Material Safety Data Sheet

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PRODUCT NAME: 3M(TM) Scotch-Weld(TM) EC-1945 B/A Metal Primer
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division
ADDRESS: 3M Center
St. Paul, MN 55144-1000

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

Issue Date: 03/06/2007
Supercedes Date: 05/18/2001
Document Group: 07-5038-0

ID Number(s):
62-2628-6401-0, 62-2628-6440-8, 62-2628-7401-9

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:

07-5032-3, 07-5036-4

No revision information is available.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Scotch-Weld(TM) EC-1945 Metal Primer (Part A)
MANUFACTURER: 3M
DIVISION: Aerospace Aircraft Maintenance Division
ADDRESS: 3M Center
St. Paul, MN 55144-1000

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

Issue Date: 03/06/2007
Supercedes Date: 05/18/2001
Document Group: 07-5032-3

Product Use:
Specific Use: Accelerator for 2-Part Primer
Intended Use: Primer

SECTION 2: INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene Isomers</td>
<td>1330-20-7</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>78-93-3</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>67-63-0</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Aliphatic Amine</td>
<td>90-72-2</td>
<td>&lt; 5</td>
</tr>
<tr>
<td>Organosilane Ester</td>
<td>1760-24-3</td>
<td>&lt; 5</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: Clear, yellow, solvent odor.
General Physical Form: Liquid
Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. May cause allergic skin reaction. May cause target organ effects.

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.

Prolonged or repeated exposure may cause:
   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.

May be absorbed following inhalation and cause target organ effects.

Ingestion:
Chemical (Aspiration) Pneumonitis: Signs/symptoms may include coughing, gasping, choking, burning of the mouth, difficulty breathing, bluish colored skin (cyanosis), and may be fatal.

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.

Prolonged or repeated exposure may cause:
   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: 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. 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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autoignition temperature</td>
<td>&gt;=404 °C [Details: MEK]</td>
</tr>
<tr>
<td>Flash Point</td>
<td>16 °F [Test Method: Closed Cup] [Details: MEK]</td>
</tr>
<tr>
<td>Flammable Limits - LEL</td>
<td>0.9 % volume</td>
</tr>
<tr>
<td>Flammable Limits - UEL</td>
<td>12.1 % volume</td>
</tr>
<tr>
<td>OSHA Flammability Classification:</td>
<td>Class IB Flammable Liquid</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: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. 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. Extremely flammable liquid and vapor. 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

Accidental Release Measures: 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. 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 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. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam 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. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard. 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. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

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. Contents may be under pressure, open carefully. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. Avoid breathing of vapors, mists or spray. Avoid static discharge. Avoid eye contact with vapors, mists, or spray. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and open flame. Do not smoke or ignite matches, lighters, etc. Avoid contact with oxidizing agents.

7.2 STORAGE

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Use with appropriate local exhaust ventilation. Provide local exhaust ventilation at transfer points. Provide appropriate local exhaust ventilation on open containers. If exhaust ventilation is not available, use appropriate respiratory protection.

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: 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: Butyl Rubber, Neoprene, Nitrile Rubber, Polyethylene/Ethylene Vinyl Alcohol.

8.2.3 Respiratory Protection
Avoid breathing of vapors, mists or spray.
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. Half facepiece or fullface pressure demand self-contained breathing apparatus. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

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>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol</td>
<td>ACGIH</td>
<td>TWA</td>
<td>200 ppm</td>
<td>Table A4</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>ACGIH</td>
<td>STEL</td>
<td>400 ppm</td>
<td>Table A4</td>
</tr>
</tbody>
</table>
Isopropyl Alcohol  
OSHA  
TWA  
400 ppm  
Table Z-1A

Isopropyl Alcohol  
OSHA  
STEL  
500 ppm  
Table Z-1A

Methyl Ethyl Ketone  
ACGIH  
TWA  
200 ppm

Methyl Ethyl Ketone  
ACGIH  
STEL  
300 ppm

Methyl Ethyl Ketone  
OSHA  
TWA  
200 ppm  
Table Z-1A

Methyl Ethyl Ketone  
OSHA  
STEL  
300 ppm  
Table Z-1A

Aliphatic Amine  
CMRG  
TWA  
5 ppm

Xylene Isomers  
ACGIH  
TWA  
100 ppm  
Table A4

Xylene Isomers  
ACGIH  
STEL  
150 ppm  
Table A4

Xylene Isomers  
OSHA  
TWA  
100 ppm  
Table Z-1A

Xylene Isomers  
OSHA  
STEL  
150 ppm  
Table Z-1A

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

Odor, Color, Grade:  
Clear, yellow, solvent odor.

General Physical Form:  
Liquid

Autoignition temperature  
>=404 ºC [Details: MEK]

Flash Point  
16 ºF [Test Method: Closed Cup] [Details: MEK]

Flammable Limits - LEL  
0.9 % volume

Flammable Limits - UEL  
12.1 % volume

Boiling point  
>=80 ºC

Density  
0.84 g/ml

Vapor Density  
>=2.1 [Ref Std: AIR=1]

Vapor Pressure  
<=91 mmHg [@ 77 ºF]

Specific Gravity  
.84 [Ref Std: WATER=1]  
Not Applicable

pH  
Not Applicable

Melting point  
Not Applicable

Solubility in Water  
Appreciable

Evaporation rate  
No Data Available

Hazardous Air Pollutants  
14.89 lb HAPS/lb solids

Volatile Organic Compounds  
798 g/l [Test Method: calculated SCAQMD rule 443.1]

Percent volatile  
90 - 100 % volume

VOC Less H2O & Exempt Solvents  
798 g/l [Test Method: calculated SCAQMD rule 443.1]

Viscosity  
1 - 100 centipoise [@ 73.4 ºF]

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:  
Heat; Sparks and/or flames

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>During Combustion</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>During Combustion</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. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable), D035 (Methyl ethyl ketone)

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

SECTION 14: TRANSPORT INFORMATION

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 - 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>Xylene Isomers</td>
<td>1330-20-7</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>78-93-3</td>
<td>10 - 30</td>
</tr>
</tbody>
</table>

STATE REGULATIONS
Contact 3M for more information.

CHEMICAL INVENTORIES
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.

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: 3  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.

No revision information is available.
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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Scotch-Weld(TM) EC-1945 Metal Primer (Part B)
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division
ADDRESS: 3M Center
St. Paul, MN 55144-1000

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

Issue Date: 03/06/2007
Supercedes Date: 05/18/2001
Document Group: 07-5036-4

Product Use:
Specific Use: Base for 2-Part Primer
Intended Use: Primer

SECTION 2: INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Tale</td>
<td>14807-96-6</td>
<td>10 - 30</td>
</tr>
<tr>
<td>n-Butyl Acetate</td>
<td>123-86-4</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Epoxy Resin</td>
<td>37312-33-7</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>7 - 13</td>
</tr>
<tr>
<td>Methyl Isobutyl Ketone</td>
<td>108-10-1</td>
<td>7 - 13</td>
</tr>
<tr>
<td>Calcium Chromate</td>
<td>13765-19-0</td>
<td>3 - 7</td>
</tr>
<tr>
<td>NICKEL OXIDE</td>
<td>1313-99-1</td>
<td>1 - 5</td>
</tr>
<tr>
<td>ANTIMONY PENTAOXIDE</td>
<td>1314-60-9</td>
<td>1 - 5</td>
</tr>
<tr>
<td>METHYL ETHYL KETONE</td>
<td>78-93-3</td>
<td>1 - 5</td>
</tr>
<tr>
<td>BUTYL ALCOHOL</td>
<td>71-36-3</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: Green, solvent odor.
General Physical Form: Liquid
Immediate health, physical, and environmental 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. May cause allergic skin reaction. Contains a chemical or chemicals which can cause cancer. May cause target organ effects.

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.

Prolonged or repeated exposure may cause:
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.

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.

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>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Chromate</td>
<td>13765-19-0</td>
<td>Known human carcinogen (Group 1)</td>
<td>National Toxicology Program Carcinogens</td>
</tr>
<tr>
<td>NICKEL COMPONDS (EXCEPT ALLOYS)</td>
<td>NONE</td>
<td>Known human carcinogen</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>NICKEL COMPONDS (EXCEPT ALLOYS)</td>
<td>NONE</td>
<td>Known human carcinogen</td>
<td>National Toxicology Program Carcinogens</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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autoignition temperature</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>60 °F [Test Method: Closed Cup]</td>
</tr>
<tr>
<td>Flammable Limits - LEL</td>
<td>0.9 % volume</td>
</tr>
<tr>
<td>Flammable Limits - UEL</td>
<td>10.0 % volume</td>
</tr>
<tr>
<td>OSHA Flammability Classification</td>
<td>Class IB Flammable Liquid</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:** Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. 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

**Accidental Release Measures:** 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. 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 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. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam 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. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard. 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. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

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. Contents may be under pressure, open carefully. 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. Avoid breathing of vapors, mists or spray. Avoid skin contact. Avoid static discharge. Avoid contact with oxidizing agents.

7.2 STORAGE

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Use with appropriate local exhaust ventilation. Provide local exhaust ventilation at transfer points. Provide appropriate local exhaust ventilation on open containers. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection
Avoid eye contact.
The following eye protection(s) are recommended: 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: Butyl Rubber, Polyvinyl Alcohol (PVA).

8.2.3 Respiratory Protection
Avoid breathing of vapors, mists or spray.
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, Half facepiece or fullface pressure demand self-contained breathing apparatus. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

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>
</tr>
</thead>
<tbody>
<tr>
<td>ANTIMONY COMPOUNDS</td>
<td>ACGIH</td>
<td>TWA, as Sb</td>
<td>0.5 mg/m³</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>ANTIMONY COMPOUNDS</td>
<td>OSHA</td>
<td>TWA, as Sb</td>
<td>0.5 mg/m³</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>BUTYL ALCOHOL</td>
<td>ACGIH</td>
<td>TWA</td>
<td>20 ppm</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>BUTYL ALCOHOL</td>
<td>OSHA</td>
<td>CEIL, Vacated</td>
<td>50 ppm</td>
<td>Skin Notation*</td>
</tr>
<tr>
<td>BUTYL ALCOHOL</td>
<td>OSHA</td>
<td>TWA</td>
<td>100 ppm</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>Calcium Chromate</td>
<td>ACGIH</td>
<td>TWA, as Cr</td>
<td>0.001 mg/m³</td>
<td>Table A2</td>
</tr>
<tr>
<td>CHROMATES</td>
<td>OSHA</td>
<td>CEIL, as CrO₃</td>
<td>0.1 mg/m³</td>
<td>Table Z-2</td>
</tr>
<tr>
<td>CHROMIUM (VI), WATER SOLUBLE COMPOUNDS</td>
<td>ACGIH</td>
<td>TWA, as Cr</td>
<td>0.05 mg/m³</td>
<td>Table A1</td>
</tr>
<tr>
<td>METHYL ETHYL KETONE</td>
<td>ACGIH</td>
<td>TWA</td>
<td>200 ppm</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>METHYL ETHYL KETONE</td>
<td>ACGIH</td>
<td>STEL</td>
<td>300 ppm</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>METHYL ETHYL KETONE</td>
<td>OSHA</td>
<td>TWA</td>
<td>200 ppm</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>METHYL ETHYL KETONE</td>
<td>OSHA</td>
<td>STEL</td>
<td>300 ppm</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>Methyl Isobutyl Ketone</td>
<td>ACGIH</td>
<td>TWA</td>
<td>50 ppm</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>Methyl Isobutyl Ketone</td>
<td>ACGIH</td>
<td>STEL</td>
<td>75 ppm</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>Methyl Isobutyl Ketone</td>
<td>OSHA</td>
<td>TWA, Vacated</td>
<td>50 ppm</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>Methyl Isobutyl Ketone</td>
<td>OSHA</td>
<td>STEL, Vacated</td>
<td>75 ppm</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>Methyl Isobutyl Ketone</td>
<td>OSHA</td>
<td>TWA</td>
<td>100 ppm</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>n-Butyl Acetate</td>
<td>ACGIH</td>
<td>TWA</td>
<td>150 ppm</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>n-Butyl Acetate</td>
<td>ACGIH</td>
<td>STEL</td>
<td>200 ppm</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>n-Butyl Acetate</td>
<td>OSHA</td>
<td>TWA</td>
<td>150 ppm</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>n-Butyl Acetate</td>
<td>OSHA</td>
<td>STEL</td>
<td>200 ppm</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>NICKEL, INSOLUBLE COMPOUNDS</td>
<td>ACGIH</td>
<td>TWA, as Ni, inhalable fraction</td>
<td>0.2 mg/m³</td>
<td>Table AI</td>
</tr>
<tr>
<td>NICKEL, INSOLUBLE COMPOUNDS</td>
<td>OSHA</td>
<td>TWA, as Ni</td>
<td>1 mg/m³</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>Talc</td>
<td>ACGIH</td>
<td>TWA, respirable dust</td>
<td>2 mg/m³</td>
<td>Table A4</td>
</tr>
<tr>
<td>Talc</td>
<td>CMRG</td>
<td>TWA, as respirable dust</td>
<td>0.5 mg/m³</td>
<td>Table A4</td>
</tr>
<tr>
<td>Talc</td>
<td>OSHA</td>
<td>TWA, respirable dust</td>
<td>2 mg/m³</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>ACGIH</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Table A4</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>CMRG</td>
<td>TWA, as respirable dust</td>
<td>5 mg/m³</td>
<td>Table A4</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>OSHA</td>
<td>TWA, Vacated, as dust</td>
<td>10 mg/m³</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>OSHA</td>
<td>TWA, as total dust</td>
<td>15 mg/m³</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>Xylene</td>
<td>ACGIH</td>
<td>TWA</td>
<td>100 ppm</td>
<td>Table A4</td>
</tr>
<tr>
<td>Xylene</td>
<td>ACGIH</td>
<td>STEL</td>
<td>150 ppm</td>
<td>Table A4</td>
</tr>
<tr>
<td>Xylene</td>
<td>OSHA</td>
<td>TWA</td>
<td>100 ppm</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>Xylene</td>
<td>OSHA</td>
<td>STEL</td>
<td>150 ppm</td>
<td>Table Z-1A</td>
</tr>
</tbody>
</table>

* Substance(s) 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.

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

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**

**Odor, Color, Grade:**
Green, solvent odor.
General Physical Form: Liquid
Autoignition temperature No Data Available
Flash Point 60 °F [Test Method: Closed Cup]
Flammable Limits - LEL 0.9 % volume
Flammable Limits - UEL 10.0 % volume
Boiling point >=118 °C
Density 1.31 g/ml
Vapor Density >=3.5 [Ref Std: AIR=1]
Vapor Pressure <=16 mmHg [@ 68 °F]
Specific Gravity 1.31 [Ref Std: WATER=1]
pH Not Applicable
Melting point Not Applicable

Solubility in Water Moderate
Evaporation rate No Data Available
Hazardous Air Pollutants 0.43 lb HAPS/lb solids
Volatile Organic Compounds 457 g/l [Test Method: calculated SCAQMD rule 443.1]
Percent volatile 30 - 40 % volume
VOC Less H2O & Exempt Solvents 457 g/l [Test Method: calculated SCAQMD rule 443.1]
Viscosity 100 - 1000 centipoise [@ 73.4 °F]

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat; Sparks and/or flames

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>During Combustion</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>During Combustion</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


EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

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

SECTION 14: TRANSPORT INFORMATION

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 - 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 (Category if applicable)</th>
<th>C.A.S. No</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTIMONY PENTAOXIDE (ANTIMONY COMPOUNDS)</td>
<td>1314-60-9</td>
<td>1 - 5</td>
</tr>
<tr>
<td>BUTYL ALCOHOL</td>
<td>71-36-3</td>
<td>1 - 5</td>
</tr>
<tr>
<td>METHYL ETHYL KETONE</td>
<td>78-93-3</td>
<td>1 - 5</td>
</tr>
<tr>
<td>NICKEL OXIDE (NICKEL COMPOUNDS)</td>
<td>1313-99-1</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Methyl Isobutyl Ketone</td>
<td>108-10-1</td>
<td>7 - 13</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>7 - 13</td>
</tr>
</tbody>
</table>

This material contains a chemical which requires export notification under TSCA Section 12[b]:

<table>
<thead>
<tr>
<th>Ingredient (Category if applicable)</th>
<th>C.A.S. No</th>
<th>Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Butyl Acetate</td>
<td>123-86-4</td>
<td>Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals</td>
</tr>
</tbody>
</table>

Status: Applicable
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>NICKEL COMPOUNDS</td>
<td>NONE</td>
<td><strong>Carcinogen</strong></td>
</tr>
</tbody>
</table>

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

CHEMICAL INVENTORIES
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.

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: 3  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.

No revision information is available.

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