1. Chemical Product and Company Identification

DESCRIPTION: ELMER'S SPRAY ADHESIVE
PRODUCT TYPE: RUBBER BASED ADHESIVE
APPLICATION: E-451, E-452 (AEROSOLS)

2. Composition, Information on Ingredients

The ingredients listed below have been associated with one or more immediate and/or delayed(*) health hazards. Risk of damage and effects depends upon duration and level of exposure. BEFORE USING, HANDLING, OR EXPOSURE TO THESE INGREDIENTS, READ AND UNDERSTAND THE MSDS.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>% by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1 Acetone</td>
<td>10-30</td>
</tr>
<tr>
<td>74-98-6 Propane</td>
<td>10-30</td>
</tr>
<tr>
<td>75-28-5 Isobutane</td>
<td>10-30</td>
</tr>
<tr>
<td>107-83-5 2-Methylpentane</td>
<td>30-50</td>
</tr>
<tr>
<td>109-66-0 Pentane</td>
<td>1-5</td>
</tr>
<tr>
<td>115-10-6 Dimethyl Ether</td>
<td>5-10</td>
</tr>
</tbody>
</table>

3. Hazards Identification

3.1 Emergency Overview

Appearance: White to off white in color
Odor: Mint when wet
DANGER!
EXTREMELY FLAMMABLE
May be harmful if inhaled. May cause irritation of nose, throat and
lungs.  
Can cause central nervous system depression.  
Causes skin irritation.  
Causes eye irritation.

- **HMIS Rating**
  
  **HEALTH** = 2 (moderate)  
  **FLAMMABILITY** = 4 (severe)  
  **REACTIVITY** = 0 (minimal)  
  **CHRONIC** = *

### 3.2 Potential Health Effects

#### Immediate Hazards

**INGESTION:** Not expected to be harmful under normal conditions of use.  
**INHALATION:** May be harmful if inhaled. Liquid or vapor may cause irritation of nose, throat and lungs.  
Can cause central nervous system depression.  
**SKIN:** Causes irritation.  
**EYES:** Causes irritation.

- **Acetone** 67-64-1  
  Can cause central nervous system depression. Signs and symptoms may include headache, dizziness, nausea, vomiting, unconsciousness and even asphyxiation.

- **Propane** 74-98-6  
  This material is a simple asphyxiant. Signs and symptoms of overexposure include cyanosis, respiratory distress, headache, dizziness, drowsiness, unconsciousness and asphyxiation. Can cause central nervous system depression.

- **2-Methylpentane** 107-83-5  
  Can cause central nervous system depression. Signs and symptoms may include headache, dizziness, nausea, vomiting and drowsiness.

- **Pentane** 109-66-0  
  Can cause central nervous system depression. Signs and symptoms may include headache, dizziness, nausea, vomiting, unconsciousness and even asphyxiation.

- **Dimethyl Ether** 115-10-6  
  Can cause central nervous system depression. Signs and symptoms may include headache, dizziness, nausea, vomiting, unconsciousness and even asphyxiation.

#### Delayed Hazards

- **Acetone** 67-64-1  
  Ingestion may cause liver damage.  
  Ingestion may cause kidney damage.  
  -- See Footnote C.  

  **Footnote C:** As of the date of issuance of this document, this material has not been listed by NTP, classified by IARC nor regulated by OSHA as a carcinogen.

### 4. First Aid Measures
5. Fire Fighting Measures

Autoignition Temperature            Not available
Upper/Lower Flammable Limits        Not available
Up/Lower Explosive Limits, % by Vol 18.0/1.0
Flash Point                         -156 deg F (pensky-martens c.c.)
EXREMELY FLAMMABLE.
DO NOT INCINERATE (BURN) CONTAINER. AVOID HEAT. KEEP CONTAINER
BELOW 120 F (50 C). High temperatures may cause bursting. Do not
place container on radiator, stove, in direct sunlight or near other
heat sources. DO NOT PUNCTURE CONTAINER. Contents under pressure
will discharge. AVOID OPEN FLAMES, SPARKS, PILOT LIGHTS. DO NOT
SMOKE. Vapor may ignite explosively. Spray mist or vapor
evaporating from a deposited film is heavier than air and may settle
in low places or travel outward to a source of ignition and flashback.
In case of fire, use dry chemical, foam or CO2. Water may be
ineffective, but should be used to keep fire-exposed containers cool.

6. Accidental Release Measures

Eliminate all ignition sources. Soak up with absorbent material and
remove to a chemical disposal area. Prevent entry into natural bodies
of water.

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety
practices. These practices include avoiding unnecessary exposure and
removal of the material from eyes, skin and clothing.
Wash thoroughly after handling. Always use appropriate Personal
Protective Equipment (PPE).
INHALATION: USE WITH ADEQUATE VENTILATION. To avoid breathing
vapors or spray mist, open windows and doors or use other means, such
as an exhaust fan to ensure fresh air entry during application and
drying. If you experience eye watering, headache or dizziness,
increase fresh air, wear respiratory protection (NIOSH/MSHA TC23C or
equivalent), or leave the area.
SKIN: Avoid contact with skin and clothing.
EYES: Avoid contact with eyes.
7.2 Storage

Store in a cool, well-ventilated area.
Store in cool, dry area away from sun, heat, oxidizing materials and alkaline materials.
Keep containers tightly closed.
Do not store at temperatures above 50 C.
Keep away from heat, sparks, flame and other ignition sources.

8. Exposure Controls/Personal Protection

8.1 Exposure Controls

ENGINEERING CONTROLS: The following exposure control techniques may be used to effectively minimize employee exposure: local exhaust ventilation, enclosed system design, process isolation and remote control in combination with appropriate use of personal protective equipment and prudent work practices. These techniques may not necessarily address all issues pertaining to your operations. We, therefore, recommend that you consult with experts of your choice to determine whether or not your programs are adequate.
If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should be provided to keep air contaminant concentration levels below acceptable criteria.

8.2 Personal Protection

Where air contaminants can exceed acceptable criteria, use NIOSH/MSHA approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminants in air in accordance with OSHA laws and regulations or other applicable standards or guidelines, including ANSI standards regarding respiratory protection. Use goggles if contact is likely. Wear impervious gloves as required to prevent skin contact.

8.3 Exposure Guidelines

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>REMANDED PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH TLV: 500 ppm (1188 mg/m³) TWA, 750 ppm (1782 mg/m³) STEL</td>
<td>OSHA PEL: 1000 ppm (2400 mg/m³) TWA</td>
<td>REMANDED PEL: 750 ppm (1800 mg/m³) TWA, 1000 ppm (2400 mg/m³) STEL</td>
<td></td>
</tr>
<tr>
<td>Propane</td>
<td>74-98-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH TLV: 2500 ppm (4508 mg/m³) TWA</td>
<td>OSHA PEL: 1000 ppm (1800 mg/m³) TWA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Isobutane</td>
<td>75-28-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH TLV: NONE ESTABLISHED</td>
<td>OSHA PEL: NONE ESTABLISHED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-Methylpentane</td>
<td>107-83-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH TLV: HexIso.500ppm (1760mg/m³)TWA;1000ppm (3500mg/m³) STEL</td>
<td>OSHA PEL: REMANDED PEL: HexIso.500ppm (1800mg/m³)TWA;1000ppm (3600mg/m³) STEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pentane</td>
<td>109-66-0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH TLV: 600 ppm (1770 mg/m³) TWA</td>
<td>OSHA PEL: 1000 ppm (2950 mg/m³) TWA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimethyl Ether</td>
<td>115-10-6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OSHA 1989 PEL remanded, but in effect in some states
9. Physical and Chemical Properties

Percent Volatiles                   90
pH @ 25 C                           Not applicable
Specific Gravity                   0.69
Appearance                          White to off white in color
Autoignition Temperature            Not available
Boiling Point                       -44 - 150 deg F
Vapor Density (Air=1)              > 1
Vapor Pressure, mm Hg @ 20 C       Not determined
Evaporation Rate (Butyl Acetate=1) > 1
Upper/Lower Flammable Limits       Not available
Flash Point                         -156 deg F (pensky-martens c.c.)
Freezing Point                     Not available
Odor                                Mint when wet
Odor Threshold, ppm                Not available
Solubility in Water                Negligible
Coefficient of Water/Oil Distrib.  Not determined

10. Stability and Reactivity

Normally stable as defined in NFPA 704-12(4-3.1).

- **Incompatibilities:**
  
  Strong oxidizers.

- **Decomposition products may include:**
  
  Oxides of carbon.

- **Hazardous polymerization:**
  
  Will not occur.

- **Other Hazards:**
  
  None known to company.

11. Toxicological Information
See Section 3 Hazards Identification information.
Acetone        67-64-1
LC50: Not available
LD50: oral-rat=5800 mg/kg (RTECS); skin-rabbit=20 g/kg (RTECS)
Propane        74-98-6
LC50: Not available
LD50: Not available
Isobutane       75-28-5
LC50: Not available
LD50: Not available
2-Methylpentane       107-83-5
LC50: Not available
LD50: Not available
Pentane 109-66-0
LC50: Not available
LD50: Not available
Dimethyl Ether       115-10-6
LC50: Not available
LD50: Not available

12. Ecological Information

Not determined.

13. Disposal Considerations

Dispose of according to local, state/provincial, and federal requirements.
Empty container: May contain explosive vapors. DO NOT cut, puncture or weld on or nearby. Incineration will cause container to burst violently.

14. Transport Information

14.1 U.S. Department of Transportation (DOT)

The data provided in this section is for information only and may not be specific to your package size. You will need to apply the appropriate regulations to properly classify your shipment for transportation.
ORM-D Consumer Commodity.

14.2 Canadian Transportation of Dangerous Goods (TDG)

Not determined.

15. Regulatory Information (Selected Regulations)
15.1 U.S. Federal Regulations

  
  This material is a "health hazard" and/or a "physical hazard" as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

- **SARA Title III: Section 311/312**
  
  Fire hazard  
  Sudden release of pressure (explosion) hazard  
  Immediate health hazard  
  Delayed health hazard

- **SARA Title III Section 313 and 40 CFR Part 372**
  
  This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.  
  None required per SARA TITLE III SECTION 313.

- **TSCA Section 8(b) Inventory**
  
  All reportable chemical substances are listed on the TSCA Inventory.  
  We rely on certifications of compliance from our suppliers for chemical substances not manufactured by us.

15.2 Canadian Regulations

- **Workplace Hazardous Materials Information System (WHMIS)**
  
  This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by the CPR.  
  CLASS D, DIV 2B  
  CLASS B, DIV 2

- **Canadian Environmental Protection Act (CEPA)**
  
  All reportable chemical substances are listed on the Domestic Substances List (DSL) or otherwise comply with CEPA new substance notification requirements.
National Pollutant Release Inventory (NPRI)

This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory. None required.

16. Other Information

CL (Cautionary Labeling): Products bearing the CL (Cautionary Labeling) Seal of The Art & Creative Materials Institute, Inc. (ACMI) are certified to be properly labeled in a program of toxicological evaluation by a medical expert. This program is reviewed by ACMI's Toxicological Advisory Board. These products are certified by ACMI to be labeled in accordance with the chronic hazard labeling standard, ASTM D-4236 and Federal Law, P.L. 100-695.

User's Responsibility

The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS) require that the information contained on these sheets be made available to your workers. Educate and train your workers regarding OSHA and WHMIS precautions. Instruct your workers to handle this product properly. Consult with appropriate experts to guard against hazards associated with use of this product and its ingredients.

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