with large amounts of water. Get medical attention immediately.
Skin Contact:	Remove contaminated clothing and shoes immediately. Wash affected area with large amounts of water. Get medical attention immediately.
Inhalation:	Remove to fresh air immediately. Get prompt medical attention immediately.
Ingestion:	Do not induce vomiting. Give water. Get medical attention immediately.
Notes to Physician:	Control symptoms and clinical condition based on individual reactions.

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5. FIRE FIGHTING MEASURES

Flash Point:	> 200°F (93°C)
Extinguishing Media:	Dry chemical, carbon dioxide, water spray or regular foam. For larger fires, use water spray or fog.
Fire Fighting:	Use water to cool containers exposed to fire. Avoid breathing vapors. Dike area to prevent runoff and contamination of water sources. Do not breath smoke or fumes. Wear suitable protective equipment.
Fire and Explosion Hazard:	Not Available
Products of Combustion:	In the event of combustion CO, CO ₂ , NO _x may be formed.

6. ACCIDENTAL RELEASE MEASURES

Evacuation and Safety:	Wear appropriate protective gear for the situation. See personal protection information in Section 8. Keep unnecessary people away. Isolate hazard area and deny entry.
Containment of Spill:	Occupational Spill: Do not touch spilled material. Stop leak if you can without risk.
Cleanup and Disposal:	For small spills, take up with sand or other absorbent material and place in containers for disposal. For larger spills, dike far ahead of spill for later disposal.

7. HANDLING AND STORAGE

Handling:	Observe all federal, state, and local regulations when handling this product.
Storage:	Store in tightly closed container. Keep container closed when not in use. Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:	Provide local exhaust ventilation system. Where there is possibility of exposure, eye wash fountain and safety shower should be provided within the immediate work area for emergency use.
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Exposure Limits:

COMPONENT	ACGIH-TWA	ACGIH-STEL	OSHA-TWA	OSHA-STEL
Methanol	200 ppm	250 ppm	200 ppm	250 ppm
Hexylene Glycol (ceiling)	25 ppm		25 ppm	121 mg/m ³

Eyes:	Wear safety glasses with splash shields or safety goggles/shield.
Body:	Wear appropriate protective (impervious) clothing and equipment.
Respiratory:	The respirator selected must be based on contamination levels found in the work place and specific to the job assignment. Do not exceed the working limits of the respirator. Respirators must also be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA). Use either a chemical cartridge respirator with a dust/mist pre-filter or supplied air. For firefighting and other immediately dangerous to life or health conditions: Any self-contained breathing apparatus that has a full face piece and is operated in a pressure-demand or other positive-pressure mode. Any supplied-air respirator that has a full face piece and is operated

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	in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.
Hands and Feet:	Wear appropriate protective gloves and boots.

9. PHYSICAL AND CHEMICAL PROPERTIES

Description:	Black liquid with an amine odor
Odor:	Amine odor
Boiling Point:	212°F (100°C) @ 760 mm Hg
Melting Point:	Not applicable
Molecular Weight:	Not available
Specific Gravity (H ₂ O=1):	1.08 @ 60°F (16°C)
pH:	9.2 (neat)
Water Solubility:	Not available
Vapor Density (Air=1):	Not available
Vapor Pressure:	Not available
Pour Point	-20°F (-29°C)
Viscosity:	7.2 cst @ 100°F (38°C)

10. STABILITY AND REACTIVITY

Stability and Reactivity:	Not available
Incompatibilities:	N-nitrosamines, many of which are cancer-causing agents to laboratory animals, may be formed when certain amines are mixed with nitrous acid, organic or inorganic nitrites or atmospheres with high nitrous oxide concentrations.
Hazardous Decomposition:	In the event of combustion CO, CO ₂ , NO _x , may be formed.
Polymerization:	Not available
Conditions to Avoid:	Avoid contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions and the release of toxic fumes.

11. TOXICOLOGICAL INFORMATION

Toxicity Data:	No data available
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12. ECOLOGICAL INFORMATION

Aquatic Data: Results based on the product. 96 hr static acute LC50 to Mysid Shrimp = greater than 10,000 mg/L

13. DISPOSAL INFORMATION

Observe all federal, state and local regulations when disposing of this substance.

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14. DEPARTMENT OF TRANSPORTATION (DOT) TRANSPORT INFORMATION

Shipping Name:	Not regulated
ID Number:	Not applicable
Hazard Class or Division:	Not applicable
Packing Group:	Not applicable
Labeling Requirements:	Not applicable
Packing Authorizations:	
Exceptions:	Not applicable
Non-bulk Packing:	Not applicable
Bulk Packing:	Not applicable
Quantity Limitations:	
Passenger Aircraft or Railcar:	Not applicable
Cargo Aircraft Only:	Not applicable
Vessel Stowage Requirements:	Not applicable
Emergency Guide Number:	Not applicable

15. REGULATORY INFORMATION

Workplace Classification:	
SARA Title III:	Sections 311/312: Acute hazard, chronic hazard
TSCA Status:	Yes
CERCLA:	No
Clean Air Act:	Yes (methanol)
OSHA Process Safety:	Not determined
California Proposition 65:	No
WHMIS Classification:	Not determined

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16. OTHER INFORMATION

Individuals handling this product should be informed of the recommended safety precautions and should have access to this information.

This information relates to the specific product designated and may not be valid for such product used in combination with any other materials or in any other processes. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability, or completeness. It is the users' responsibility to satisfy themselves as to the suitability and completeness of such information for their own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.

TETRA Technologies, Inc. reserves the right to refuse shipment of this product to any consumer who fails to demonstrate the ability to consistently handle and use it safely and in compliance with all applicable laws, rules and regulations. Such demonstration may require on-site inspection of any or all storage, processing, packaging and other handling systems that come in contact with it.

Customers are responsible for compliance with local, state and federal regulations that may be pertinent in the storage, application and disposal of this product.