



Technology ahead of its time™

MSDS: 0015145  
Date: 11/18/2003

## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** AEROFROTH® 70 Plus Frother  
**Synonyms:** None  
**Chemical Family:** Mixture  
**Molecular Formula:** Mixture  
**Molecular Weight:** Mixture

CYTEC INDUSTRIES INC., FIVE GARRET MOUNTAIN PLAZA, WEST PATERSON, NEW JERSEY 07424, USA  
For Product Information call 1-800/652-6013. Outside the USA and Canada call 1-973/357-3193.  
EMERGENCY PHONE: For emergency involving spill, leak, fire, exposure or accident call CHEMTREC: 1-800/424-9300. Outside the USA and Canada call 1-703/527-3887.

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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

#### OSHA REGULATED COMPONENTS

Component / CAS No.	% (w/w)	OSHA (PEL):	ACGIH (TLV)	Carcinogen
Aliphatic alcohol mixture -	7 - 13	Not Established	Not Established	-
Complex oxygenate/hydrocarbon mixture -	15 - 40	Not Established	Not Established	-
Methyl isobutyl carbinol 108-11-2	30 - 60	25 ppm (skin)	25 ppm (skin) 40 ppm STEL	-

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

##### APPEARANCE AND ODOR:

Color: dark amber  
Appearance: liquid  
Odor: mixed alcohols and glycol esters

##### STATEMENTS OF HAZARD:

DANGER! CAUSES EYE BURNS AND SKIN IRRITATION  
COMBUSTIBLE LIQUID AND VAPOR

#### POTENTIAL HEALTH EFFECTS

**EFFECTS OF OVEREXPOSURE:**

The estimated acute oral (rat) LD50, acute dermal (rabbit) LD50 and 4-hour inhalation (rat) LC50 values for this material are >2500 mg/kg, >2000 mg/kg and >5.0 mg/L, respectively.

Direct contact with this material may cause severe eye and moderate skin irritation. Overexposure to vapors may cause irritation of the respiratory tract and eyes and may cause central nervous system effects. Refer to Section 11 for toxicology information on the regulated components of this product.

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## 4. FIRST AID MEASURES

**Ingestion:**

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

**Skin Contact:**

Remove contaminated clothing and shoes without delay. Wash immediately with plenty of water. Do not reuse contaminated clothing without laundering. Get medical attention if pain or irritation persists after washing or if signs and symptoms of overexposure appear.

**Eye Contact:**

Rinse immediately with plenty of water for at least 15 minutes. Obtain medical attention immediately.

**Inhalation:**

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

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## 5. FIRE-FIGHTING MEASURES

**Extinguishing Media:**

Use water spray, alcohol foam, carbon dioxide or dry chemical to extinguish fires. Water stream may be ineffective.

**Protective Equipment:**

Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See Section 8 (Exposure Controls/Personal Protection).

**Special Hazards:**

Keep containers cool by spraying with water if exposed to fire.

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## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:**

Where exposure level is known, wear approved respirator suitable for level of exposure. Where exposure level is not known, wear approved, positive pressure, self-contained respirator. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

**Methods For Cleaning Up:**

Remove sources of ignition. Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

**Environmental Precautions:**

Use appropriate containment to avoid environmental contamination.

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## 7. HANDLING AND STORAGE

### HANDLING

**Precautionary Measures:** Do not get in eyes. Avoid contact with skin and clothing. Keep away from heat and flame. Wash thoroughly after handling.

**Handling Statements:** None

### STORAGE

Areas containing this material should have fire safe practices and electrical equipment in accordance with applicable regulations and/or guidelines. Standards are primarily based on the material's flashpoint, but may also take into account properties such as miscibility with water or toxicity. All local and national regulations should be followed. In the Americas, National Fire Protection Association (NFPA) 30: Flammable and Combustible Liquids Code, is a widely used standard. NFPA 30 establishes storage conditions for the following classes of materials: Class I Flammable Liquids, Flashpoint <37.8 °C. Class II Combustible Liquids, 37.8 °C < Flashpoint <60 °C. Class IIIa Combustible Liquids, 60 °C < Flashpoint < 93 °C. Class IIIb Combustible Liquids, Flashpoint > 93 °C.

**Storage Temperature:** Room temperature

**Reason:** Integrity

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering Measures:

Utilize a closed system process where feasible. Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

### Respiratory Protection:

Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure.

### Eye Protection:

Prevent eye and skin contact. Provide eye wash fountain and safety shower in close proximity to points of potential exposure. Wear eye/face protection such as chemical splash proof goggles or face shield.

### Skin Protection:

Prevent contamination of skin or clothing when removing protective equipment. Wear impermeable gloves and suitable protective clothing.

### Additional Advice:

Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Color:</b>	dark amber
<b>Appearance:</b>	liquid
<b>Odor:</b>	mixed alcohols and glycol esters
<b>Boiling Point:</b>	Not available
<b>Melting Point:</b>	Not available
<b>Vapor Pressure:</b>	Not available
<b>Specific Gravity:</b>	0.854@ 25 C
<b>Vapor Density:</b>	Not available
<b>Percent Volatile (By Wt.):</b>	Not available
<b>pH:</b>	Not available
<b>Saturation In Air (% By Vol.):</b>	Not available

<b>Evaporation Rate:</b>	Not available
<b>Solubility In Water:</b>	Miscible
<b>Volatile Organic Content:</b>	Not available
<b>Flash Point:</b>	43.9 °C 111 °F Pensky-Martens Closed Cup
<b>Flammable Limits (% By Vol):</b>	Not available
<b>Autoignition Temperature:</b>	Not available
<b>Decomposition Temperature:</b>	Not available
<b>Partition coefficient (n-octanol/water):</b>	Not applicable
<b>Odor Threshold:</b>	See Section 2 for exposure limits.

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## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable
<b>Conditions To Avoid:</b>	None known
<b>Polymerization:</b>	Will not occur
<b>Materials To Avoid:</b>	Strong oxidizing agents, strong acids and alkalies. Avoid contact with oxidizers, heat, sparks and open flames.
<b>Hazardous Decomposition Products:</b>	carbon dioxide carbon monoxide oxides of nitrogen oxides of sulfur (includes sulfur di and tri oxides)

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## 11. TOXICOLOGICAL INFORMATION

Toxicological information for the product is found under Section 3. HAZARDS IDENTIFICATION. Toxicological information on the regulated components of this product is as follows:

Direct contact with aliphatic alcohol mixture may cause moderate to severe eye and skin irritation. Overexposure to vapors may produce irritation of the nose, throat, and upper respiratory tract and may cause central nervous system effects.

Complex oxygenate/hydrocarbon mixture's toxicological properties have not been fully investigated. The acute oral (rat) LD50 and dermal (rabbit) LD50 values are estimated to both be > 2000 mg/kg. The acute 4-hour inhalation (rat) LC50 is estimated to be >3.2 mg/L. Direct contact may cause moderate eye and skin irritation. Overexposure to vapor may cause irritation of the respiratory tract and eyes and may cause central nervous system effects.

Methyl isobutyl carbinol has acute oral (rat) and dermal (rabbit) LD50 values of 2.6 g/kg and 3.6 g/kg, respectively. This material has an acute 4-hour inhalation LC50 (rat) >2000 ppm (8.34 mg/L). Acute overexposure to methyl isobutyl carbinol vapor causes mucous membrane irritation and severe eye irritation. Direct contact with this material causes mild skin irritation.

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## 12. ECOLOGICAL INFORMATION

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The ecological properties of this material have not been fully investigated. It is presumed to be dangerous to the environment, very toxic to aquatic organisms, and may cause long-term adverse effects in the environment.

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## 13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the Cytec product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA `listed hazardous waste` or has any of the four RCRA `hazardous waste characteristics`. Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA `listed hazardous waste`; information contained in Section 15 of this MSDS is not intended to indicate if the product is a `listed hazardous waste`. RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 9 of this MSDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 2 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. Cytec encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. Cytec recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. Cytec has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

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## 14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

### US DOT

Proper Shipping Name: Flammable liquid, n.o.s.

Hazard Class: 3

Packing Group: III

UN/ID Number: UN1993

Transport Label Required: Flammable Liquid  
Marine Pollutant

Technical Name (N.O.S.): Contains methyl isobutyl carbinol and complex oxygenate/hydrocarbon mixture

Hazardous Substances:

Not applicable

### TRANSPORT CANADA

Proper Shipping Name: Flammable liquid, n.o.s.

Hazard Class: 3

Packing Group: III

UN Number: 1993

Transport Label Required: Flammable Liquid  
Marine Pollutant

Technical Name (N.O.S.): Contains methyl isobutyl carbinol and complex oxygenate/hydrocarbon mixture

### ICAO / IATA

Proper Shipping Name: Flammable liquid, n.o.s.  
Hazard Class: 3  
Packing Group: III  
UN Number: 1993  
Transport Label Required: Flammable Liquid  
Packing Instructions/Maximum Net Quantity Per Package:  
Passenger Aircraft: 309; 60 L  
Cargo Aircraft: 310; 220 L  
Technical Name (N.O.S.): Contains methyl isobutyl carbinol and complex oxygenate/hydrocarbon mixture

**IMO**

Proper Shipping Name: Flammable liquid, n.o.s.  
Hazard Class: 3  
UN Number: 1993  
Packing Group: III  
Transport Label Required: Flammable Liquid  
Marine Pollutant  
Technical Name (N.O.S.): Contains methyl isobutyl carbinol and complex oxygenate/hydrocarbon mixture

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## 15. REGULATORY INFORMATION

### INVENTORY INFORMATION

**United States (USA):** All components of this product are included on the TSCA Inventory in compliance with the Toxic Substances Control Act, 15 U. S. C. 2601 et. seq.

**Canada:** This product contains components not on the Domestic Substances List. These components are on the Non-Domestic Substances List.

**European Union (EU):** Product is not included in the European Inventory of Existing Chemical Substances (EINECS). The product can be supplied in quantities less than 10 kg/year according to Council Directive 67/548/EEC and its amendments.

**Australia:** All components of this product have NOT yet been included in the Australian Inventory of Chemical Substances (AICS) or assessed by Worksafe Australia.

**China:** All components of this product are NOT included on the Chinese inventory.

**Japan:** All components of this product are NOT included on the Japanese (ENCS) inventory.

**Korea:** All components of this product are NOT included on the Korean (ECL) inventory.

**Philippines:** All components of this product are NOT included on the Philippine (PICCS) inventory.

### OTHER ENVIRONMENTAL INFORMATION

The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

This product does not contain any components regulated under these sections of the EPA

### PRODUCT HAZARD CLASSIFICATION UNDER SECTION 311 OF SARA

- Acute
- Fire

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## 16. OTHER INFORMATION

**NFPA Hazard Rating (National Fire Protection Association)**

Health: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

Fire: 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

Reactivity: 0 - Materials that in themselves are normally stable, even under fire exposure conditions.

**Reasons For Issue:** New Product

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