Material Safety Data Sheet

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PRODUCT NAME: 3M™ Dynatron® MUD Lite PN 00192 (Quart), 00194 (Gallon), 00196 (5-Gallon)
MANUFACTURER: 3M
DIVISION: Automotive Aftermarket
ADDRESS: 3M Center, St. Paul, MN 55144-1000

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

Issue Date: 09/01/11
Supercedes Date: Initial Issue
Document Group: 30-0267-2

ID Number(s):
60-4550-5840-8, 60-4550-6547-8, 60-4550-6548-6

This product is a kit or a multipart product which consists of multiple, independently packaged components. An MSDS for each of these components is included. Please do not separate the component MSDSs from this cover page. The document numbers of the MSDSs for components of this product are:
29-5993-0, 30-0238-3

No revision information is available.

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In addition, information obtained from a database may not be as current as the information in the MSDS available directly from 3M.

3M USA MSDSs are available at www.3M.com
Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Cream Hardener (Red, White & Blue)
MANUFACTURER: 3M
DIVISION: Automotive Aftermarket
ADDRESS: 3M Center, St. Paul, MN 55144-1000

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

Issue Date: 12/02/11
Supercedes Date: 12/02/11
Document Group: 29-5993-0

Product Use: Intended Use: Automotive

SECTION 2: INGREDIENTS

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<th>Ingredient</th>
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</tr>
<tr>
<td>WATER</td>
<td>7732-18-5</td>
<td>10 - 30</td>
</tr>
<tr>
<td>BENZOIC ACID, C9-11-BRANCHED ALKYL ESTERS</td>
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<td>10 - 30</td>
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<tr>
<td>ZINC STEARATE</td>
<td>557-05-1</td>
<td>3 - 7</td>
</tr>
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<td>OXIRANE, POLYMER WITH METHYLOXIRANE, MONOBUTYL ETHER</td>
<td>9038-95-3</td>
<td>1 - 5</td>
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<tr>
<td>CALCIUM SULFATE</td>
<td>7778-18-9</td>
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<td>25869-00-5</td>
<td>0 - 1</td>
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</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Viscous
Odor, Color, Grade: Red paste with slight ester odor
General Physical Form: Solid
Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and
3.2 POTENTIAL HEALTH EFFECTS

**Eye Contact:**
Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

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

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Inhalation:**
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Prolonged or repeated exposure may cause:
Pneumoconiosis: Signs/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

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

May be absorbed following ingestion and cause target organ effects.

**Target Organ Effects:**
Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

### 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:** Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

**Skin Contact:** Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

**Inhalation:** Remove person to fresh air. If signs/symptoms develop, get medical attention.

**If Swallowed:** Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

### SECTION 5: FIRE FIGHTING MEASURES

#### 5.1 FLAMMABLE PROPERTIES

<table>
<thead>
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<th>Property</th>
<th>Value</th>
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<tr>
<td>Autoignition temperature</td>
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</tr>
<tr>
<td>Flash Point</td>
<td>111 °C [Test Method: Estimated]</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

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

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Dust clouds of this material in combination with an ignition source may be explosive.

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode.

6.2. Environmental precautions
Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods
Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Collect as much of the spilled material as possible. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS.

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
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Avoid static discharge. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Avoid breathing of dust created by cutting, sanding, grinding or machining. Avoid eye contact with dust or airborne particles.

7.2 STORAGE
Store away from heat. Store out of direct sunlight. Keep container tightly closed. Do not heat under confinement to avoid risk of explosion

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1 ENGINEERING CONTROLS
Provide appropriate local exhaust for cutting, grinding, sanding or machining. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control dust, fume, or airborne particles. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection
Avoid eye contact with vapors, mists, or spray.
The following eye protection(s) are recommended: Safety Glasses with side shields
Indirect Vented Goggles

8.2.2 Skin Protection
Avoid skin contact.
Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
Gloves made from the following material(s) are recommended: Polymer laminate

8.2.3 Respiratory Protection
Avoid breathing of vapors, mists or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or full face air-purifying respirator with organic vapor cartridges and P95 particulate prefilters
Select and use respiratory protection to prevent an inhalation exposure based on the results of an exposure assessment. Consult with your respirator manufacturer for selection of appropriate types of respirators.

8.2.4 Prevention of Swallowing
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Authority</th>
<th>Type</th>
<th>Limit</th>
<th>Additional Information</th>
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<tr>
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<td>TWA</td>
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<tr>
<td>BENZYL PEROXIDE</td>
<td>OSHA</td>
<td>TWA</td>
<td>5 mg/m3</td>
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<tr>
<td>CALCIUM SULFATE</td>
<td>ACGIH</td>
<td>TWA, inhalable fraction</td>
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<td>CALCIUM SULFATE</td>
<td>OSHA</td>
<td>TWA, respirable fraction</td>
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<td>TWA, as total dust</td>
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<td>Skin Notation*</td>
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<tr>
<td>CYANIDES</td>
<td>OSHA</td>
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<tr>
<td>IRON OXIDE (Fe2O3)</td>
<td>OSHA</td>
<td>TWA, as fume</td>
<td>10 mg/m3</td>
<td></td>
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<tr>
<td>ZINC STEARATE</td>
<td>OSHA</td>
<td>TWA, respirable fraction</td>
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<td>ZINC STEARATE</td>
<td>OSHA</td>
<td>TWA, as total dust</td>
<td>15 mg/m3</td>
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</tr>
</tbody>
</table>

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: Viscous
Odor, Color, Grade: Red paste with slight ester odor
General Physical Form: Solid
Autoignition temperature: No Data Available
Flash Point: 111 ºC [Test Method: Estimated]
Flammable Limits(LEL): Not Applicable
Flammable Limits(UEL): Not Applicable
Boiling Point: No Data Available
Density: 1.2 g/cm^3
Vapor Density: Not Applicable
Vapor Pressure: Not Applicable
Specific Gravity: 1.2 [@ 25 ºC] [Ref Std: WATER=1]
PH: No Data Available
Melting point: No Data Available
Solubility in Water: Negligible
Evaporation rate: No Data Available
Hazardous Air Pollutants:
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<tr>
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<th>Condition</th>
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</thead>
<tbody>
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<td>Carbon monoxide</td>
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<td>Carbon dioxide</td>
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<tr>
<td>Toxic Vapor, Gas, Particulate</td>
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</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable. Stable unless exposed to heat, flames and drying conditions.

Materials and Conditions to Avoid:
10.1 Conditions to avoid
Heat

10.2 Materials to avoid
Accelerators

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>Not Specified</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>Not Specified</td>
</tr>
<tr>
<td>Toxic Vapor, Gas, Particulate</td>
<td>Not Specified</td>
</tr>
</tbody>
</table>
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: Incinerate in a permitted hazardous waste incinerator in the presence of a combustible material. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

EPA Hazardous Waste Number (RCRA): Not regulated

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

SECTION 14: TRANSPORT INFORMATION

ID Number(s):
60-4550-6614-6, 60-4550-6617-9

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS
Contact 3M for more information.

311/312 Hazard Categories:
Fire Hazard - No  Pressure Hazard - No  Reactivity Hazard - Yes  Immediate Hazard - Yes  Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No</th>
<th>% by Wt</th>
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</thead>
<tbody>
<tr>
<td>ZINC STEARATE (ZINC COMPOUNDS)</td>
<td>557-05-1</td>
<td>3 - 7</td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>94-36-0</td>
<td>30 - 60</td>
</tr>
<tr>
<td>FERRIC FERROCYANIDE (CYANIDES)</td>
<td>14038-43-8</td>
<td>0 - 1</td>
</tr>
</tbody>
</table>

STATE REGULATIONS
Contact 3M for more information.
CHEMICAL INVENTORIES
The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

INTERNATIONAL REGULATIONS
Contact 3M for more information.

WHMIS: Hazardous

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: 2 Flammability: 1 Reactivity: 1 Special Hazards: Oxidizer

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.

HMIS Hazard Classification
Health: 2 Flammability: 1 Reactivity: 1 Protection: X - See PPE section.

Hazardous Material Identification System (HMIS®) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint and Coatings Association (NPCA).

Revision Changes:
Section 14: ID Number(s) Template 1 was modified.
Section 14: ID Number Heading Template 1 was added.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Dynatron® MUD Lite PN 00192 (Quart), 00194 (Gallon), 00196 (5-Gallon)
MANUFACTURER: 3M
DIVISION: Automotive Aftermarket
ADDRESS: 3M Center, St. Paul, MN 55144-1000

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

Issue Date: 09/01/11
Supercedes Date: Initial Issue
Document Group: 30-0238-3

Product Use:
Intended Use: Automotive

SECTION 2: INGREDIENTS

<table>
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<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
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<tbody>
<tr>
<td>LIMESTONE</td>
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<tr>
<td>1,3-ISOBENZOFURANDIONE, POLYMER WITH 2,5-FURANDIONE AND 2,2'-OXYBIS[ETHANOL]</td>
<td>26123-45-5</td>
<td>15 - 40</td>
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<td>STYRENE MONOMER</td>
<td>100-42-5</td>
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<td>TALC</td>
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<td>3 - 7</td>
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<td>1 - 5</td>
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<tr>
<td>MAGNESIUM CARBONATE</td>
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<tr>
<td>QUARTZ SILICA</td>
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<td>&lt; 0.5</td>
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SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste
Odor, Color, Grade: Thick fibrous paste, styrene odor
General Physical Form: Liquid
Immediate health, physical, and environmental hazards: Flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Closed containers exposed to heat from fire may build pressure and explode.
May cause target organ effects. Contains a chemical or chemicals which can cause cancer.

### 3.2 POTENTIAL HEALTH EFFECTS

**Eye Contact:**
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Skin Contact:**
Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

**Inhalation:**
Intentional concentration and inhalation may be harmful or fatal.

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Prolonged or repeated exposure may cause:
Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

May be absorbed following inhalation and cause target organ effects.

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

May be absorbed following ingestion and cause target organ effects.

**Target Organ Effects:**
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Prolonged or repeated exposure may cause:
Immunological Effects: Signs/symptoms may include alterations in the number of circulating immune cells, allergic skin and/or respiratory reaction, and changes in immune function.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

**Carcinogenicity:**
Contains a chemical or chemicals which can cause cancer.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>Class Description</th>
<th>Regulation</th>
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<td>QUARTZ SILICA</td>
<td>14808-60-7</td>
<td>Grp. 1: Carcinogenic to humans</td>
<td>International Agency for Research on Cancer</td>
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<td>SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)</td>
<td>SEQ677</td>
<td>Grp. 1: Carcinogenic to humans</td>
<td>International Agency for Research on Cancer</td>
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<tr>
<td>SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)</td>
<td>SEQ677</td>
<td>Known human carcinogen</td>
<td>National Toxicology Program Carcinogens</td>
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<tr>
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<td>100-42-5</td>
<td>Grp. 2B: Possible human carc.</td>
<td>International Agency for Research on Cancer</td>
</tr>
</tbody>
</table>
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: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

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

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

- Autoignition temperature: No Data Available
- Flash Point: 90 °F [Test Method: Closed Cup]
- Flammable Limits(LEL): 0.9 %
- Flammable Limits(UEL): 6.8 %
- OSHA Flammability Classification: Class IC Flammable Liquid

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: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Water may be used to blanket the fire. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Flammable liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spills, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practices. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard.

6.2. Environmental precautions
For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

**Clean-up methods**

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. 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 using non-sparking tools. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Seal the container.

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**

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. No smoking while handling this material. Avoid breathing of vapors, mists or spray. Avoid static discharge. Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not breathe vapors. Do not breathe dust. Avoid contact with oxidizing agents.

**7.2 STORAGE**


**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 ENGINEERING CONTROLS**

Use with appropriate local exhaust ventilation. Use in an enclosed process area is recommended. Provide appropriate local exhaust for cutting, grinding, sanding or machining. Do not use in a confined area or areas with little or no air movement.

**8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**8.2.1 Eye/Face Protection**

Avoid eye contact. Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields

Indirect Vented Goggles

**8.2.2 Skin Protection**

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Polyvinyl Alcohol (PVA) Polymer laminate
8.2.3 Respiratory Protection
Avoid breathing of vapors, mists or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not breathe vapors. Do not breathe dust.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P95 particulate prefilters. Select and use respiratory protection to prevent an inhalation exposure based on the results of an exposure assessment. Consult with your respirator manufacturer for selection of appropriate types of respirators.

8.2.4 Prevention of Swallowing
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Not applicable.

8.3 EXPOSURE GUIDELINES

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Authority</th>
<th>Type</th>
<th>Limit</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIMESTONE</td>
<td>OSHA</td>
<td>TWA, respirable fraction</td>
<td>5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>LIMESTONE</td>
<td>OSHA</td>
<td>TWA, as total dust</td>
<td>15 mg/m³</td>
<td></td>
</tr>
<tr>
<td>MAGNESIUM CARBONATE</td>
<td>OSHA</td>
<td>TWA, respirable fraction</td>
<td>5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>MAGNESIUM CARBONATE</td>
<td>OSHA</td>
<td>TWA, as total dust</td>
<td>15 mg/m³</td>
<td></td>
</tr>
<tr>
<td>OXIDE GLASS CHEMICALS</td>
<td>3M</td>
<td>TWA, as dust</td>
<td>10 mg/m³</td>
<td></td>
</tr>
<tr>
<td>QUARTZ SILICA</td>
<td>ACGIH</td>
<td>TWA, respirable fraction</td>
<td>0.025 mg/m³</td>
<td></td>
</tr>
<tr>
<td>QUARTZ SILICA</td>
<td>OSHA</td>
<td>TWA concentration, respirable</td>
<td>0.1 mg/m³</td>
<td></td>
</tr>
<tr>
<td>QUARTZ SILICA</td>
<td>OSHA</td>
<td>TWA concentration, as total dust</td>
<td>0.3 mg/m³</td>
<td></td>
</tr>
<tr>
<td>STYRENE MONOMER</td>
<td>ACGIH</td>
<td>TWA</td>
<td>20 ppm</td>
<td></td>
</tr>
<tr>
<td>STYRENE MONOMER</td>
<td>ACGIH</td>
<td>STEL</td>
<td>40 ppm</td>
<td></td>
</tr>
<tr>
<td>STYRENE MONOMER</td>
<td>OSHA</td>
<td>TWA</td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td>STYRENE MONOMER</td>
<td>OSHA</td>
<td>CEIL</td>
<td>200 ppm</td>
<td></td>
</tr>
<tr>
<td>TALC</td>
<td>ACGIH</td>
<td>TWA, respirable fraction</td>
<td>2 mg/m³</td>
<td></td>
</tr>
<tr>
<td>TALC</td>
<td>CMRG</td>
<td>TWA, as respirable dust</td>
<td>0.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>TALC</td>
<td>OSHA</td>
<td>TWA concentration, respirable</td>
<td>0.1 mg/m³</td>
<td></td>
</tr>
<tr>
<td>TALC</td>
<td>OSHA</td>
<td>TWA concentration, as total dust</td>
<td>0.3 mg/m³</td>
<td></td>
</tr>
<tr>
<td>TALC</td>
<td>OSHA</td>
<td>TWA</td>
<td>20 millions of particles/cu. ft.</td>
<td></td>
</tr>
</tbody>
</table>

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:    | Paste |
| Odor, Color, Grade:       | Thick fiberous paste, styrene odor |
| General Physical Form:     | Liquid |
| Autoignition temperature   | No Data Available |
| Flash Point                | 90 °F [Test Method: Closed Cup] |
Flammable Limits (LEL) 0.9 %  
Flammable Limits (UEL) 6.8 %  
Boiling Point 293.00 °F [Details: CONDITIONS: (Styrene)]  
Density 9.5126 lb/gal  
Density 1.14 g/ml  
Vapor Density No Data Available  
Vapor Pressure 5.2 mmHg [Details: CONDITIONS: at 20 C]  
Specific Gravity 1.14 [Ref Std: WATER=1]  
Melting point No Data Available  
Solubility in Water Nil  
Evaporation rate No Data Available  
Hazardous Air Pollutants 17.8 % weight [Test Method: Calculated]  
Volatile Organic Compounds 203 g/l [Test Method: calculated SCAQMD rule 443.1]  
Kow - Oct/Water partition coef No Data Available  
Percent volatile 21.03 %  
VOC Less H2O & Exempt Solvents 204 g/l [Test Method: calculated SCAQMD rule 443.1]  
VOC Less H2O & Exempt Solvents 1.71 lb/gal [Test Method: calculated SCAQMD rule 443.1]

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:
10.1 Conditions to avoid  
None known  
10.2 Materials to avoid  
Strong acids  
Strong bases  
Strong oxidizing agents  

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>Hydrocarbons</td>
<td>Not Specified</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Styrene Oxide</td>
<td>Not Specified</td>
</tr>
<tr>
<td>Toxic Vapor, Gas, Particulate</td>
<td>Not Specified</td>
</tr>
</tbody>
</table>

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: Incinerate in a permitted hazardous waste incinerator. Combustion products will include HCl. Facility must be capable of handling halogenated materials.
As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)
Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS
Contact 3M for more information.

311/312 Hazard Categories:
Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>STYRENE MONOMER</td>
<td>100-42-5</td>
<td>10 - 30</td>
</tr>
</tbody>
</table>

STATE REGULATIONS
Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)</td>
<td>SEQ677</td>
<td>**Carcinogen</td>
</tr>
</tbody>
</table>

** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES
The components of this product are in compliance with the chemical notification requirements of TSCA.

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: 2
- Flammability: 3
- Reactivity: 1
- 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:** The MSDS has been revised because 3M has adopted the 16-section ANSI/ISO format. The potential hazards of the product have not changed. We encourage you to reread the MSDS and review the information.

No revision information is available.

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