



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M 1400 Series EMS Ball Markers
MANUFACTURER: 3M
DIVISION: Telecom Access Division

ADDRESS: 3M Center
 St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 05/20/2004
Supersedes Date: 08/27/2003

Document Group: 09-2904-2

Product Use:

Intended Use: Ball Markers are used to indicate location of buried cables, pipes and equipment.
Specific Use: Flotation solution allows antenna to keep correct orientation in ball. Propylene glycol lowers freezing point.

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
WATER	7732-18-5	70 - 80
PROPYLENE GLYCOL	57-55-6	20 - 30

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Liquid

Odor, Color, Grade: Clear, slightly sweet liquid; no odor.

General Physical Form: Liquid flotation solution

Immediate health, physical, and environmental hazards:

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Mild Eye Irritation: Signs/symptoms may include redness, pain, and tearing.

Skin Contact:

Prolonged or repeated exposure may cause:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

Inhalation:

No health effects are expected.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, nausea, diarrhea and vomiting.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

Inhalation: No need for first aid is anticipated.

If Swallowed: Do not induce vomiting. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>Not Applicable</i>
Flash Point	<i>Not Applicable</i>
Flammable Limits - LEL	<i>Not Applicable</i>
Flammable Limits - UEL	<i>Not Applicable</i>
OSHA Flammability Classification:	Not Applicable

5.2 EXTINGUISHING MEDIA

Water or water spray.

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Non-flammable: ordinary combustible material. Not applicable.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover or dilute with water. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Clean up residue with detergent and water. Clean up residue with an appropriate organic solvent. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Discharge the resulting residue containing solution to a municipal or industrial wastewater treatment facility.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid prolonged or repeated skin contact. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. For industrial or professional use only.

7.2 STORAGE

Normal warehouse conditions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Not applicable. Ventilation not required under normal conditions of use. See other precautionary information below.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

8.2.2 Skin Protection

Avoid prolonged or repeated skin contact. Gloves not normally required.

Avoid skin contact with liquid should marker ball break. Natural rubber gloves would provide adequate skin protection against propylene glycol during a spill and clean-up of a broken marker ball.

8.2.3 Respiratory Protection

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Swallowing not likely under normal conditions of use.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
PROPYLENE GLYCOL	AIHA	TWA, as aerosol	10 mg/m ³	
PROPYLENE GLYCOL	AIHA	TWA, as total	50 ppm	

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Liquid
Odor, Color, Grade:	Clear, slightly sweet liquid; no odor.
General Physical Form:	Liquid flotation solution
Autoignition temperature	<i>Not Applicable</i>
Flash Point	<i>Not Applicable</i>
Flammable Limits - LEL	<i>Not Applicable</i>
Flammable Limits - UEL	<i>Not Applicable</i>
Boiling point	>=100 °C
Density	<i>No Data Available</i>
Vapor Density	<i>No Data Available</i>
Vapor Density	<i>No Data Available</i>
Vapor Pressure	<i>No Data Available</i>
Vapor Pressure	<i>No Data Available</i>
Specific Gravity	Approximately 1 g/ml [<i>Ref Std: WATER=1</i>]
pH	<i>Not Applicable</i>
Melting point	<i>No Data Available</i>
Solubility In Water	<i>No Data Available</i>
Solubility in Water	Complete
Average particle size	<i>Not Applicable</i>
Bulk density	<i>Not Applicable</i>
Evaporation rate	<i>No Data Available</i>
Volatile Organic Compounds	<i>Not Applicable</i>
Kow - Oct/Water partition coef	<i>No Data Available</i>
Percent volatile	<i>Not Applicable</i>
VOC Less H₂O & Exempt Solvents	<i>No Data Available</i>
Viscosity	<=46 centipoise
Ash	<i>Not Applicable</i>

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Not Applicable

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

<u>Test Organism</u>	<u>Test Type</u>	<u>Result</u>
Green algae, Selenastrum capricornutum	48 hours Effect Concentration 50%	19000 mg/l
Fathead Minnow, Pimephales promelas	48 hours Lethal Concentration 50%	51400 mg/l
Rainbow Trout, Oncorhynchus mykiss	48 hours Lethal Concentration 50%	51600 mg/l
Water flea, Daphnia magna	48 hours Lethal Concentration 50%	43000 mg/l
Fathead Minnow, Pimephales promelas	96 hours Lethal Concentration 50%	7100 mg/l

This data is for 100% Propylene Glycol and is not adjusted for any dilution.

CHEMICAL FATE INFORMATION

<u>Test Type</u>	<u>Result</u>	<u>Protocol</u>
Theoretical Oxygen Demand	1.685	
20 days Percent degraded	72.7 % weight	

This data is for 100% Propylene Glycol and is not adjusted for any dilution.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in an industrial or commercial facility in the presence of a combustible material. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste. Dispose of completely absorbed waste product in a sanitary landfill. Incinerate in an industrial or commercial facility.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

80-6111-4219-3, 80-6111-4220-1, 80-6111-4221-9, 80-6111-4222-7, 80-6111-4322-5, 80-6111-4323-3, 80-6111-4324-1, 80-6111-6113-6, 80-6111-6114-4, 80-6111-6115-1, 80-6111-6116-9, 80-6111-6117-7, 80-6111-6835-4, 80-6300-0025-7, 80-6300-0032-3, 80-6300-0033-1

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 1 Flammability: 1 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the

inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Reason for Reissue: Update Section 3, Skin Contact information.

Revision Changes:

Section 16: NFPA hazard classification heading was modified.
Section 16: NFPA hazard classification for health was modified.
Section 16: Reason for reissue comment was modified.
Copyright was modified.
Section 8: Exposure guidelines data source legend was modified.
Section 3: Potential effects from skin contact information was modified.
Section 5: Fire fighting procedures information was modified.
Section 6: Release measures information was modified.
Section 7: Handling information was modified.
Section 13: Waste disposal method information was modified.
Section 15: 311/312 hazard categories heading was modified.
Section 15: International regulations information was modified.
Section 15: State regulations information was modified.
Section 15: US federal regulations information was modified.
Section 4: First aid for ingestion (swallowing) - decontamination - was modified.
Section 4: First aid for ingestion (swallowing) - medical assistance - was modified.
Section 10: Hazardous polymerization heading was modified.
Section 16: NFPA explanation was modified.
Section 15: Inventories information was modified.
Section 12: Ecotoxicological information heading was modified.
Section 12: Chemical fate information heading was modified.
Section 8: Exposure guidelines ingredient information was modified.
Section 16: NFPA hazard classification for special hazards was modified.
Section 16: Reason for reissue heading was modified.
Section 12: Ecotoxicological information comment was modified.
Section 12: Chemical Fate information comment was modified.
Section 8: Engineering controls information was added.
Section 8: Skin protection phrase was added.
Section 8: Prevention of swallowing information was added.
Section 2: Ingredient phrase was added.
Section 4: First aid for inhalation - none - was added.
Section 4: First aid for inhalation - termination of exposure - was deleted.
Section 4: First aid for inhalation - medical assistance - was deleted.

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