Material Safety Data Sheet

Copyright, 2006, 3M Company. All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

This material safety data sheet (MSDS) is provided as a courtesy in response to a customer request. This product is not regulated under, and a MSDS is not required for this product by the OSHA Hazard Communication Standard (29 CFR 1910.1200) because, when used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, use or processing of the product not in accordance with the product's recommendations or not under ordinary conditions may affect the performance of the product and may present potential health and safety hazards.

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 398FR & 398FRP FLAME RETARDANT SEALING TAPES
MANUFACTURER: 3M
DIVISION: Industrial Tape And Specialties Division
ADDRESS: 3M Center
St. Paul, MN  55144-1000

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

Issue Date: 02/14/2006
Supercedes Date: 04/14/2004
Document Group: 19-0422-6

Product Use: Intended Use: Sealant

SECTION 2: INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLASS CLOTH</td>
<td>UNKNOWN</td>
<td>50 - 60</td>
</tr>
<tr>
<td>ACRYLIC ADHESIVE</td>
<td>Trade Secret</td>
<td>17 - 20</td>
</tr>
<tr>
<td>TRIS(TRIBROMONEOPENTYL)PHOSPHATE</td>
<td>19186-97-1</td>
<td>15 - 20</td>
</tr>
<tr>
<td>ROSIN ESTER</td>
<td>TRADE SECRET</td>
<td>2 - 5</td>
</tr>
</tbody>
</table>

This product contains NO polybrominated biphenyls (PBB's) or polybrominated diphenylethers (PBDE's).

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: Acrylic adhesive on glass cloth backing. No significant odor.
General Physical Form: Solid
Immediate health, physical, and environmental hazards: The environmental properties of this product present a low environmental hazard. This product, when used under reasonable conditions and in accordance with the 3M directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
No health effects are expected.

Skin Contact:
No health effects are expected.

Inhalation:
No health effects are expected.

Ingestion:
No health effects are expected.

3.3 POTENTIAL ENVIRONMENTAL EFFECTS

This substance does not leach metals or other RCRA (Resource Conservation and Recovery Act) listed TCLP (Toxic Characteristic Leaching Procedure) hazardous substances at concentrations that would make the product a hazardous waste.

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: No need for first aid is anticipated.

Skin Contact: No need for first aid is anticipated.

Inhalation: No need for first aid is anticipated.

If Swallowed: No need for first aid is anticipated.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autoignition temperature</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammable Limits - LEL</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammable Limits - UEL</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
5.2  EXTINGUISHING MEDIA
Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

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: No unusual fire or explosion hazards are anticipated.

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Not applicable.

SECTION 7: HANDLING AND STORAGE

7.1  HANDLING
Avoid prolonged or repeated skin contact. This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

7.2  STORAGE
Not applicable.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1  ENGINEERING CONTROLS
Not applicable.

8.2  PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1  Eye/Face Protection
Avoid eye contact. Not applicable.

8.2.2  Skin Protection
Not applicable. Gloves not normally required. Avoid prolonged or repeated skin contact.

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
Not applicable.
8.3 EXPOSURE GUIDELINES

None Established

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade: Acrylic adhesive on glass cloth backing. No significant odor.
General Physical Form: Solid
Autoignition temperature: Not Applicable
Flash Point: Not Applicable
Flammable Limits - LEL: Not Applicable
Flammable Limits - UEL: Not Applicable
Boiling point: Not Applicable
Density: Not Applicable
Vapor Density: Not Applicable
Vapor Pressure: Not Applicable
Specific Gravity: Not Applicable
pH: Not Applicable
Melting point: Not Applicable
Solubility in Water: Nil
Evaporation rate: Not Applicable
Percent volatile: Not Applicable
Viscosity: Not Applicable

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: None known

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide</td>
<td>Oxidation, heat or reaction</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>Oxidation, heat or reaction</td>
</tr>
</tbody>
</table>

Hazardous Decomposition: Under recommended usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products may occur as a result of oxidation, heating, or reaction with another material.

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

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Reclaim if feasible. If product can't be reclaimed, dispose of waste product in a sanitary landfill. Alternatively, incinerate the waste product in an industrial, commercial, or municipal incinerator.

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

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

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 - No  Delayed Hazard - No

STATE REGULATIONS
Contact 3M for more information.

CHEMICAL INVENTORIES
This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.

Contact 3M for more information.

INTERNATIONAL REGULATIONS
Contact 3M for more information.

ADDITIONAL INFORMATION

This product contains NO polybrominated biphenyls (PBB's) or polybrominated diphenyl ethers (PBDE's). However, a flame retardant used in this product is a brominated compound.

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

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>0</td>
<td>None</td>
</tr>
</tbody>
</table>

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: Slight modification of relative ratios of cloth, adhesive, liner, health hazard statements and first aid recommendations.

Revision Changes:
Section 1: Product name was modified.
Copyright was modified.
Section 8: Eye/face protection phrase was modified.
Section 8: Skin protection phrase was modified.
Section 2: Ingredient table was modified.
Page Heading: Product name was modified.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.
3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the MSDS available directly from 3M.

3M MSDSs are available at www.3M.com