

MATERIAL SAFETY DATA SHEET

STARCOOL 171

METALWORKING FLUID CONCENTRATE

Section 1. Chemical Product and Company Identification	
Product Name: StarCool 171	Generic Name: Metalworking Fluid
Manufacturer: MILACRON MARKETING COMPANY LLC 3000 Disney Street Cincinnati, Ohio 45209	Emergency Telephone Number: 1-800-424-9300 (CHEMTREC) Information Telephone Number: 513-458-8199 Date Prepared: 11/29/2010 MSDS No.: 904
Material Uses: Coolant and lubricant for metalworking processes	

Section 2. Hazardous Ingredient/Identity Information		
HAZARDOUS INGREDIENTS	CAS #	RANGE, %
Triethanolamine	102-71-6	10 - 20
Ethanolamine	141-43-5	1 - 5
Alkanolamine	proprietary	1 - 5
Dicarboxylic acid mixture	72162-23-3	1 - 5
Nonanoic acid	112-05-0	1 - 5
Isononanoic acid	3302-10-1	1 - 5
Hexahydro-1,3,5-tris(2-hydroxyethyl)-triazine	4719-04-4	1 - 5

Section 3. Hazard Identity		
Product is a primary eye irritant. Product is alkaline, and corrosive to aluminum. Highway spills could result in slippery conditions. No other significant health effects are associated with this product.		
	Concentrated Product	Diluted Product in Use
Inhalation	Not applicable	Upper respiratory irritation may occur on extended exposure to mists
Eye Contact	Product is a primary eye irritant	Will cause a stinging sensation in the eye
Skin Contact	Product is not a primary skin irritant	Not irritating to the skin when used as recommended
Ingestion	Not orally toxic	Swallowing small amounts is not expected to cause injury
Exposure to in-use mist can be minimized by proper ventilation, and mist collectors.		
Mild skin irritation may be experienced when the mix concentration is too strong.		
Contact MILACRON MARKETING COMPANY LLC at 513-458-8199 for specific recommendations.		
Carcinogen Listings	NTP: No	IARC: No
	OSHA: No	
Signs and symptoms of exposure: Eye injury may occur from contact with concentrated product. Skin irritation can occur from improper handling or use of concentrate or mix.		
Medical conditions generally aggravated by exposure: Existing skin irritation may worsen.		

Section 4. Emergency and First Aid Measures

Eyes: In case of eye contact with the concentrated product or mix, flush immediately with running water for 15 minutes. Get prompt medical attention.

Skin contact: In case of skin contact with concentrated product, wash with water as soon as possible. Mix is not irritating to the skin when used as recommended.

Ingestion: Do not induce vomiting if concentrate or mix is swallowed. Dilute by drinking water or milk, and immediately contact a physician. Swallowing small amounts of mix is not expected to cause injury.

Inhalation: Not expected to be a primary route of exposure for the concentrate. Inhalation of mist can occur. OSHA has set a 15 mg/M³ PEL as a nuisance level for airborne particulates. NIOSH has set a 0.5 mg/M³ REL for metalworking fluid mist.

Section 5. Fire and Explosion Data

Flash Point (COC), °F: NA

Flammable Limits:

Lower Explosive Limit: NA

Upper Explosive Limit: NA

Extinguishing Media: NA

Special Fire Fighting Procedure: None

Unusual Fire and Explosion Hazards: None

Hazardous Combustion Products: Smoke, fumes, and oxides of carbon and nitrogen

NFPA Ratings	Health	Flammability	Reactivity
	1	0	0

Section 6. Accidental Release Measures

Contain the spill, and collect on absorbent material. Discard according to Federal, state and local regulations.

Section 7. Handling and Storage

Use only as recommended by MILACRON MARKETING COMPANY LLC. Avoid all contact of concentrate with eyes or skin. Do not swallow. If frozen, product separates. Thaw completely at room temperature and stir thoroughly prior to use.

Other Precautions - Contains amines. Do not add sodium nitrite or other nitrosating agents to the concentrate or mix due to the potential for nitrosamine formation.

Section 8. Exposure Control/Personal Protection

Respiratory Protection: Under conditions which generate mists, observe all OSHA, ACGIH and NIOSH exposure guidelines. If an exposure guideline is exceeded, use a NIOSH-approved respirator as recommended by a qualified industrial hygienist.

Personal Protection: Safety glasses, work apparel, and impervious gloves. Wear goggles when handling product concentrate.

Engineering Controls: Normal shop ventilation is adequate for most applications. However, when high mist levels are generated, NIOSH recommends mist reduction through improved ventilation, process changes, and the use of mist collectors.

Section 9. Physical/Chemical Characteristics

Boiling Point	212 °F	Evaporation Rate	Like water when diluted
Specific Gravity	1.07	Solubility in Water	100% miscible
Vapor Pressure (mm Hg)	ND	Appearance/Odor	Clear/Chemical
Melting Point	ND	pH (concentrate)	9.8

Vapor Density	ND	pH (5.0% mix)	8.9 – 9.3
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Section 10. Stability/Reactivity	
Stability:	Stable
Conditions to Avoid:	NA
Materials to Avoid:	Avoid contact with strong acids or oxidizers.
Hazardous Polymerization:	Will not occur.
Combustion Products:	Smoke, fumes, and oxides of carbon and nitrogen

Section 11. Disposal Considerations	
For Used Mix:	Disposal procedures must comply with Federal, state, county, and local regulations.
For Unused Concentrate:	Concentrate is not a hazardous waste as defined by 40 CFR 261.

Section 12. Transport Information		
	Hazardous Materials (49 CFR 172.101)	Hazard Class (49 CFR 172.101)
By Land	Not a hazardous material	NA
BY Air or Vessel (49 CFR 175-176)	Corrosive Liquid, n.o.s. (contains ethanolamines) UN1760	Corrosive

Section 13. Regulatory Information					
EXPOSURE GUIDELINES					
REGULATED MATERIAL	NIOSH REL	OSHA PEL	OSHA STEL	ACGIH TLV	ACGIH STEL
Metalworking Fluid Mist	0.5 mg/M ³				
Triethanolamine				5 mg/M ³	
Ethanolamine	3 ppm	3 ppm		3 ppm	6 ppm
EPCRA (SARA) TITLE III Extremely Hazardous Substances (302): NA					
Hazardous Substances (311, 312): Product concentrate is a hazardous substance as defined under the OSHA Hazard Communication Standard and may be reportable under the provisions of SARA Sections 311 and 312.					
HAZARD CATEGORIES					
Acute Health: Yes			Fire: No		
Chronic Health: No			Reactive: No		
RCRA: Product concentrate is not a hazardous waste as defined by 40 CFR 261.					
TSCA: All of the ingredients in this product are on the TSCA inventory.					
State Right-to-Know: Many states have enacted Right-To-Know laws that require information beyond that mandated by federal laws. The information in this sheet may not meet every state's requirements.					
Toxic Substances (313): Components present in the product at levels that could require reporting.					
CHEMICAL NAME	CAS #	MAX. %	COMMENTS		

NOTE: The opinions expressed herein are those of MILACRON MARKETING COMPANY LLC and of their suppliers. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the conditions of use of this product are beyond the control of MILACRON MARKETING COMPANY LLC, no guarantee or representation, expressed or implied, is made. It is the user's obligation to determine the conditions of safe use of this product.