

MATERIAL SAFETY 3M  
 DATA SHEET 3M Center  
 St. Paul, Minnesota  
 55144-1000  
 1-800-364-3577 or (651) 737-6501 (24 hours)

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DIVISION: 3M SPECIALTY MATERIALS  
 TRADE NAME:

FX-14 FLUORAD Brand Fluorochemical Methacrylate  
 ID NUMBER/U.P.C. :  
 98-0211-1526-0 00-51135-02097-5 98-0211-1527-8 00-51135-02098-2  
 98-0211-1528-6 00-51135-02099-9  
 ISSUED: December 17, 1999  
 SUPERSEDES: March 17, 1999  
 DOCUMENT: 10-3953-6

1. INGREDIENT	C.A.S. NO.	PERCENT
[2-(N-ETHYLPERFLUOROALKYLSULFONAMIDO)ETHYL METHACRYLATE].....	376-14-7	83 - 85
[2-(N-ETHYLPERFLUOROALKYLSULFONAMIDO)ETHYL METHACRYLATE].....	67939-33-7	4.0 - 6.0
[2-(N-ETHYLPERFLUOROALKYLSULFONAMIDO)ETHYL METHACRYLATE].....	67906-70-1	3.0 - 5.0
[2-(N-ETHYLPERFLUOROALKYLSULFONAMIDO)ETHYL METHACRYLATE].....	67939-36-0	2.0 - 4.0
N-ETHYLPERFLUOROCTANESULFONAMIDOETHYL ALCOHOL.....	1691-99-2	1.0 - 3.0
[2-(N-ETHYLPERFLUOROALKYLSULFONAMIDO)ETHYL METHACRYLATE].....	67906-73-4	1.0 - 3.0
RESIDUAL ORGANIC FLUOROchemicalS.....	Mixture	0 - 1

The components of this product are in compliance with the chemical notification requirements of TSCA. All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

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2. PHYSICAL DATA  
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BOILING POINT:..... ca. 150 C  
                                  1 mmHg  
VAPOR PRESSURE:..... < 10 mmHg  
                                  Calc. @ 20 C  
VAPOR DENSITY:..... > 1.0 Air=1  
                                  Calx. @ 20 C  
EVAPORATION RATE:..... < 1.0 BuOAc=1  
SOLUBILITY IN WATER:..... neglig.  
SPECIFIC GRAVITY:..... ca. 1.5 Water=1  
PERCENT VOLATILE:..... 0 %  
pH:..... N/A  
VISCOSITY:..... N/D  
MELTING POINT:..... N/D

APPEARANCE AND ODOR:  
  Amber paste.

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3. FIRE AND EXPLOSION HAZARD DATA  
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FLASH POINT:..... > 100 C Setaflash  
FLAMMABLE LIMITS - LEL:..... N/A  
FLAMMABLE LIMITS - UEL:..... N/A  
AUTOIGNITION TEMPERATURE:..... N/A

EXTINGUISHING MEDIA:  
  Water, Carbon dioxide, Dry chemical, Foam

SPECIAL FIRE FIGHTING PROCEDURES:  
  Wear full protective clothing, including helmet, self-contained,  
  positive pressure or pressure demand breathing apparatus, bunker coat  
  and pants, bands around arms, waist and legs, face mask, and  
  protective covering for exposed areas of the head.

UNUSUAL FIRE AND EXPLOSION HAZARDS:  
  See Hazardous Decomposition section for products of combustion.

NFPA HAZARD CODES:  HEALTH: 1  FIRE: 0  REACTIVITY: 0  
                          UNUSUAL REACTION HAZARD: none

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4. REACTIVITY DATA  
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STABILITY: Stable

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4. REACTIVITY DATA (continued)  
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INCOMPATIBILITY - MATERIALS/CONDITIONS TO AVOID:

Not applicable.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon Monoxide and Carbon Dioxide, Oxides of Nitrogen, Oxides of Sulfur, Hydrogen Fluoride, Toxic Vapors, Gases or Particulates.

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5. ENVIRONMENTAL INFORMATION  
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SPILL RESPONSE:

Observe precautions from other sections. Collect spilled material. Clean up residue with an appropriate organic solvent. Read and follow safety precautions on the solvent label and MSDS. Place in a closed container.

RECOMMENDED DISPOSAL:

Incinerate in an industrial or commercial facility in the presence of a combustible material. Combustion products will include HF.

ENVIRONMENTAL DATA:

COD=.08 g/g; BOD5=800 mg/kg; BOD20=.01 g/g; 96-Hr. LC50, Fathead minnow >1000 mg/l; No acute inhibition of microbial oxygen uptake >1000mg/l.

REGULATORY INFORMATION:

Volatile Organic Compounds: N/A.  
VOC Less H2O & Exempt Solvents: N/A.

Since regulations vary, consult applicable regulations or authorities before disposal. U.S. EPA Hazardous Waste Number = None (Not U.S. EPA Hazardous).

This product is in compliance with the chemical registration requirements of TSCA and EINECS.

OTHER ENVIRONMENTAL INFORMATION:

This product contains one or more organic fluorochemicals that have the potential to resist degradation and persist in the environment.

EPCRA HAZARD CLASS:

FIRE HAZARD: No PRESSURE: No REACTIVITY: No ACUTE: Yes CHRONIC: No

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6. SUGGESTED FIRST AID  
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EYE CONTACT:

Immediately flush eyes with large amounts of water. Get immediate medical attention.

SKIN CONTACT:

Flush skin with large amounts of water. If irritation persists, get medical attention.

INHALATION:

If signs/symptoms occur, remove person to fresh air. If signs/symptoms continue, call a physician.

IF SWALLOWED:

Drink two glasses of water. Call a physician.

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7. PRECAUTIONARY INFORMATION  
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EYE PROTECTION:

Avoid eye contact with vapor, spray, or mist. Wear vented goggles.

SKIN PROTECTION:

Avoid skin contact. Wear appropriate gloves when handling this material. A pair of gloves made from the following material(s) are recommended: butyl rubber.

RECOMMENDED VENTILATION:

If exhaust ventilation is not adequate, use appropriate respiratory protection. Provide ventilation adequate to control vapor concentrations below recommended exposure limits and/or control spray or mist.

RESPIRATORY PROTECTION:

Avoid breathing of airborne material. Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half-mask organic vapor respirator with dust/mist prefilter.

PREVENTION OF ACCIDENTAL INGESTION:

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Wash hands after handling and before eating.

RECOMMENDED STORAGE:

Store away from areas where product may come into contact with food or pharmaceuticals. Do not store containers on their sides. Store away from heat. Keep container closed when not in use.

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7. PRECAUTIONARY INFORMATION (continued)  
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FIRE AND EXPLOSION AVOIDANCE:  
Nonflammable.

OTHER PRECAUTIONARY INFORMATION:

No smoking: Smoking while using this product can result in contamination of the tobacco and/or smoke and lead to the formation of the hazardous decomposition products mentioned in the Reactivity Data section of this MSDS.

HMIS HAZARD RATINGS: HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0  
PERSONAL PROTECTION: X (See precautions, section 7.)

EXPOSURE LIMITS

INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN*
[2-(N-ETHYLPERFLUOROALKYLSULFONAMIDO) L METHACRYLATE].....	NONE	NONE	NONE	NONE	
[2-(N-ETHYLPERFLUOROALKYLSULFONAMIDO) L METHACRYLATE].....	NONE	NONE	NONE	NONE	
[2-(N-ETHYLPERFLUOROALKYLSULFONAMIDO) L METHACRYLATE].....	NONE	NONE	NONE	NONE	
[2-(N-ETHYLPERFLUOROALKYLSULFONAMIDO) L METHACRYLATE].....	NONE	NONE	NONE	NONE	
N-ETHYLPERFLUOROCTANESULFONAMIDOETHY L ALCOHOL.....	0.1	MG/M3	TWA	3M	Y
[2-(N-ETHYLPERFLUOROALKYLSULFONAMIDO) L METHACRYLATE].....	NONE	NONE	NONE	NONE	
RESIDUAL ORGANIC FLUOROCHEMICALS.....	0.1	MG/M3	TWA	3M	Y

\* SKIN NOTATION: Listed substances indicated with 'Y' under SKIN refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

- 3M: 3M Recommended Exposure Guidelines
- NONE: None Established

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8. HEALTH HAZARD DATA  
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EYE CONTACT:

Mild Eye Irritation: signs/symptoms can include redness, swelling, pain, and tearing.

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8. HEALTH HAZARD DATA (continued)  
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SKIN CONTACT:

Not expected to cause an allergic skin reaction.

Mild Skin Irritation: signs/symptoms can include redness, swelling, and itching.

May be absorbed through the skin and produce effects similiar to those caused by inhalation and/or ingestion.

INHALATION:

Prolonged or repeated exposure may cause:

Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

IF SWALLOWED:

Animal studies conducted on organic fluorochemicals which are present in this product indicate effects including liver disturbances, weight loss, loss of appetite, lethargy, and neurological, pancreatic, adrenal and hematologic effects. There are no known human health effects from anticipated exposure to these organic fluorochemicals when used as intended and instructed.

Irritation of Gastrointestinal Tissues: signs/symptoms can include pain, vomiting, abdominal tenderness, nausea, blood in vomitus, and blood in feces.

OTHER HEALTH HAZARD INFORMATION:

A Product Toxicity Summary Sheet is available.

This product contains one or more organic fluorochemicals that have the potential to be absorbed and remain in the body for long periods of time, either as the parent molecule or as metabolites, and may accumulate with repeated exposures. There are no known human health effects from anticipated exposure to these organic fluorochemicals when used as intended and instructed.

The presence of organic fluorochemicals in the blood of the general population and subpopulations, such as workers, has been published dating back to the 1970's. 3M's epidemiological study of its own workers indicates no adverse effects.

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SECTION CHANGE DATES  
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PRECAUTIONARY INFO. SECTION CHANGED SINCE March 17, 1999 ISSUE

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