16. OTHER INFORMATION (continued)

Prepared By: Stephen Repetto
Title: Research Chemist, Environmental Health & Safety
Company: Loctite Corp. 1001 Tr Br Cr, Rocky Hill CT 06067
(24hr.) Phone: (860) 571-5100
Revision Date: January 27, 1999
Revision: 0023
Section 1 — Product and Company Identification

Product Number
WM.0D7440

Product Name
DUTCH BOY® HOME™ Latex Interior Semi-Gloss Wall Paint, Light Base

Manufacturer's Name
DUTCH BOY GROUP
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

<table>
<thead>
<tr>
<th>Regulatory Information</th>
<th>(216) 566-2902</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://www.paintdocs.com">www.paintdocs.com</a></td>
<td></td>
</tr>
</tbody>
</table>

| Medical Emergency      | (216) 566-2917 |

<table>
<thead>
<tr>
<th>Transportation Emergency</th>
<th>(800) 424-9300</th>
</tr>
</thead>
</table>

*For Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)

Section 2 — Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>% by Weight</th>
<th>CAS Number</th>
<th>Ingredient</th>
<th>Units</th>
<th>Vapor Pressure</th>
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<tbody>
<tr>
<td>0.5</td>
<td>14464-46-1</td>
<td>Cristobalite</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>ACGIH TLV</td>
<td>0.025 mg/m3 as Resp. Dust</td>
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<td>OSHA PEL</td>
<td>0.05 mg/m3 as Resp. Dust</td>
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<td>15</td>
<td>13463-67-7</td>
<td>Titanium Dioxide</td>
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<td></td>
<td></td>
<td>ACGIH TLV</td>
<td>10 mg/m3 as Dust</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>OSHA PEL</td>
<td>10 mg/m3 Total Dust</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>OSHA PEL</td>
<td>5 mg/m3 Respirable Fraction</td>
</tr>
</tbody>
</table>

Section 3 — Hazards Identification

Routes of Exposure

Inhalation of vapor or spray mist.
Eye or skin contact with the product, vapor or spray mist.

Effects of Overexposure

Eyes: Irritation.
Skin: Prolonged or repeated exposure may cause irritation.
Inhalation: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.

Signs and Symptoms of Overexposure

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

Medical Conditions Aggravated by Exposure

None generally recognized.

Cancer Information

For complete discussion of toxicology data refer to Section 11.

Section 4 — First Aid Measures

Eyes: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
Skin: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
Inhalation: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
Ingestion: Do not induce vomiting. Get medical attention immediately.

Section 5 — Fire Fighting Measures

HMIS Codes

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
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</thead>
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<tr>
<td></td>
<td>1**</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

For Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)
UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY
Not Applicable
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed “as Dust” in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).
Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES
Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT
9.87 lb/gal
1182 g/l

SPECIFIC GRAVITY
1.19

BOILING POINT
212 - 213 °F
100 - 100 °C

MELTING POINT
Not Available

VOLATILE VOLUME
62%

EVAPORATION RATE
Slower than ether

VAPOR DENSITY
Heavier than air

SOLUBILITY IN WATER
Not Available

pH
9.0

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.37 lb/gal
45 g/l
Less Water and Federally Exempt Solvents

0.14 lb/gal
17 g/l
Emitted VOC
SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.
IARC’s Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, “No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint.”

TOXICOLOGY DATA

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Ingredient Name</th>
<th>LC50 RAT 4HR</th>
<th>LD50 RAT 4HR</th>
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</thead>
<tbody>
<tr>
<td>14464-46-1</td>
<td>Cristobalite</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>13463-67-7</td>
<td>Titanium Dioxide</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)
Not Regulated for Transportation.

Canada (TDG)
Not Regulated for Transportation.

IMO
Not Regulated for Transportation.

IATA/ICAO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION
No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.
SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.
Material Name: Elmer's Multi-Purpose Spray Adhesive

Manufacturer Information
Elmer's Products, Inc.
460 Polaris Parkway
Westerville, OH 43082

Emergency Phone Number:
Poison Control Center
1-888-516-2502

For additional product information, access our website at www.elmers.com or call 1-888-435-6377. To place an order, call 1-800-848-9400.

Trade Names/Synonyms
E421; E422; E451; E452; 60451; 61451

Product Use
adhesives

** * * Section 2 - HAZARDS IDENTIFICATION* * *

NFPA Ratings:
Health: 2 Fire: 4 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

EMERGENCY OVERVIEW
**Color:** white

**Physical Form:** liquid

**Odor:** minty odor

**Major Health Hazards:** eye irritation

**Physical Hazards:** Extremely flammable. Flash back hazard. Containers may rupture or explode if exposed to heat.

**POTENTIAL HEALTH EFFECTS**

**Inhalation**

**Short Term:** irritation, changes in body temperature, nausea, vomiting, fatigue, stomach pain, difficulty breathing, irregular heartbeat, headache, drowsiness, dizziness, loss of coordination, blurred vision, kidney damage, liver damage, convulsions, unconsciousness, coma

**Long Term:** irritation, changes in body temperature, headache, drowsiness, dizziness, loss of coordination, blood disorders, nausea, vomiting, irregular heartbeat, kidney damage, liver damage, convulsions, unconsciousness, coma

**Skin**

**Short Term:** irritation

**Long Term:** irritation, tingling sensation

**Eye**

**Short Term:** irritation (possibly severe), blurred vision, tearing

**Long Term:** irritation, eye damage

**Ingestion**

**Short Term:** nausea, vomiting, diarrhea, headache, drowsiness, dizziness, loss of coordination, unconsciousness, stomach pain, kidney damage, liver damage

**Long Term:** kidney damage, liver damage

**Regulatory Status**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is a controlled product according to Canada’s Controlled Product Regulation.

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**Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>CAS</th>
<th>Component</th>
<th>Percent</th>
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<tbody>
<tr>
<td>107-83-5</td>
<td>2-METHYLPENTANE</td>
<td>35</td>
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<tr>
<td>67-64-1</td>
<td>ACETONE</td>
<td>20</td>
</tr>
<tr>
<td>75-28-5</td>
<td>ISOBUTANE</td>
<td>15</td>
</tr>
</tbody>
</table>
### Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Hexane isomers, Aliphatic hydrocarbon gases (Alkane [C1-C4]), Pentanes.

### **Section 4 - FIRST AID MEASURES**

**Inhalation**

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

**Skin**

If bonding occurs, immerse the bonded surfaces in warm soapy water. Peel or roll the surfaces apart using a blunt edge, such as a spatula or spoon handle. Do not pull surfaces apart with a direct opposing action. If burns occur, treat as thermal burns. Get medical attention, if needed.

**Eyes**

If bonding to tissues occurs, wash with large amounts of warm water. Cover both eyes with sterile bandages. The eye will open without further action. Do not pull surfaces apart with a direct opposing action. If burns occur, treat as thermal burns. Get medical attention.

**Ingestion**

If swallowed, get medical attention.

**Note to Physicians**

For inhalation, consider oxygen.

### **Section 5 - FIRE FIGHTING MEASURES**

See Section 9 for Flammability Properties
**Flammable Properties**
Severe fire hazard. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Containers may rupture or explode if exposed to heat.

**Extinguishing Media**
carbon dioxide, regular dry chemical

**Protective Equipment and Precautions for Firefighters**
Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

**Fire Fighting Measures**
Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

**Sensitivity to Mechanical Impact**
Not sensitive

**Sensitivity to Static Discharge**
Yes

---

**Section 6 - ACCIDENTAL RELEASE MEASURES**

**Occupational spill/release**
Avoid heat, flames, sparks and other sources of ignition. Do not touch spilled material. Stop leak if possible without personal risk. Small spills of the liquid component: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Spills with a large number of canisters: Reduce vapors with water spray. Remove sources of ignition. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

---

**Section 7 - HANDLING AND STORAGE**

**Handling Procedures**
Avoid heat, flames, sparks and other sources of ignition. Avoid contact with eyes. Do not eat, drink, or smoke when using this product. Wash thoroughly after handling. Since emptied containers retain material residue, follow safe handling/label warnings even after container is emptied. Do not cut, puncture, or weld on or near this container.

**Storage Procedures**
Store and handle in accordance with all current regulations and standards. Store below 49 C. Keep away from heat, sparks and flame. Avoid direct sunlight.
See original container for storage recommendations. Keep separated from incompatible substances.

### Component Exposure Limits

#### ACETONE (67-64-1)

**ACGIH:**
- 500 ppm TWA
- 750 ppm STEL

**NIOSH:**
- 250 ppm TWA; 590 mg/m³ TWA

**OSHA:**
- 1000 ppm TWA; 2400 mg/m³ TWA

**OSHA (Vacated):**
- 2400 mg/m³ STEL (The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors); 1000 ppm STEL
- 750 ppm TWA; 1800 mg/m³ TWA

#### ISOBUTANE (75-28-5)

**ACGIH:**
- 1000 ppm TWA

**NIOSH:**
- 800 ppm TWA; 1900 mg/m³ TWA

#### PROPANE (74-98-6)

**ACGIH:**
- 1000 ppm TWA

**NIOSH:**
- 1000 ppm TWA; 1800 mg/m³ TWA

**OSHA:**
- 1000 ppm TWA; 1800 mg/m³ TWA

**OSHA (Vacated):**
- 1000 ppm TWA; 1800 mg/m³ TWA

#### DIMETHYL ETHER (115-10-6)

**AIHA:**
- 1000 ppm TWA

#### PENTANE (109-66-0)

**ACGIH:**
- 600 ppm TWA

**NIOSH:**
- 120 ppm TWA; 350 mg/m³ TWA
- 610 ppm Ceiling (15 min); 1800 mg/m³ Ceiling (15 min)

**OSHA:**
- 1000 ppm TWA; 2950 mg/m³ TWA

**OSHA (Vacated):**
- 750 ppm STEL; 2250 mg/m³ STEL
600 ppm TWA; 1800 mg/m3 TWA

**BENZENE (71-43-2)**

**ACGIH:** 0.5 ppm TWA
2.5 ppm STEL

Skin - potential significant contribution to overall exposure by the cutaneous route

**NIOSH:** 0.1 ppm TWA
1 ppm STEL

**OSHA:** 10 ppm TWA (applies to industry segments exempt from the benzene standard at 29 CFR 1910.1028); 1 ppm TWA
5 ppm STEL (see 29 CFR 1910.1028)
25 ppm Ceiling

**OSHA (Vacated):**

25 ppm Ceiling (unless specified in 1910.1028)

50 ppm STEL (unless specified in 1910.1028, 10 min)
10 ppm TWA (unless specified in 1910.1028)

**ACETALDEHYDE (75-07-0)**

**ACGIH:** 25 ppm Ceiling

**OSHA:** 200 ppm TWA; 360 mg/m3 TWA

**OSHA (Vacated):**

150 ppm STEL; 270 mg/m3 STEL

100 ppm TWA; 180 mg/m3 TWA

**FORMALDEHYDE (50-00-0)**

**ACGIH:** 0.3 ppm Ceiling

**NIOSH:** 0.016 ppm TWA

0.1 ppm Ceiling (15 min)

**OSHA:** 0.75 ppm TWA
2 ppm STEL (see 29 CFR 1910.1048)

**OSHA (Vacated):**

5 ppm Ceiling (unless specified in 1910.1048)
10 ppm STEL (unless specified in 1910.1048, 30 min)
3 ppm TWA (unless specified in 1910.1048)

**Ventilation**
Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eyes/Face**
Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Protective Clothing**
Wear appropriate chemical resistant clothing.

**Glove Recommendations**
Wear appropriate chemical resistant gloves.

**Respiratory Protection**
Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

**For Unknown Concentrations or Immediately Dangerous to Life or Health -**
Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.
Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

* * * Section 9 - PHYSICAL AND CHEMICAL PROPERTIES* * *

<table>
<thead>
<tr>
<th>Physical State: Aerosol</th>
<th>Appearance: white liquid</th>
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</thead>
<tbody>
<tr>
<td>Color: white</td>
<td>Physical Form: liquid</td>
</tr>
<tr>
<td>Odor: minty odor</td>
<td>Odor Threshold: Not available</td>
</tr>
<tr>
<td>Melting Point: Not available</td>
<td>Boiling Point: -44 - -44 °C</td>
</tr>
<tr>
<td>Flash Point: -104 °C (PMCC)</td>
<td>Evaporation Rate: faster than, butyl acetate</td>
</tr>
<tr>
<td>LEL: 1.0 %</td>
<td>UEL: 18.0 %</td>
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</tbody>
</table>
**Vapor Pressure**: Not available  
**Vapor Density (air = 1)**: >1  
**Specific Gravity (water = 1)**: 0.6932  
**Water Solubility**: negligible  
**Coeff. Water/Oil Dist**: Not available  
**VOC**: 64.3 % weight  
**VOC less Water and Exempt Solvents**: 522 g/L  
**Volatility by Volume**: 87.0 %  
**Volatility by Weight**: 81.1 %

---

**Section 10 - STABILITY AND REACTIVITY**

**Chemical Stability**  
Stable at normal temperatures and pressure.

**Conditions to Avoid**  
Avoid heat, flames, sparks and other sources of ignition. Minimize contact with material. Containers may rupture or explode if exposed to heat.

**Materials to Avoid**  
acids, amines, bases, oxidizing materials, reducing agents

**Decomposition Products**  
hydrocarbons, oxides of carbon, oxides of sulfur

**Possibility of Hazardous Reactions**  
Will not polymerize.

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**Section 11 - TOXICOLOGICAL INFORMATION**

**Component Analysis - LD50/LC50**  
The components of this material have been reviewed in various sources and the following selected endpoints are published:

**ACETONE (67-64-1)**  
Oral LD50 Rat 5800 mg/kg
ISOBUTANE (75-28-5)
Inhalation LC50 Rat 658 mg/L 4 h

PROPANE (74-98-6)
Inhalation LC50 Rat 658 mg/L 4 h

DIMETHYL ETHER (115-10-6)
Inhalation LC50 Rat 308.5 mg/L 4 h

PENTANE (109-66-0)
Inhalation LC50 Rat 364 g/m3 4 h; Dermal LD50 Rabbit 3000 mg/kg; Oral LD50 Rat >2000 mg/kg

BENZENE (71-43-2)
Inhalation LC50 Rat 13050-14380 ppm 4 h; Oral LD50 Rat 1800 mg/kg

ACETALDEHYDE (75-07-0)
Oral LD50 Rat 1930 mg/kg

FORMALDEHYDE (50-00-0)
Oral LD50 Rat 500 mg/kg; Inhalation LC50 Rat 0.578 mg/L 4 h

RTECS Acute Toxicity (selected)
The components of this material have been reviewed, and RTECS publishes the following endpoints:

ACETONE (67-64-1)
Inhalation: 50100 mg/m3/8 hour Inhalation Rat LC50; 50100 mg/m3 Inhalation Rat LC50
Oral: 5800 mg/kg Oral Rat LD50; 5800 mg/kg Oral Rat LD50
Skin: >9400 uL/kg Skin Guinea pig LD50

ISOBUTANE (75-28-5)
Inhalation: 570000 ppm/15 minute(s) Inhalation Rat LC50; 57 pph/15 minute(s) Inhalation Rat LC50

PROPANE (74-98-6)
Inhalation: >800000 ppm/15 minute(s) Inhalation Rat LC50

DIMETHYL ETHER (115-10-6)
Inhalation: 308 gm/m3 Inhalation Rat LC50; 309 gm/m3/4 hour Inhalation Rat LC50;
164000 ppm/4 hour Inhalation Rat LC50

PENTANE (109-66-0)
Inhalation: 364 gm/m3/4 hour Inhalation Rat LC50
Oral: >2000 mg/kg Oral Rat LD50

Acute Toxicity Level
ACETONE (67-64-1)
Moderately inhalation
Toxic:
Slightly ingestion
Toxic:

ISOBUTANE (75-28-5)
Non Toxic: inhalation

DIMETHYL ETHER (115-10-6)
Slightly inhalation
Toxic:

PENTANE (109-66-0)
Non Toxic: inhalation

BENZENE (71-43-2)
Highly dermal absorption
Toxic:
Moderately ingestion
Toxic:
Slightly inhalation
Toxic:

ACETALDEHYDE (75-07-0)
Moderately inhalation, ingestion
Toxic:
Slightly dermal absorption
Toxic:

FORMALDEHYDE (50-00-0)
Highly inhalation
Toxic:
Toxic: dermal absorption, ingestion

Component Carcinogenicity
ACETONE (67-64-1)
**ACGIH**: A4 - Not Classifiable as a Human Carcinogen

**BENZENE (71-43-2)**

**ACGIH**: A1 - Confirmed Human Carcinogen

**IARC**: Monograph 100F [in preparation]; Supplement 7 [1987]; Monograph 29 [1982] (Group 1 (carcinogenic to humans))

**OSHA**: Cancer hazard - see 29 CFR 1910.1028

**NTP**: Known Human Carcinogen

**ACETALDEHYDE (75-07-0)**

**ACGIH**: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

**IARC**: Monograph 100E [in preparation] (associated with consumption of alcoholic beverages) (Group 1 (carcinogenic to humans))

**NTP**: Reasonably Anticipated To Be A Human Carcinogen

**FORMALDEHYDE (50-00-0)**

**ACGIH**: A2 - Suspected Human Carcinogen

**IARC**: Monograph 100F [in preparation]; Monograph 88 [2006]; Monograph 62 [1995]; Supplement 7 [1987] (Group 1 (carcinogenic to humans))

**OSHA**: Irritant and potential cancer hazard - see 29 CFR 1910.1048

**NTP**: Known Human Carcinogen

**Irritation**

eye irritation

**RTECS Irritation**

The components of this material have been reviewed, and RTECS publishes the following endpoints:

**ACETONE (67-64-1)**

500 ppm Eyes Human; 186300 ppm Eyes Human mild; 10 uL Eyes Rabbit mild; 20 mg/24 hour Eyes Rabbit moderate; 20 mg Eyes Rabbit severe; 500 mg/24 hour Skin Rabbit mild; 395 mg/open Skin Rabbit mild

**Local Effects**

**2-METHYLPENTANE (107-83-5)**

**Irritant**: inhalation, skin, eye

**ACETONE (67-64-1)**
Irritant: inhalation, skin, eye
ISOButANE (75-28-5)
Irritant: inhalation
DIMethyl ETHER (115-10-6)
Irritant: inhalation, skin, eye
PENTANE (109-66-0)
Irritant: inhalation, skin
BENZENE (71-43-2)
Irritant: inhalation, skin, eye
ACETALDEHYDE (75-07-0)
Irritant: inhalation, skin, eye
FORMALDEHYDE (50-00-0)
Irritant: skin, eye
Corrosive: inhalation, skin, eye, ingestion

Target Organs
2-METHYL PENTANE (107-83-5)
central nervous system
ACETONE (67-64-1)
central nervous system
ISOButANE (75-28-5)
central nervous system
PROPANE (74-98-6)
central nervous system
DIMethyl ETHER (115-10-6)
central nervous system
PENTANE (109-66-0)
central nervous system
BENZENE (71-43-2)
immune system (blood), central nervous system
ACETALDEHYDE (75-07-0)
immune system (sensitizer), central nervous system
FORMALDEHYDE (50-00-0)
immune system (sensitizer)

**Medical Conditions Aggravated by Exposure**
respiratory disorders, skin disorders and allergies

**RTECS Tumorigenic**
The components of this material have been reviewed, and RTECS publishes data for one or more components.

**RTECS Mutagenic**
The components of this material have been reviewed, and RTECS publishes data for one or more components.

**RTECS Reproductive Effects**
The components of this material have been reviewed, and RTECS publishes data for one or more components.

**Additional Data**
Stimulants such as epinephrine may induce ventricular fibrillation. Alcohol may enhance the toxic effects.

---

**Section 12 - ECOLOGICAL INFORMATION**

**Component Analysis - Aquatic Toxicity**

**ACETONE (67-64-1)**

**Fish:** 96 Hr LC50 Oncorhynchus mykiss: 4.74 - 6.33 mL/L; 96 Hr LC50 Pimephales promelas: 6210 - 8120 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 8300 mg/L

**Invertebrate:** 48 Hr EC50 Daphnia magna: 10294 - 17704 mg/L [Static]; 48 Hr EC50 Daphnia magna: 12600 - 12700 mg/L

**PENTANE (109-66-0)**

**Fish:** 96 Hr LC50 Oncorhynchus mykiss: 9.87 mg/L; 96 Hr LC50 Pimephales promelas: 11.59 mg/L; 96 Hr LC50 Lepomis macrochirus: 9.99 mg/L

**Invertebrate:** 48 Hr EC50 Daphnia magna: 9.74 mg/L

**BENZENE (71-43-2)**

**Fish:** 96 Hr LC50 Pimephales promelas: 10.7-14.7 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 5.3 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 22.49 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 28.6 mg/L [static]; 96 Hr LC50 Pimephales promelas: 22330-41160 μg/L [static]; 96 Hr LC50 Lepomis macrochirus: 70000-142000 μg/L [static]
Algae: 72 Hr EC50 Pseudokirchneriella subcapitata: 29 mg/L
Invertebrate: 48 Hr EC50 Daphnia magna: 8.76 - 15.6 mg/L [Static]; 48 Hr EC50 Daphnia magna: 10 mg/L

ACETALDEHYDE (75-07-0)
Fish: 96 Hr LC50 Pimephales promelas: 28.0-34.0 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 53 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 1.8-2.4 mg/L [static]; 96 Hr LC50 Pimephales promelas: 39.8-46.8 mg/L [static]
Algae: 120 Hr EC50 Nitzschia linearis: 237 - 249 mg/L
Invertebrate: 48 Hr EC50 Daphnia magna: 3.64 - 6.15 mg/L [Static]; 48 Hr EC50 Daphnia magna: 48.3 mg/L

FORMALDEHYDE (50-00-0)
Fish: 96 Hr LC50 Pimephales promelas: 22.6 - 25.7 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 1510 µg/L [static]; 96 Hr LC50 Brachydanio rerio: 41 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 0.032 - 0.226 mL/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 100 - 136 mg/L [static]; 96 Hr LC50 Pimephales promelas: 23.2 - 29.7 mg/L [static]
Invertebrate: 48 Hr LC50 Daphnia magna: 2 mg/L; 48 Hr EC50 Daphnia magna: 11.3 - 18 mg/L [Static]

*** Section 13 - DISPOSAL CONSIDERATIONS ***

Disposal Methods
Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.

Component Waste Numbers

ACETONE (67-64-1)
RCRA: waste number U002 (Ignitable waste)

BENZENE (71-43-2)
RCRA: waste number U019 (Ignitable waste, Toxic waste)
0.5 mg/L regulatory level

ACETALDEHYDE (75-07-0)
RCRA: waste number U001 (Ignitable waste)
FORMALDEHYDE (50-00-0)
RCRA: waste number U122

*** Section 14 - TRANSPORT INFORMATION ***

US DOT Information
Shipping Name: Aerosols
Hazard Class: 2.1
UN/NA #: UN1950
Required Label(s): 2.1

TDG Information
Shipping Name: Aerosols
Hazard Class: 2.1
UN #: UN1950
Required Label(s): 2.1

*** Section 15 - REGULATORY INFORMATION ***

U.S. Federal Regulations
This material contains one or more of the following chemicals required to be identified under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

ACETONE (67-64-1)
CERCLA: 5000 lb final RQ; 2270 kg final RQ

PENTANE (109-66-0)
TSCA 12b: Section 4, 1 % de minimis concentration

BENZENE (71-43-2)
SARA 313: 0.1 % de minimis concentration
CERCLA: 10 lb final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule); 4.54 kg final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule)

ACETALDEHYDE (75-07-0)
SARA 313: 0.1 % de minimis concentration
CERCLA: 1000 lb final RQ; 454 kg final RQ
TSCA 12b: Section 4, 0.1 % de minimus concentration
OSHA (safety): 2500 lb TQ

FORMALDEHYDE (50-00-0)
SARA 302/304: 500 lb TPQ

100 lb EPCRA RQ
SARA 313: 0.1 % de minimis concentration
CERCLA: 100 lb final RQ; 45.4 kg final RQ
OSHA (safety): 1000 lb TQ

SARA 311/312
Acute Health: Yes Chronic Health: No Fire: Yes Pressure: Yes Reactive: No

U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-METHYLPENTANE</td>
<td>107-83-5</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>ACETONE</td>
<td>67-64-1</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>ISOBUTANE</td>
<td>75-28-5</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>PROPANE</td>
<td>74-98-6</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>DIMETHYL ETHER</td>
<td>115-10-6</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>PENTANE</td>
<td>109-66-0</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>BENZENE</td>
<td>71-43-2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>ACETALDEHYDE</td>
<td>75-07-0</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>Yes</td>
</tr>
<tr>
<td>FORMALDEHYDE</td>
<td>50-00-0</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

MSDS - ELM-074
http://www.elmers.com/msds/me451_c.htm
WARNING! This product contains a chemical known to the state of California to cause cancer.
WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects.

Canada
This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Canada WHMIS
The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

2-METHYLPENTANE (107-83-5)
1 %
ACETONE (67-64-1)
1 %
PENTANE (109-66-0)
1 %

WHMIS Classification
D2B, B5.

Canadian Inventory
All identified components are listed on the DSL.

U.S. Inventory (TSCA)
All the components of this substance are listed on or are exempt from the inventory.

Component Analysis - Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>US</th>
<th>CA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-METHYLPENTANE</td>
<td>107-83-5</td>
<td>Yes</td>
<td>DSL</td>
</tr>
<tr>
<td>ACETONE</td>
<td>67-64-1</td>
<td>Yes</td>
<td>DSL</td>
</tr>
<tr>
<td>ISOBUTANE</td>
<td>75-28-5</td>
<td>Yes</td>
<td>DSL</td>
</tr>
<tr>
<td>PROPANE</td>
<td>74-98-6</td>
<td>Yes</td>
<td>DSL</td>
</tr>
<tr>
<td>DIMETHYL ETHER</td>
<td>115-10-6</td>
<td>Yes</td>
<td>DSL</td>
</tr>
<tr>
<td>PENTANE</td>
<td>109-66-0</td>
<td>Yes</td>
<td>DSL</td>
</tr>
</tbody>
</table>
**Section 16 - OTHER INFORMATION**

**Key / Legend**
- ACGIH - American Conference of Governmental Industrial Hygienists
- ADR - European Road Transport
- AU - Australia
- BOD - Biochemical Oxygen Demand
- C - Celsius
- CA - Canada
- CAS - Chemical Abstracts Service
- CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
- CN - China
- CPR - Controlled Products Regulations
- DFG - Deutsche Forschungsgemeinschaft
- DOT - Department of Transportation
- DSL - Domestic Substances List
- EEC - European Economic Community
- EINECS - European Inventory of Existing Commercial Chemical Substances
- EPA - Environmental Protection Agency
- EU - European Union
- F - Fahrenheit
- IARC - International Agency for Research on Cancer
- IATA - International Air Transport Association
- ICAO - International Civil Aviation Organization
- IDL - Ingredient Disclosure List
- IDLH - Immediately Dangerous to Life and Health
- IMDG - International Maritime Dangerous Goods
- JP - Japan
- Kow - Octanol/water partition coefficient
- KR - Korea
- LEL - Lower Explosive Limit
- LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database
- MAK - Maximum Concentration Value in the Workplace
- MEL - Maximum Exposure Limits
- NFPA - National Fire Protection Agency
- NIOSH - National Institute for Occupational Safety and Health
- NJTSR - New Jersey Trade Secret Registry
- NTP - National Toxicology Program
- NZ - New Zealand
- OSHA - Occupational Safety and Health Administration
- PH - Philippines
- RCRA - Resource Conservation and Recovery Act
- RID - European Rail Transport
- RTECS - Registry of Toxic Effects of Chemical Substances®
- SARA - Superfund Amendments and Reauthorization Act
- STEL - Short-term Exposure Limit
- TDG - Transportation of Dangerous Goods
- TSCA - Toxic Substances Control Act
- TWA - Time Weighted Average
- UEL - Upper Explosive Limit
- US - United States

**Other Information**
SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

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New MSDS: 1/19/2012
MSDS Update: 2/8/2012
Material Safety Data Sheet
Material Name: Elmer's Glue-All
MSDS ID: ELM-035
Issue Date: 08/30/12
Revision 1.0002

**Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Material Name:** Elmer's Glue-All

**Manufacturer Information**
Elmer's Products, Inc.
460 Polaris Parkway
Westerville, OH 43082
Emergency Phone Number:
Poison Control Center
1-888-516-2502
For additional product information, access our website at www.elmers.com or call 1-888-435-6377. To place an order, call 1-800-848-9400.

**Trade Names/Synonyms**
US: E135; E371; E375; E379; E382; E383; E384; E385; E393; E395; E477; E619; E960; E981; E1235; E1321; E1322; E1323; E1324; E1325; E1326; E1327; E1366; E1462; E1501; E3810; E3820; E3850; E3830; E3860; Canada: 60345; 60352; 60355; 60359; 60375; 60382; 60383; 60385; 60387; 60395; 65120

**Product Use**
adhesives

**Section 2 - HAZARDS IDENTIFICATION**

**NFPA Ratings:**
**Health:** 1  **Fire:** 1  **Reactivity:** 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

**EMERGENCY OVERVIEW**
**Color:** white
**Physical Form:** liquid
**Odor:** Mild acetic
**Major Health Hazards:** No significant target effects reported.
POTENTIAL HEALTH EFFECTS

Inhalation
Short Term: no information on significant adverse effects
Long Term: no information on significant adverse effects

Skin
Short Term: no information on significant adverse effects
Long Term: no information on significant adverse effects

Eye
Short Term: no information on significant adverse effects
Long Term: no information on significant adverse effects

Ingestion
Short Term: no information on significant adverse effects
Long Term: no information on significant adverse effects

Regulatory Status
This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

** Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS **

<table>
<thead>
<tr>
<th>CAS</th>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixture</td>
<td>PROPRIETARY NON-HAZARDOUS INGREDIENTS</td>
<td>100</td>
</tr>
</tbody>
</table>

** Section 4 - FIRST AID MEASURES **

Inhalation
If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

Skin
If bonding occurs, immerse the bonded surfaces in warm soapy water. Peel or roll the surfaces apart using a blunt edge, such as a spatula or spoon handle. Do not pull surfaces apart with a direct opposing action. If burns occur, treat as thermal burns. Get medical attention, if needed.

Eyes
If bonding to tissues occurs, wash with large amounts of warm water. Cover both eyes with sterile bandages. The eye will open without further action. Do not pull surfaces apart with a direct opposing action. If burns occur, treat as thermal burns. Get medical attention.

Ingestion
If swallowed, get medical attention.
**Section 5 - FIRE FIGHTING MEASURES**

See Section 9 for Flammability Properties

**Flammable Properties**
Slight fire hazard.

**Extinguishing Media**
carbon dioxide, regular dry chemical, regular foam, water

**Fire Fighting Measures**
Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

**Hazardous Combustion Products**
Combustion: oxides of carbon

Sensitivity to Mechanical Impact
Not sensitive

Sensitivity to Static Discharge
Not sensitive

**Section 6 - ACCIDENTAL RELEASE MEASURES**

**Occupational spill/release**
Stop leak if possible without personal risk. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

**Section 7 - HANDLING AND STORAGE**

**Handling Procedures**
Wash thoroughly after handling.

**Storage Procedures**
Store and handle in accordance with all current regulations and standards. See original container for storage recommendations. Keep separated from incompatible substances.

**Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Component Exposure Limits**
ACGIH, NIOSH, OSHA, and AIHA have not developed exposure limits for any of this product's components.

**Ventilation**
Based on available information, additional ventilation is not required.

**PERSONAL PROTECTIVE EQUIPMENT**
**Eyes/Face**
Eye protection not required under normal conditions.

**Protective Clothing**
Protective clothing is not required under normal conditions.

**Glove Recommendations**
Protective gloves are not required under normal conditions.

**Respiratory Protection**
No respirator is required under normal conditions of use.

---

### Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>white</td>
</tr>
<tr>
<td>Odor:</td>
<td>Mild acetic</td>
</tr>
<tr>
<td>pH:</td>
<td>4.8-5.1</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>100 °C</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Density (air = 1):</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity (water = 1):</td>
<td>1.04-1.07</td>
</tr>
<tr>
<td>Coeff. Water/Oil Dist:</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC:</td>
<td>11 g/L (SCAQMD Rule 1168)</td>
</tr>
</tbody>
</table>

| Appearance: | White liquid |
| Physical Form: | liquid |
| Odor Threshold: | Not available |
| Melting/Freezing Point: | 0 °C |
| Flash Point: | No data available |
| Vapor Pressure: | Not available |
| Density: | 8.7-8.9 g/cc |
| Water Solubility: | Dispersible |
| Viscosity: | Not available |
| Volatility: | Not available |

---

### Section 10 - STABILITY AND REACTIVITY

**Chemical Stability**
Stable at normal temperatures and pressure.

**Conditions to Avoid**
Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

**Materials to Avoid**
oxidizing materials
Hazardous Decomposition
Combustion: oxides of carbon
Possibility of Hazardous Reactions
Will not polymerize.

* * * Section 11 - TOXICOLOGICAL INFORMATION* * *

Component Analysis - LD50/LC50
The components of this material have been reviewed in various sources and no selected endpoints have been identified.
RTECS Acute Toxicity (selected)
The components of this material have been reviewed and RTECS publishes no data as of the date on this document.
Component Carcinogenicity
None of this product's components are listed by ACGIH, IARC, OSHA, or NTP.
RTECS Irritation
The components of this material have been reviewed and RTECS publishes no data as of the date on this document.
Medical Conditions Aggravated by Exposure
None known.
Tumorigenic
No data available for the mixture.
Mutagenic
No data available for the mixture.
Reproductive Effects
No data available for the mixture.

* * * Section 12 - ECOLOGICAL INFORMATION* * *

Component Analysis - Aquatic Toxicity
No LOLI ecotoxicity data are available for this product's components.

* * * Section 13 - DISPOSAL CONSIDERATIONS* * *

Disposal Methods
Dispose in accordance with all applicable regulations.
Component Waste Numbers
The U.S. EPA has not published waste numbers for this product's components.

* * * Section 14 - TRANSPORT INFORMATION* * *
**Section 15 - REGULATORY INFORMATION**

**U.S. Federal Regulations**
None of this product’s components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

**SARA 311/312**
Acute Health: No
Chronic Health: No
Fire: No
Pressure: No
Reactive: No

**U.S. State Regulations**
None of this product’s components are listed on the state lists from CA, MA, MN, NJ or PA.
Not regulated under California Proposition 65

**Canada**
This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

**WHMIS Classification**
Not a Controlled Product under Canada's Workplace Hazardous Material Information System.

**Canadian Inventory**
All components of this product are listed on either the DSL or the NDSL.

**U.S. Inventory (TSCA)**
All the components of this substance are listed on or are exempt from the inventory.

**Component Analysis - Inventory**
No information available

---

**Section 16 - OTHER INFORMATION**

**Key / Legend**
ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines;
Other Information
SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE
PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE,
except that the product shall conform to contracted specifications, and that the product does not
infringe any valid United States or Canadian patent. No claim of any kind shall be greater in
amount than the purchase price of the quantity of product in respect of which damages are
claimed. In no event shall Seller be liable for incidental or consequential damages, whether
Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

New MSDS: 7/12/2010
MSDS Update: 5/24/2011
Material Name: Elmer's Multi-Purpose Spray Adhesive

Manufacturer Information
Elmer's Products, Inc.
460 Polaris Parkway
Westerville, OH 43082

Emergency Phone Number:
Poison Control Center
1-888-516-2502

For additional product information, access our website at www.elmers.com or call 1-888-435-6377. To place an order, call 1-800-848-9400.

Trade Names/Synonyms
E421; E422; E451; E452; 60451; 61451

Product Use
adhesives

NFPA Ratings:
Health: 2 Fire: 4 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

EMERGENCY OVERVIEW
Color: white
Physical Form: liquid
Odor: minty odor
Major Health Hazards: eye irritation
Physical Hazards: Extremely flammable. Flash back hazard. Containers may rupture or explode if exposed to heat.

**POTENTIAL HEALTH EFFECTS**

**Inhalation**
**Short Term:** irritation, changes in body temperature, nausea, vomiting, fatigue, stomach pain, difficulty breathing, irregular heartbeat, headache, drowsiness, dizziness, loss of coordination, blurred vision, kidney damage, liver damage, convulsions, unconsciousness, coma
**Long Term:** irritation, changes in body temperature, headache, drowsiness, dizziness, loss of coordination, loss of coordination, blood disorders, nausea, vomiting, irregular heartbeat, kidney damage, liver damage, convulsions, unconsciousness, coma

**Skin**
**Short Term:** irritation
**Long Term:** irritation, tingling sensation

**Eye**
**Short Term:** irritation (possibly severe), blurred vision, tearing
**Long Term:** irritation, eye damage

**Ingestion**
**Short Term:** nausea, vomiting, diarrhea, headache, drowsiness, dizziness, loss of coordination, unconsciousness, stomach pain, kidney damage, liver damage
**Long Term:** kidney damage, liver damage

**Regulatory Status**
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is a controlled product according to Canada’s Controlled Product Regulation.

*** Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS***

<table>
<thead>
<tr>
<th>CAS</th>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>107-83-5</td>
<td>2-METHYLPENTANE</td>
<td>35</td>
</tr>
<tr>
<td>67-64-1</td>
<td>ACETONE</td>
<td>20</td>
</tr>
<tr>
<td>75-28-5</td>
<td>ISOBUTANE</td>
<td>15</td>
</tr>
</tbody>
</table>
### Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Hexane isomers, Aliphatic hydrocarbon gases (Alkane [C1-C4]), Pentanes.

---

### * * * Section 4 - FIRST AID MEASURES* * *

**Inhalation**

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

**Skin**

If bonding occurs, immerse the bonded surfaces in warm soapy water. Peel or roll the surfaces apart using a blunt edge, such as a spatula or spoon handle. Do not pull surfaces apart with a direct opposing action. If burns occur, treat as thermal burns. Get medical attention, if needed.

**Eyes**

If bonding to tissues occurs, wash with large amounts of warm water. Cover both eyes with sterile bandages. The eye will open without further action. Do not pull surfaces apart with a direct opposing action. If burns occur, treat as thermal burns. Get medical attention.

**Ingestion**

If swallowed, get medical attention.

**Note to Physicians**

For inhalation, consider oxygen.

---

### * * * Section 5 - FIRE FIGHTING MEASURES* * *

See Section 9 for Flammability Properties
**Flammable Properties**
Severe fire hazard. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Containers may rupture or explode if exposed to heat.

**Extinguishing Media**
carbon dioxide, regular dry chemical

**Protective Equipment and Precautions for Firefighters**
Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

**Fire Fighting Measures**
Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

**Sensitivity to Mechanical Impact**
Not sensitive

**Sensitivity to Static Discharge**
Yes

---

**Section 6 - ACCIDENTAL RELEASE MEASURES**

**Occupational spill/release**
Avoid heat, flames, sparks and other sources of ignition. Do not touch spilled material. Stop leak if possible without personal risk. Small spills of the liquid component: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Spills with a large number of canisters: Reduce vapors with water spray. Remove sources of ignition. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

---

**Section 7 - HANDLING AND STORAGE**

**Handling Procedures**
Avoid heat, flames, sparks and other sources of ignition. Avoid contact with eyes. Do not eat, drink, or smoke when using this product. Wash thoroughly after handling. Since emptied containers retain material residue, follow safe handling/label warnings even after container is emptied. Do not cut, puncture, or weld on or near this container.

**Storage Procedures**
Store and handle in accordance with all current regulations and standards. Store below 49 C. Keep away from heat, sparks and flame. Avoid direct sunlight.
See original container for storage recommendations. Keep separated from incompatible substances.

### Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Component Exposure Limits

**Acetone (67-64-1)**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Limit TWA</th>
<th>Limit STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>500 ppm</td>
<td>750 ppm</td>
</tr>
<tr>
<td>NIOSH</td>
<td>250 ppm TWA; 590 mg/m3 TWA</td>
<td></td>
</tr>
<tr>
<td>OSHA (Vacated)</td>
<td>2400 mg/m3 STEL (The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors); 1000 ppm STEL</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Agency</th>
<th>Limit TWA</th>
<th>Limit STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIOSH</td>
<td>1000 ppm TWA; 2400 mg/m3 TWA</td>
<td></td>
</tr>
<tr>
<td>OSHA (Vacated)</td>
<td>750 ppm TWA; 1800 mg/m3 TWA</td>
<td></td>
</tr>
</tbody>
</table>

**Isobutane (75-28-5)**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Limit TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>1000 ppm TWA</td>
</tr>
<tr>
<td>NIOSH</td>
<td>800 ppm TWA; 1900 mg/m3 TWA</td>
</tr>
</tbody>
</table>

**Propane (74-98-6)**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Limit TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>600 ppm TWA</td>
</tr>
<tr>
<td>NIOSH</td>
<td>1000 ppm TWA; 1800 mg/m3 TWA</td>
</tr>
<tr>
<td>OSHA (Vacated)</td>
<td>1000 ppm TWA; 1800 mg/m3 TWA</td>
</tr>
</tbody>
</table>

**Dimethyl Ether (115-10-6)**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Limit TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIHA</td>
<td>1000 ppm TWA</td>
</tr>
</tbody>
</table>

**Pentane (109-66-0)**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Limit TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>600 ppm TWA</td>
</tr>
<tr>
<td>NIOSH</td>
<td>120 ppm TWA; 350 mg/m3 TWA</td>
</tr>
<tr>
<td>OSHA (Vacated)</td>
<td>750 ppm STEL; 2250 mg/m3 STEL</td>
</tr>
<tr>
<td>OSHA</td>
<td>1000 ppm TWA; 2950 mg/m3 TWA</td>
</tr>
</tbody>
</table>

OSHA (Vacated): 750 ppm STEL; 2250 mg/m3 STEL
600 ppm TWA; 1800 mg/m3 TWA

**BENZENE (71-43-2)**

**ACGIH:** 0.5 ppm TWA  
2.5 ppm STEL  
Skin - potential significant contribution to overall exposure by the cutaneous route  

**NIOSH:** 0.1 ppm TWA  
1 ppm STEL  

**OSHA:** 10 ppm TWA (applies to industry segments exempt from the benzene standard at 29 CFR 1910.1028); 1 ppm TWA  
5 ppm STEL (see 29 CFR 1910.1028)  
25 ppm Ceiling

**OSHA (Vacated):** 25 ppm Ceiling (unless specified in 1910.1028)  
50 ppm STEL (unless specified in 1910.1028, 10 min)  
10 ppm TWA (unless specified in 1910.1028)

**ACETALDEHYDE (75-07-0)**

**ACGIH:** 25 ppm Ceiling  

**OSHA:** 200 ppm TWA; 360 mg/m3 TWA  
150 ppm STEL; 270 mg/m3 STEL

**OSHA (Vacated):** 100 ppm TWA; 180 mg/m3 TWA

**FORMALDEHYDE (50-00-0)**

**ACGIH:** 0.3 ppm Ceiling  

**NIOSH:** 0.016 ppm TWA  
0.1 ppm Ceiling (15 min)  

**OSHA:** 0.75 ppm TWA  
2 ppm STEL (see 29 CFR 1910.1048)  
5 ppm Ceiling (unless specified in 1910.1048)  

**OSHA (Vacated):**
10 ppm STEL (unless specified in 1910.1048, 30 min)
3 ppm TWA (unless specified in 1910.1048)

Ventilation
Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT
Eyes/Face
Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Protective Clothing
Wear appropriate chemical resistant clothing.

Glove Recommendations
Wear appropriate chemical resistant gloves.

Respiratory Protection
Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

For Unknown Concentrations or Immediately Dangerous to Life or Health -
Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode. Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

*** Section 9 - PHYSICAL AND CHEMICAL PROPERTIES***

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Appearance</th>
<th>Color</th>
<th>Physical Form</th>
<th>Odor Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerosol</td>
<td>white liquid</td>
<td>white</td>
<td>liquid</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available</td>
<td>minty odor</td>
<td>Boiling Point: -44 - -44 °C</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>-104 °C (PMCC)</td>
<td>Evaporation Rate: faster than, butyl acetate</td>
<td>UEL: 18.0 %</td>
<td></td>
</tr>
</tbody>
</table>
**Vapor Pressure:** Not available

**Specific Gravity (water = 1):** 0.6932

**Coeff. Water/Oil Dist:** Not available

**VOC less Water and Exempt Solvents:** 522 g/L

**Volatility by Weight:** 81.1 %

---

**Vapor Density (air = 1):** >1

**Water Solubility:** negligible

**VOC:** 64.3 % weight

**Volatility by Volume:** 87.0 %

---

### **Section 10 - STABILITY AND REACTIVITY**

**Chemical Stability**
Stable at normal temperatures and pressure.

**Conditions to Avoid**
Avoid heat, flames, sparks and other sources of ignition. Minimize contact with material. Containers may rupture or explode if exposed to heat.

**Materials to Avoid**
acids, amines, bases, oxidizing materials, reducing agents

**Decomposition Products**
hydrocarbons, oxides of carbon, oxides of sulfur

**Possibility of Hazardous Reactions**
Will not polymerize.

---

### **Section 11 - TOXICOLOGICAL INFORMATION**

**Component Analysis - LD50/LC50**
The components of this material have been reviewed in various sources and the following selected endpoints are published:

**ACETONE (67-64-1)**
Oral LD50 Rat 5800 mg/kg
ISOBUTANE (75-28-5)
Inhalation LC50 Rat 658 mg/L 4 h

PROPANE (74-98-6)
Inhalation LC50 Rat 658 mg/L 4 h

DIMETHYL ETHER (115-10-6)
Inhalation LC50 Rat 308.5 mg/L 4 h

PENTANE (109-66-0)
Inhalation LC50 Rat 364 g/m3 4 h; Dermal LD50 Rabbit 3000 mg/kg; Oral LD50 Rat >2000 mg/kg

BENZENE (71-43-2)
Inhalation LC50 Rat 13050-14380 ppm 4 h; Oral LD50 Rat 1800 mg/kg

ACETALDEHYDE (75-07-0)
Oral LD50 Rat 1930 mg/kg

FORMALDEHYDE (50-00-0)
Oral LD50 Rat 500 mg/kg; Inhalation LC50 Rat 0.578 mg/L 4 h

RTECS Acute Toxicity (selected)
The components of this material have been reviewed, and RTECS publishes the following endpoints:

ACETONE (67-64-1)
Inhalation: 50100 mg/m3/8 hour Inhalation Rat LC50; 50100 mg/m3 Inhalation Rat LC50
Oral: 5800 mg/kg Oral Rat LD50; 5800 mg/kg Oral Rat LD50
Skin: >9400 uL/kg Skin Guinea pig LD50

ISOBUTANE (75-28-5)
Inhalation: 57000 ppm/15 minute(s) Inhalation Rat LC50; 57 pph/15 minute(s) Inhalation Rat LC50

PROPAANE (74-98-6)
Inhalation: >800000 ppm/15 minute(s) Inhalation Rat LC50

DIMETHYL ETHER (115-10-6)
Inhalation: 308 gm/m3 Inhalation Rat LC50; 309 gm/m3/4 hour Inhalation Rat LC50;
164000 ppm/4 hour Inhalation Rat LC50

PENTANE (109-66-0)
Inhalation: 364 gm/m3/4 hour Inhalation Rat LC50
Oral: >2000 mg/kg Oral Rat LD50

Acute Toxicity Level
ACETONE (67-64-1)
Moderately inhalation
Toxic: ingestion

ISOBUTANE (75-28-5)
Non Toxic: inhalation

DIMETHYL ETHER (115-10-6)
Slightly inhalation

PENTANE (109-66-0)
No Toxic: inhalation

BENZENE (71-43-2)
Highly dermal absorption

ACETALDEHYDE (75-07-0)
Moderately inhalation, ingestion

FORMALDEHYDE (50-00-0)
Highly inhalation

Component Carcinogenicity
ACETONE (67-64-1)
ACGIH: A4 - Not Classifiable as a Human Carcinogen

BENZENE (71-43-2)
ACGIH: A1 - Confirmed Human Carcinogen
IARC: Monograph 100F [in preparation]; Supplement 7 [1987]; Monograph 29 [1982] (Group 1 (carcinogenic to humans))
OSHA: Cancer hazard - see 29 CFR 1910.1028
NTP: Known Human Carcinogen

ACETALDEHYDE (75-07-0)
ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC: Monograph 100E [in preparation] (associated with consumption of alcoholic beverages) (Group 1 (carcinogenic to humans))
NTP: Reasonably Anticipated To Be A Human Carcinogen

FORMALDEHYDE (50-00-0)
ACGIH: A2 - Suspected Human Carcinogen
IARC: Monograph 100F [in preparation]; Monograph 88 [2006]; Monograph 62 [1995]; Supplement 7 [1987] (Group 1 (carcinogenic to humans))
OSHA: Irritant and potential cancer hazard - see 29 CFR 1910.1048
NTP: Known Human Carcinogen

Irritation
eye irritation

RTECS Irritation
The components of this material have been reviewed, and RTECS publishes the following endpoints:

ACETONE (67-64-1)
500 ppm Eyes Human; 186300 ppm Eyes Human mild; 10 uL Eyes Rabbit mild; 20 mg/24 hour Eyes Rabbit moderate; 20 mg Eyes Rabbit severe; 500 mg/24 hour Skin Rabbit mild; 395 mg/open Skin Rabbit mild

Local Effects
2-METHYLPENTANE (107-83-5)
Irritant: inhalation, skin, eye

ACETONE (67-64-1)
Irritant: inhalation, skin, eye
ISOButANE (75-28-5)
Irritant: inhalation
DIMethyl ETHER (115-10-6)
Irritant: inhalation, skin, eye
PENTANE (109-66-0)
Irritant: inhalation, skin
BENZENE (71-43-2)
Irritant: inhalation, skin, eye
ACETALDEHYDE (75-07-0)
Irritant: inhalation, skin, eye
FORMALDEHYDE (50-00-0)
Irritant: skin, eye
Corrosive: inhalation, skin, eye, ingestion

Target Organs
2-METHYLPENTANE (107-83-5)
central nervous system
ACETONE (67-64-1)
central nervous system
ISOButANE (75-28-5)
central nervous system
PROPANE (74-98-6)
central nervous system
DIMethyl ETHER (115-10-6)
central nervous system
PENTANE (109-66-0)
central nervous system
BENZENE (71-43-2)
immune system (blood), central nervous system
ACETALDEHYDE (75-07-0)
immune system (sensitizer), central nervous system
FORMALDEHYDE (50-00-0)
immune system (sensitizer)

**Medical Conditions Aggravated by Exposure**
respiratory disorders, skin disorders and allergies

**RTECS Tumorigenic**
The components of this material have been reviewed, and RTECS publishes data for one or more components.

**RTECS Mutagenic**
The components of this material have been reviewed, and RTECS publishes data for one or more components.

**RTECS Reproductive Effects**
The components of this material have been reviewed, and RTECS publishes data for one or more components.

**Additional Data**
Stimulants such as epinephrine may induce ventricular fibrillation. Alcohol may enhance the toxic effects.

---

**Component Analysis - Aquatic Toxicity**

**ACETONE (67-64-1)**

**Fish:**
- 96 Hr LC50 Oncorhynchus mykiss: 4.74 - 6.33 mL/L; 96 Hr LC50 Pimephales promelas: 6210 - 8120 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 8300 mg/L

**Invertebrate:**
- 48 Hr EC50 Daphnia magna: 10294 - 17704 mg/L [Static]; 48 Hr EC50 Daphnia magna: 12600 - 12700 mg/L

**PENTANE (109-66-0)**

**Fish:**
- 96 Hr LC50 Oncorhynchus mykiss: 9.87 mg/L; 96 Hr LC50 Pimephales promelas: 11.59 mg/L; 96 Hr LC50 Lepomis macrochirus: 9.99 mg/L

**Invertebrate:**
- 48 Hr EC50 Daphnia magna: 9.74 mg/L

**BENZENE (71-43-2)**

**Fish:**
- 96 Hr LC50 Pimephales promelas: 10.7-14.7 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 5.3 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 22.49 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 28.6 mg/L [static]; 96 Hr LC50 Pimephales promelas: 22330-41160 µg/L [static]; 96 Hr LC50 Lepomis macrochirus: 70000-142000 µg/L [static]
Algae: 72 Hr EC50 Pseudokirchneriella subcapitata: 29 mg/L

Invertebrate: 48 Hr EC50 Daphnia magna: 8.76 - 15.6 mg/L [Static]; 48 Hr EC50 Daphnia magna: 10 mg/L

**ACETALDEHYDE (75-07-0)**

Fish: 96 Hr LC50 Pimephales promelas: 28.0-34.0 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 53 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 1.8-2.4 mg/L [static]; 96 Hr LC50 Pimephales promelas: 39.8-46.8 mg/L [static]

Algae: 120 Hr EC50 Nitzschia linearis: 237 - 249 mg/L

Invertebrate: 48 Hr EC50 Daphnia magna: 3.64 - 6.15 mg/L [Static]; 48 Hr EC50 Daphnia magna: 48.3 mg/L

**FORMALDEHYDE (50-00-0)**

Fish: 96 Hr LC50 Pimephales promelas: 22.6 - 25.7 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 1510 µg/L [static]; 96 Hr LC50 Brachydanio rerio: 41 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 0.032 - 0.226 mL/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 100 - 136 mg/L [static]; 96 Hr LC50 Pimephales promelas: 23.2 - 29.7 mg/L [static]

Invertebrate: 48 Hr LC50 Daphnia magna: 2 mg/L; 48 Hr EC50 Daphnia magna: 11.3 - 18 mg/L [Static]

---

*** Section 13 - DISPOSAL CONSIDERATIONS***

**Disposal Methods**
Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.

**Component Waste Numbers**

**ACETONE (67-64-1)**

RCRA: waste number U002 (Ignitable waste)

**BENZENE (71-43-2)**

RCRA: waste number U019 (Ignitable waste, Toxic waste)

0.5 mg/L regulatory level

**ACETALDEHYDE (75-07-0)**

RCRA: waste number U001 (Ignitable waste)
FORMALDEHYDE (50-00-0)
RCRA: waste number U122

*** Section 14 - TRANSPORT INFORMATION***

US DOT Information
Shipping Name: Aerosols
Hazard Class: 2.1
UN/NA #: UN1950
Required Label(s): 2.1

TDG Information
Shipping Name: Aerosols
Hazard Class: 2.1
UN #: UN1950
Required Label(s): 2.1

*** Section 15 - REGULATORY INFORMATION***

U.S. Federal Regulations
This material contains one or more of the following chemicals required to be identified under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

ACETONE (67-64-1)
CERCLA: 5000 lb final RQ; 2270 kg final RQ

PENTANE (109-66-0)
TSCA 12b: Section 4, 1 % de minimus concentration

BENZENE (71-43-2)
SARA 313: 0.1 % de minimis concentration

CERCLA: 10 lb final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule); 4.54 kg final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule)

ACETALDEHYDE (75-07-0)
SARA 313: 0.1 % de minimis concentration
CERCLA: 1000 lb final RQ; 454 kg final RQ
TSCA 12b: Section 4, 0.1 % de minimus concentration
OSHA (safety): 2500 lb TQ

FORMALDEHYDE (50-00-0)

SARA 302/304: 500 lb TPQ

100 lb EPCRA RQ

SARA 313: 0.1 % de minimis concentration
CERCLA: 100 lb final RQ; 45.4 kg final RQ
OSHA (safety): 1000 lb TQ

SARA 311/312
Acute Health: Yes Chronic Health: No Fire: Yes Pressure: Yes Reactive: No

U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-METHYLPENTANE</td>
<td>107-83-5</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>ACETONE</td>
<td>67-64-1</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>ISOBUTANE</td>
<td>75-28-5</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>PROPANE</td>
<td>74-98-6</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>DIMETHYL ETHER</td>
<td>115-10-6</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>PENTANE</td>
<td>109-66-0</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>BENZENE</td>
<td>71-43-2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>ACETALDEHYDE</td>
<td>75-07-0</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>FORMALDEHYDE</td>
<td>50-00-0</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the state of California to cause cancer.
WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects.

Canada
This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Canada WHMIS
The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

2-METHYLPENTANE (107-83-5)
1 %
ACETONE (67-64-1)
1 %
PENTANE (109-66-0)
1 %

WHMIS Classification
D2B, B5.

Canadian Inventory
All identified components are listed on the DSL.

U.S. Inventory (TSCA)
All the components of this substance are listed on or are exempt from the inventory.

Component Analysis - Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>US</th>
<th>CA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-METHYLPENTANE</td>
<td>107-83-5</td>
<td>Yes</td>
<td>DSL</td>
</tr>
<tr>
<td>ACETONE</td>
<td>67-64-1</td>
<td>Yes</td>
<td>DSL</td>
</tr>
<tr>
<td>ISOBUTANE</td>
<td>75-28-5</td>
<td>Yes</td>
<td>DSL</td>
</tr>
<tr>
<td>PROPANE</td>
<td>74-98-6</td>
<td>Yes</td>
<td>DSL</td>
</tr>
<tr>
<td>DIMETHYL ETHER</td>
<td>115-10-6</td>
<td>Yes</td>
<td>DSL</td>
</tr>
<tr>
<td>PENTANE</td>
<td>109-66-0</td>
<td>Yes</td>
<td>DSL</td>
</tr>
</tbody>
</table>
**Section 16 - OTHER INFORMATION**

**Key / Legend**
ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLE - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

**Other Information**
SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

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**New MSDS:** 1/19/2012  
**MSDS Update:** 2/8/2012
Material Name: Elmer's Carpenter's Interior Wood Glue

Manufacturer Information
Elmer's Products, Inc.
460 Polaris Parkway
Westerville, OH 43082
Emergency Phone Number:
Poison Control Center
1-888-516-2502
For additional product information, access our website at www.elmers.com or call 1-888-435-6377. To place an order, call 1-800-848-9400.

Trade Names/Synonyms
US: E614; E700; E701; E702; E704; E705; E706; E970; E980; E1367; E1825; E1850; E7000; E7000D; E7000E; E7010; E7010Q; E7020; E7040; E7050; E9702; E9703; E9705; Canada: 60613; 60614; 60615; 60616; 60617; 60618; 60619; 61367; 69702; 69703; 69705; 69707

Product Use
adhesives

* * * Section 2 - HAZARDS IDENTIFICATION* * *

NFPA Ratings:
Health: 1 Fire: 1 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

EMERGENCY OVERVIEW
Color: yellow
Physical Form: liquid
Odor: Mild acetic
Major Health Hazards: No significant target effects reported.

POTENTIAL HEALTH EFFECTS
Inhalation
**Short Term:** no information on significant adverse effects
**Long Term:** no information on significant adverse effects

Skin
**Short Term:** no information on significant adverse effects
**Long Term:** no information on significant adverse effects

Eye
**Short Term:** no information on significant adverse effects
**Long Term:** no information on significant adverse effects

Ingestion
**Short Term:** no information on significant adverse effects
**Long Term:** no information on significant adverse effects

**Regulatory Status**
This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

* * * Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS* * *

<table>
<thead>
<tr>
<th>CAS</th>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixture</td>
<td>PROPRIETARY NON-HAZARDOUS INGREDIENTS</td>
<td>100</td>
</tr>
</tbody>
</table>

* * * Section 4 - FIRST AID MEASURES* * *

**Inhalation**
If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

**Skin**
If bonding occurs, immerse the bonded surfaces in warm soapy water. Peel or roll the surfaces apart using a blunt edge, such as a spatula or spoon handle. Do not pull surfaces apart with a direct opposing action. If burns occur, treat as thermal burns. Get medical attention, if needed.

**Eyes**
If bonding to tissues occurs, wash with large amounts of warm water. Cover both eyes with sterile bandages. The eye will open without further action. Do not pull surfaces apart with a direct opposing action. If burns occur, treat as thermal burns. Get medical attention.

**Ingestion**
If swallowed, get medical attention.
**Section 5 - FIRE FIGHTING MEASURES**

See Section 9 for Flammability Properties

**Flammable Properties**
Slight fire hazard.

**Extinguishing Media**
carbon dioxide, regular dry chemical, regular foam, water

**Fire Fighting Measures**
Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

**Hazardous Combustion Products**
Combustion: oxides of carbon

**Sensitivity to Mechanical Impact**
Not sensitive

**Sensitivity to Static Discharge**
Not sensitive

---

**Section 6 - ACCIDENTAL RELEASE MEASURES**

**Occupational spill/release**
Stop leak if possible without personal risk. **Small spills:** Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

---

**Section 7 - HANDLING AND STORAGE**

**Handling Procedures**
Wash thoroughly after handling.

**Storage Procedures**
Store and handle in accordance with all current regulations and standards. See original container for storage recommendations. Keep separated from incompatible substances.

---

**Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Component Exposure Limits**
ACGIH, NIOSH, OSHA, and AIHA have not developed exposure limits for any of this product's components.

**Ventilation**
Based on available information, additional ventilation is not required.

**PERSONAL PROTECTIVE EQUIPMENT**
Eyes/face
Eye protection not required under normal conditions.

Protective clothing
Protective clothing is not required under normal conditions.

Glove recommendations
Protective gloves are not required under normal conditions.

Respiratory protection
No respirator is required under normal conditions of use.

---

**Section 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Physical State: Liquid</th>
<th>Appearance: Yellow liquid</th>
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</thead>
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<tr>
<td>Color: yellow</td>
<td>Physical Form: liquid</td>
</tr>
<tr>
<td>Odor: Mild acetic</td>
<td>Odor Threshold: Not available</td>
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<tr>
<td>pH: 4.1-4.4</td>
<td>Melting/Freezing Point: 0 °C</td>
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<tr>
<td>Boiling Point: 100 °C</td>
<td>Flash Point: No data available</td>
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<tr>
<td>Evaporation Rate: Not available</td>
<td>Vapor Pressure: Not available</td>
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<tr>
<td>Vapor Density (air = 1): Not available</td>
<td>Density: 8.9-9.3 g/cc</td>
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<tr>
<td>Specific Gravity (water = 1): 1.07-1.12</td>
<td>Water Solubility: Dispersible</td>
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<tr>
<td>Coeff. Water/Oil Dist: Not available</td>
<td>Viscosity: Not available</td>
</tr>
<tr>
<td>VOC: Near Zero</td>
<td>Volatility: Not available</td>
</tr>
</tbody>
</table>

---

**Section 10 - STABILITY AND REACTIVITY**

Chemical stability
Stable at normal temperatures and pressure.

Conditions to avoid
Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Materials to avoid
oxidizing materials
Hazardous Decomposition
Combustion: oxides of carbon
Possibility of Hazardous Reactions
Will not polymerize.

* * * Section 11 - TOXICOLOGICAL INFORMATION* * *

Component Analysis - LD50/LC50
The components of this material have been reviewed in various sources and no selected endpoints have been identified.

RTECS Acute Toxicity (selected)
The components of this material have been reviewed and RTECS publishes no data as of the date on this document.

Component Carcinogenicity
None of this product's components are listed by ACGIH, IARC, OSHA, or NTP.

RTECS Irritation
The components of this material have been reviewed and RTECS publishes no data as of the date on this document.

Medical Conditions Aggravated by Exposure
None known.

Tumorigenic
No data available for the mixture.

Mutagenic
No data available for the mixture.

Reproductive Effects
No data available for the mixture.

* * * Section 12 - ECOLOGICAL INFORMATION* * *

Component Analysis - Aquatic Toxicity
No LOLI ecotoxicity data are available for this product's components.

* * * Section 13 - DISPOSAL CONSIDERATIONS* * *

Disposal Methods
Dispose in accordance with all applicable regulations.

Component Waste Numbers
The U.S. EPA has not published waste numbers for this product's components.

* * * Section 14 - TRANSPORT INFORMATION* * *
US DOT Information: No Classification assigned.
TDG Information: No Classification assigned.

* * * Section 15 - REGULATORY INFORMATION* * *

U.S. Federal Regulations
None of this product's components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA 311/312
Acute Health: No Chronic Health: No Fire: No Pressure: No Reactive: No

U.S. State Regulations
None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA.
Not regulated under California Proposition 65

WHMIS Classification
Not a Controlled Product under Canada's Workplace Hazardous Material Information System.

U.S. Inventory (TSCA)
All the components of this substance are listed on or are exempt from the inventory.

Component Analysis - Inventory
No information available

* * * Section 16 - OTHER INFORMATION* * *

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New MSDS: 7/12/2010
MSDS Update: 9/5/2012
1. **Product and company identification**

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Essence Interior Flat Latex Wall Paint</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Material uses</strong></td>
<td>Coatings: Waterborne paint.</td>
</tr>
<tr>
<td><strong>Code</strong></td>
<td>184A100, 120, 129, 310, 320, 330</td>
</tr>
<tr>
<td><strong>Manufacturer</strong></td>
<td>Ace Hardware Paint Division 21901 South Central Avenue, Matteson, IL 60443-2800 Phone #: (800) 311-8324</td>
</tr>
<tr>
<td><strong>Supplier</strong></td>
<td>Ace Hardware Corporation 2200 Kensington Court, Oak Brook, IL 60523-2100 (800) 311-8324</td>
</tr>
<tr>
<td><strong>Validation date</strong></td>
<td>1/25/2012.</td>
</tr>
<tr>
<td><strong>Prepared by</strong></td>
<td>Atrion Regulatory Services, Inc.</td>
</tr>
<tr>
<td><strong>In case of emergency</strong></td>
<td>Infotrac (800) 535-5053 Outside USA (352) 323-3500</td>
</tr>
</tbody>
</table>

2. **Hazards identification**

**Physical state**: Liquid.

**Color**: Various

**Odor**: Characteristic.

**Emergency overview**

**Hazard statements**: MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD - CAN CAUSE CANCER. BIRTH DEFECT HAZARD - CAN CAUSE BIRTH DEFECTS. DEVELOPMENTAL HAZARD - CAN CAUSE ADVERSE DEVELOPMENTAL EFFECTS.

**Precautions**: Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not get on skin or clothing. Avoid contact with eyes. Avoid exposure during pregnancy. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

**OSHA/HCS status**: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Routes of entry**: Dermal contact. Eye contact. Inhalation. Ingestion.

**Potential acute health effects**

- **Inhalation**: Slightly irritating to the respiratory system.
- **Ingestion**: No known significant effects or critical hazards.
- **Skin**: Slightly irritating to the skin.
- **Eyes**: Slightly irritating to the eyes.

**Potential chronic health effects**

- **Chronic effects**: Contains material that may cause target organ damage, based on animal data.
- **Carcinogenicity**: Can cause cancer. Risk of cancer depends on duration and level of exposure.
- **Mutagenicity**: No known significant effects or critical hazards.
- **Teratogenicity**: Can cause birth defects.
- **Developmental effects**: Can cause developmental abnormalities.
- **Fertility effects**: No known significant effects or critical hazards.
2. Hazards identification

Target organs: Contains material which may cause damage to the following organs: kidneys, lungs, upper respiratory tract, skin, eyes, and testes.

Over-exposure signs/symptoms

Inhalation: Adverse symptoms may include the following:
- respiratory tract irritation
- coughing

Ingestion: No specific data.

Skin: Adverse symptoms may include the following:
- irritation
- redness

Eyes: Adverse symptoms may include the following:
- irritation
- watering
- redness

Medical conditions aggravated by over-exposure: Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>United States</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>10-30</td>
</tr>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>5-10</td>
</tr>
<tr>
<td>Silica, amorphous - diatomaceous earth</td>
<td>61790-53-2</td>
<td>1-5</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>1-5</td>
</tr>
<tr>
<td>Palygorskite</td>
<td>12174-11-7</td>
<td>0.1-1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Canada</th>
<th>CAS number</th>
<th>%</th>
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<tbody>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>10-30</td>
</tr>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>5-10</td>
</tr>
<tr>
<td>Silica, amorphous - diatomaceous earth</td>
<td>61790-53-2</td>
<td>1-5</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>1-5</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>107-21-1</td>
<td>0.1-1</td>
</tr>
<tr>
<td>Palygorskite</td>
<td>12174-11-7</td>
<td>0.1-1</td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Eye contact: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.

Skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms occur.
4. First aid measures

Ingestion: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product: In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable: Use an extinguishing agent suitable for the surrounding fire.

Not suitable: None known.

Special exposure hazards: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- metal oxide/oxides

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
7. Handling and storage

Handling: Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Avoid exposure - obtain special instructions before use. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium dioxide</td>
<td>ACGIH TLV (United States, 2/2010).</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hour(s).</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hour(s). Form: Total dust</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 6/2010).</td>
</tr>
<tr>
<td></td>
<td>TWA: 15 mg/m³ 8 hour(s). Form: Total dust</td>
</tr>
<tr>
<td></td>
<td>TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 6/2010).</td>
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<tr>
<td></td>
<td>TWA: 15 mg/m³ 8 hour(s). Form: Total dust</td>
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<tr>
<td></td>
<td>TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 6/2010).</td>
</tr>
<tr>
<td></td>
<td>TWA: 15 mg/m³ 8 hour(s). Form: Total dust</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>OSHA PEL Z3 (United States, 9/2005).</td>
</tr>
<tr>
<td></td>
<td>TWA: 6 mg/m³ 8 hour(s).</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL Z3 (United States, 9/2005). Notes: 80/(%SiO2)</td>
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<tr>
<td></td>
<td>TWA: 80 mg/m³ 8 hour(s).</td>
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<td></td>
<td>NIOSH REL (United States, 6/2009).</td>
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<tr>
<td></td>
<td>TWA: 6 mg/m³ 10 hour(s). Form: Respirable fraction</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL Z3 (United States, 9/2005). Notes: 10/(SiO2+2)</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hour(s). Form: Respirable</td>
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<tr>
<td></td>
<td>TWA: 0.1 mg/m³, (as quartz) 8 hour(s). Form: Respirable dust</td>
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<td></td>
<td>ACGIH TLV (United States, 2/2010).</td>
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<td>NIOSH REL (United States, 6/2009).</td>
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<td>TWA: 0.05 mg/m³ 10 hour(s). Form: respirable dust</td>
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<td>OSHA PEL Z3 (United States, 9/2005). Notes: 30/(%SiO2+2)</td>
</tr>
<tr>
<td></td>
<td>TWA: 30 mg/m³ 8 hour(s). Form: Total dust.</td>
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</table>

Canada

<table>
<thead>
<tr>
<th>Occupational exposure limits</th>
<th>TWA (8 hours)</th>
<th>STEL (15 mins)</th>
<th>Ceiling</th>
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<tbody>
<tr>
<td>Ingredient</td>
<td>List name</td>
<td>ppm</td>
<td>mg/m³</td>
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</table>

1/25/2012. United States/Canada 4/11
8. Exposure controls/personal protection

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<th></th>
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<td>20</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 f/cc</td>
</tr>
<tr>
<td>Silica, amorphous - diatomaceous earth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.5</td>
</tr>
</tbody>
</table>

Notes:

Form: [a]Respirable fraction [b]Respirable particulate [c]Respirable [d]Respirable fraction: means that size fraction of the airborne particulate deposited in the gas-exchange region of the respiratory tract and collected during air sampling with a particle size-selective device that, (a) meets the ACGIH particle size–selective sampling criteria for airborne particulate matter; and (b) has the cut point of 4 µm at 50 per cent collection efficiency. [e]Respirable dust. [f]Respirable dust [g]Total dust [h]Total dust [i]Total dust. [j]RESPIRABLE FIBRES (other than respirable asbestos fibres): Objects, other than respirable asbestos fibres, longer than 5 µm, having a diameter of less than 3 µm and a ratio of length to diameter of more than 3 :1. [k]Aerosol [l]aerosol [m]Particulate [n]Vapour [o]vapour and mist [p]Inhalable fraction: means that size fraction of the airborne particulate deposited anywhere in the respiratory tract and collected during air sampling with a particle size-selective device that, (a) meets the ACGIH particle size-selective sampling criteria for airborne particulate matter; and (b) has the cut point of 100 µm at 50 per cent collection efficiency. [q]The value is for particulate matter containing no asbestos and < 1 per cent crystalline silica.

Consult local authorities for acceptable exposure limits.

**Recommended monitoring procedures**: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Engineering measures**: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Hygiene measures**: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking, using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal protection**

**Respiratory**: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
8. Exposure controls/personal protection

**Hands**: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Eyes**: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

**Skin**: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Environmental exposure controls**: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

- **Physical state**: Liquid.
- **Flash point**: Not available.
- **Auto-ignition temperature**: Not available.
- **Flammable limits**: Not available.
- **Color**: Various
- **Odor**: Characteristic.
- **pH**: Not available.
- **Boiling/condensation point**: Not available.
- **Melting/freezing point**: Not available.
- **Relative density**: 1.178 to 1.43
- **Density**: 1.176 to 1.427 g/cm³
- **Vapor pressure**: Not available.
- **Vapor density**: Not available.
- **VOC content**: 0.267 to 0.367 lbs/gal (32 to 44 g/l)
- **Odor threshold**: Not available.
- **Evaporation rate**: Not available.
- **Viscosity**: Not available.
- **Solubility**: Not available.
- **LogK_{ow}**: Not available.

10. Stability and reactivity

- **Chemical stability**: The product is stable.
- **Conditions to avoid**: No specific data.
- **Incompatible materials**: Reactive or incompatible with the following materials: oxidizing materials, reducing materials, metals and acids.
- **Hazardous decomposition products**: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- **Possibility of hazardous reactions**: Under normal conditions of storage and use, hazardous reactions will not occur.

Under normal conditions of storage and use, hazardous polymerization will not occur.
11. Toxicological information

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium dioxide</td>
<td>TDLo Oral</td>
<td>Rat</td>
<td>60 g/kg</td>
<td>-</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>4700 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Chronic toxicity
Not available.

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitizer
Not available.

Carcinogenicity

Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>EPA</th>
<th>NIOSH</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium dioxide</td>
<td>A4</td>
<td>2B</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Silica, amorphous -</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>diatomaceous earth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>A2</td>
<td>1</td>
<td>-</td>
<td>+</td>
<td>Proven.</td>
<td>-</td>
</tr>
<tr>
<td>Palygorskite</td>
<td>-</td>
<td>2B</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Mutagenicity
Not available.

Teratogenicity
Not available.

Reproductive toxicity
Not available.

12. Ecological information

Ecotoxicity: No known significant effects or critical hazards.

Aquatic ecotoxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium dioxide</td>
<td>Acute EC50 5.83 mg/L</td>
<td>Algae - Pseudokirchneriella subcapitata - Exponential growth phase</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Fresh water</td>
<td>Daphnia - Daphnia magna - &lt;24 hours</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 &gt;1000000 ug/L</td>
<td>Fresh water</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Fresh water</td>
<td>Crustaceans - Ceriodaphnia dubia - Neonate - &lt;24 hours</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 &gt;10 mg/L</td>
<td>Fresh water</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Fresh water</td>
<td>Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) - &lt;24 hours</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 5.5 ppm</td>
<td>Fresh water</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Fresh water</td>
<td>Fish - Fundulus heteroclitus</td>
<td>96 hours</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>Acute LC50 &gt;1000000 ug/L</td>
<td>Marine water</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>Crustaceans - Crangon crangon - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12. Ecological information

<table>
<thead>
<tr>
<th>Test</th>
<th>Species</th>
<th>Concentration</th>
<th>Time</th>
<th>LC50/NOEC</th>
<th>Time 1</th>
<th>Time 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute LC50</td>
<td>Daphnia - Ceriodaphnia dubia - Neonate</td>
<td>6900000 ug/L Fresh water</td>
<td>48 hours</td>
<td>48 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute LC50</td>
<td>Fish - Pimephales promelas - &lt;=7 days</td>
<td>8050000 ug/L Fresh water</td>
<td>96 hours</td>
<td>96 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic NOEC</td>
<td>Daphnia - Ceriodaphnia dubia - &lt;=24 hours</td>
<td>11610000 ug/L Fresh water</td>
<td>48 hours</td>
<td>96 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic NOEC</td>
<td>Fish - Pimephales promelas - &lt;=7 days</td>
<td>6090000 ug/L Fresh water</td>
<td>96 hours</td>
<td>96 hours</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Persistence/degradability**
Not available.

13. Disposal considerations

**Waste disposal**
The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

<table>
<thead>
<tr>
<th>Regulatory information</th>
<th>UN number</th>
<th>Proper shipping name</th>
<th>Classes</th>
<th>PG*</th>
<th>Label</th>
<th>Additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Classification</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>TDG Classification</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>IMDG Class</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>IATA-DGR Class</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

PG* : Packing group

15. Regulatory information

**United States**

**HCS Classification**
- Carcinogen
- Target organ effects

1/25/2012. United States/Canada
15. Regulatory information

U.S. Federal regulations
- **TSCA 4(a) final test rules**: Acetaldehyde
- **TSCA 8(a) PAIR**: Glycols, polyethylene, mono((1,1,3,3-tetramethylbutyl)phenyl) ether; Acetaldehyde
- **TSCA 8(a) IUR**: Not determined
- **United States inventory (TSCA 8b)**: All components are listed or exempted.
- **TSCA 8(d) H and S data reporting**: Acetaldehyde

- **SARA 302/304/311/312 extremely hazardous substances**: No products were found.
- **SARA 302/304 emergency planning and notification**: No products were found.
- **SARA 302/304/311/312 hazardous chemicals**: Limestone; Titanium dioxide; Quartz (SiO2)

- **SARA 311/312 MSDS distribution - chemical inventory - hazard identification**: Limestone: Immediate (acute) health hazard; Titanium dioxide: Immediate (acute) health hazard; Quartz (SiO2): Immediate (acute) health hazard, Delayed (chronic) health hazard

- **Clean Water Act (CWA) 311**: Acetaldehyde; Vinyl acetate; ammonia
- **Clean Air Act (CAA) 112 accidental release prevention**: No products were found.

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

**SARA 313**
- **Form R - Reporting requirements**: Not applicable.
- **Supplier notification**: Not applicable.

**State regulations**
- **Massachusetts**: The following components are listed: SILICA, CRYSTALLINE, QUARTZ; TITANIUM DIOXIDE; CALCIUM CARBONATE
- **New York**: None of the components are listed.
- **New Jersey**: The following components are listed: SILICA, AMORPHOUS DIATOMACEOUS EARTH; KIESELGUHR; SILICA, QUARTZ; QUARTZ (SiO2); TITANIUM DIOXIDE; TITANIUM OXIDE (TiO2); CALCIUM CARBONATE; LIMESTONE
- **Pennsylvania**: The following components are listed: QUARTZ (SiO2); TITANIUM OXIDE (TiO2); LIMESTONE

**California Prop. 65**
- **WARNING**: This product contains a chemical known to the State of California to cause cancer.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Cancer</th>
<th>Reproductive</th>
<th>No significant risk level</th>
<th>Maximum acceptable dosage level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1/25/2012. United States/Canada 9/11
15. Regulatory information

<table>
<thead>
<tr>
<th>Material</th>
<th>Australia inventory (AICS)</th>
<th>China inventory (IECSC)</th>
<th>Japan inventory</th>
<th>Korea inventory</th>
<th>New Zealand Inventory of Chemicals (NZIoC)</th>
<th>Philippines inventory (PICCS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Palygorskite</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>90 μg/day (inhalation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Canada

WHMIS (Canada): Class D-2A: Material causing other toxic effects (Very toxic).

Canadian lists

Canadian NPRI: None of the components are listed.

CEPA Toxic substances: None of the components are listed.

Canada inventory: At least one component is not listed in DSL but all such components are listed in NDSL.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists

Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Japan inventory: Not determined.

Korea inventory: Not determined.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Chemicals: Not listed

Chemical Weapons Convention List Schedule II Chemicals: Not listed

Chemical Weapons Convention List Schedule III Chemicals: Not listed

16. Other information

Label requirements

MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD - CAN CAUSE CANCER. BIRTH DEFECT HAZARD - CAN CAUSE BIRTH DEFECTS. DEVELOPMENTAL HAZARD - CAN CAUSE ADVERSE DEVELOPMENTAL EFFECTS.

Hazardous Material Information System (U.S.A.)

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>1</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
</tr>
<tr>
<td>Physical hazards</td>
<td>0</td>
</tr>
</tbody>
</table>

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

1/25/2012. United States/Canada 10/11
16. Other information

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of issue : 1/25/2012.
Date of previous issue : No previous validation.
Version : 1

Indicates information that has changed from previously issued version.

Notice to reader
To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.
Material Safety Data Sheet

FABRITAC
Date of Preparation: Jan. 01, 2012

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Fabri-Tac Adhesive
General Use: Adhesive
Manufacturer: Beacon Chemical Company, Inc. 125 South MacQuesten Parkway Mount Vernon, NY 10550
Phone: (914-699-3400) Fax: (914-699-2783) Hours of 5 Chemtrec Emergency Phone (800) 424-9300

Section 2 - Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS Number</th>
<th>%wt or %vol</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETONE</td>
<td>67-64-1</td>
<td>&gt;75%</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview

Potential Health Effects

Inhalation: In high concentrations may cause headache, nausea.
Eye: Can cause irritation, redness, tearing, blurred vision.
Skin: Prolonged exposure may irritate the skin. Repeated and prolonged contact of the liquid with skin can cause dryness and erythema.

Chronic Effects: There are no known chronic effects associated with this material.

Section 4 - First Aid Measures

Inhalation: If inhaled, remove the patient to fresh air. If breathing is difficult get prompt medical attention.
Eye Contact: Immediately wash eyes with running water for 15 minutes. Get immediate medical attention.
Skin Contact: In case of contact with skin, wash with soap and water.
Ingestion: Dilute by drinking water or milk. Induce vomiting by sticking finger down throat or by giving syrup of Ipecac.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 5 - Fire-Fighting Measures

Autoignition Temperature: 869F (465C)
Flammability Classification: 3
Extinguishing Media: Use water fog, alcohol foam or dry chemical extinguishing media.
Unusual Fire or Explosion Hazards: FABRITAC is extremely flammable and its vapors form explosive mixtures with air.
Dangerous when exposed to heat, sparks, flame or oxidants.

Fire-Fighting Instructions: Handle as a very flammable liquid. Use water spray to keep fire-exposed tanks and containers cool.
Do not enter the fire area without proper personal protective equipment including self-contained breathing apparatus.

Section 6 - Accidental Release Measures

Spill /Leak Procedures: Spills should be contained. Recover as much as possible for reuse. Absorb remainder with an inert material. Place into closed container and store in a safe location to await disposal. Wash the spill area with soap and water.
Do not flush liquid latex into public sewer or water system.

Waste Disposal Method: Dispose of in a landfill in accordance with local, state, and federal regulations.

Section 7 - Handling and Storage

Handling Precautions: Wear appropriate protective equipment when handling material. Avoid skin and eye contact.
Storage Requirements: Keep away from sparks, heat, flame. Store in a cool well ventilated location.
Section 8 - Exposure Controls / Personal Protection

Ventilation: Use in a well ventilated area.
Respiratory Protection: Not generally needed.
Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.
Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.
Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance and Odor: Clear liquid.
Flash point: 1.4F (-17C)
Melting point: -95.35C
Boiling Point: 56.2C
Vapor density: (air=1.0) 2.0
% Volatile: approx 100% by volume

Section 10 - Stability and Reactivity

Stability: product is normally stable. Keep away from heat, sparks and flame.

Section 11- Toxicological Information

No Toxicity Data Available

Eye Effects: N/A
Skin Effects: N/A
Acute Inhalation Effects: N/A
Acute Oral Effects: N/A
Chronic Effects: There are no known chronic effects associated with this material.

Section 12 - Ecological Information

Ecotoxicity: N/A
Environmental Fate N/A
Environmental Transport: N/A
Environmental Degradation: N/A
Soil Absorption/Mobility: N/A

Section 13 - Disposal Considerations

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.
Disposal Regulatory Requirements: Incinerate or bury in a licensed facility. Do not discharge into waterways or sewer systems without proper authority.
Container Cleaning and Disposal: Dispose of in a licensed facility. Recommended crushing or other means to prevent unauthorized use.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Adhesive
Shipping Symbols: UN 1133
Hazard Class: 3
Packing Group II
Less than 1 liter
ORM-D CONSUMER COMMODITY

Section 15 - Regulatory Information

EPA Regulations:
RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)
RCRA N/A
CERCLA Hazardous Substance (40 CFR 302.4) unlisted
CERCLA Reportable Quantity N/A
**OSHA Regulations:**
Air Contaminant : Not listed
OSHA Specifically Regulated Substance N/A
T.R.I. Reportable (No)

### Section 16 - Other Information

**Prepared By:** Pete Ryan

**Additional Hazard Rating Systems:**

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Fire</th>
<th>Reactivity</th>
<th>Special</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>NA</td>
</tr>
<tr>
<td>HMIS</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Disclaimer:** The information accumulated herein is based on data which Beacon Chemical Co., Inc. considers to be accurate; provided however, that the company makes no warranty as to the accuracy of the data. Anyone intending to use the information contained herein shall assume sole and complete responsibility for the results of said use including loss or damage resulting from the handling of the material.
1. Product and Company Identification

Product Name: GLASS PLUS ® - Cleaner
UPC CODES: Refer to Section 16
CAS #: Mixture
Product use: Cleaner
Manufacturer: Reckitt Benckiser
Morris Corporate Center IV
399 Interpace Parkway
P.O. Box 225
Parsippany, NJ 07054-0225
In Case of Emergency: 1-800-228-4722
Transportation Emergencies: 24 Hour Number:
North America: CHEMTREC: 1-800-424-9300
Outside North America: 1-703-527-3887

2. Hazards Identification

Emergency overview: KEEP OUT OF REACH OF CHILDREN.

Potential short term health effects:

Routes of exposure: Eye, Skin contact, Ingestion.

Eyes: No adverse effects expected.
Skin: Not a skin irritant.
Inhalation: Inhalation toxicity not determined.
Ingestion: Not orally toxic.

Target organs: Eyes. Respiratory system. Skin.

Chronic effects: The finished product is not expected to have chronic health effects.

Signs and symptoms: Not applicable.

3. Composition / Information on Ingredients

Composition comments: This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication).

4. First Aid Measures

First aid procedures:

Eye contact: In case of eye contact, hold eyes open and IMMEDIATELY rinse eyes thoroughly with plenty of water. Remove any contact lenses and continue rinsing for at least 15 minutes. If irritation occurs or persists, get medical attention.

Skin contact: None expected under normal use conditions. Wash with soap and water after handling.

Inhalation: Remove to fresh air.

Ingestion: Rinse mouth with water. Contact a physician or poison control center if symptoms develop. NEVER give an unconscious person anything to ingest.

Notes to physician: Contains glycol ethers and surfactants.
General advice
If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin.

5. Fire Fighting Measures

Flammable properties
Not flammable by OSHA criteria.

Extinguishing media
Suitable extinguishing media
Treat for surrounding material.

Unsuitable extinguishing media
Not available

Protection of firefighters
Specific hazards arising from the chemical
Not available

Protective equipment for firefighters
Firefighters should wear full protective clothing including self contained breathing apparatus.

Hazardous combustion products
May include and are not limited to: Oxides of carbon.

6. Accidental Release Measures

Personal precautions
Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

Methods for containment
Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up
Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice.

7. Handling and Storage

Handling
Use good industrial hygiene practices in handling this material.

Storage
Keep out of reach of children. Store in original container in a cool, secure area inaccessible to children and pets. Keep from freezing.

8. Exposure Controls / Personal Protection

Engineering controls
No special ventilation requirements.

Personal protective equipment
Eye / face protection
Not normally required under normal use conditions. When handling in large quantities or responding to emergency situations, the use of appropriate eye protection is recommended.

Skin protection
Not required.

Respiratory protection
As required by employer code.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance
Clear.

Color
Blue

Form
Liquid

Odor
Floral / Citrus

Odor threshold
Not available
Physical state | Liquid
---|---
pH | 10.5 (Basic)
Freezing point | Not available
Pour point | Not available
Boiling point | Not available
Flash point | > 93.3 °C (> 199.94 °F) Tagliabue
Evaporation rate | Not available
Flammability limits in air, lower, % by volume | Not available
Flammability limits in air, upper, % by volume | Not available
Vapor pressure | 17.5 mm of Hg @ 20°C
Vapor density | Not available
Specific gravity | 0.995 (Water=1)
Octanol/water coefficient | Not available
Solubility (H2O) | Complete
Auto-ignition temperature | Not available

10. Stability and Reactivity

Chemical stability | Stable under recommended storage conditions.
Conditions to avoid | Do not mix with other chemicals.
Incompatible materials | Acids. Caustics.
Hazardous decomposition products | May include and are not limited to: Oxides of carbon.
Possibility of hazardous reactions | Hazardous polymerization does not occur.

11. Toxicological Information

Effects of acute exposure
Eye | No adverse effects expected.
Skin | Not a skin irritant.
Inhalation | Inhalation toxicity not determined.
Ingestion | Not orally toxic.

Sensitization | The finished product is not expected to have chronic health effects.
Chronic effects | The finished product is not expected to have chronic health effects.
Carcinogenicity | The finished product is not expected to have chronic health effects.
Mutagenicity | The finished product is not expected to have chronic health effects.
Reproductive effects | The finished product is not expected to have chronic health effects.
Teratogenicity | The finished product is not expected to have chronic health effects.
Synergistic Materials | Not available

12. Ecological Information

Ecotoxicity | Not available
Environmental effects | Not available
Aquatic toxicity | Not available
Persistence / degradability | Not available
Bioaccumulation / accumulation | Not available
Partition coefficient | Not available
Mobility in environmental media | Not available
Chemical fate information | Not available

13. Disposal Considerations

Waste codes | Not available
14. Transport Information

**UN/ID N.o.**
Not applicable

**U.S. Department of Transportation (DOT): Classification:** Not regulated
- **Proper shipping name:** Not applicable
- **U.S. DOT Hazard Class:** Not applicable
- **Subsidiary Risk:** Not applicable
- **Packing group:** Not applicable
- **DOT RQ (lbs):** Not applicable
- **ERG NO:** Not applicable

**Transportation of Dangerous Goods (TDG - Canada): Classification:** Not regulated
- **Proper shipping name:** Not applicable
- **Status:** Not applicable
- **Packing group:** Not applicable

**IMDG (Marine Transport): Classification:** Not regulated
- **Proper shipping name:** Not applicable
- **Class:** Not applicable
- **Subsidiary Risk:** Not applicable
- **Packing group:** Not applicable
- **IMDG Page:** Not applicable
- **Marine pollutant:** Not applicable
- **EMS:** Not applicable
- **MFAG:** Not applicable
- **Maximum Quantity:** Not applicable

**IATA/ICAO (Air): Classification:** Not regulated
- **Proper shipping name:** Not applicable
- **Class:** Not applicable
- **Subsidiary Risk:** Not applicable
- **Packing group:** Not applicable
- **Maximum Quantity:** Not applicable
15. Regulatory Information

<table>
<thead>
<tr>
<th>US Federal regulations</th>
<th>This product is not known to be a &quot;Hazardous Chemical&quot; as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational Safety and Health Administration (OSHA)</td>
<td>29 CFR 1910.1200 hazardous chemical</td>
</tr>
<tr>
<td>CERCLA (Superfund) reportable quantity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Superfund Amendments and Reauthorization Act of 1986 (SARA)</td>
<td>Hazard categories</td>
</tr>
<tr>
<td></td>
<td>Immediate Hazard - No</td>
</tr>
<tr>
<td></td>
<td>Delayed Hazard - No</td>
</tr>
<tr>
<td></td>
<td>Fire Hazard - No</td>
</tr>
<tr>
<td></td>
<td>Pressure Hazard - No</td>
</tr>
<tr>
<td></td>
<td>Reactivity Hazard - No</td>
</tr>
<tr>
<td></td>
<td>Section 302 extremely hazardous substance</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Section 311 hazardous chemical</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Clean Air Act (CAA)</td>
<td>Not available</td>
</tr>
<tr>
<td>Clean Water Act (CWA)</td>
<td>Not available</td>
</tr>
<tr>
<td>State regulations</td>
<td>This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.</td>
</tr>
</tbody>
</table>

Inventory status

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

16. Other Information

Disclaimer

This product should only be used as directed on the label and for the purpose intended. To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Further information

19200-00080 - GLASS PLUS® - Cleaner liquid Refill - 64 oz. - 0002832
19200-00085 - GLASS PLUS® - Cleaner Trigger - 32 oz. - 0002832

Issue date

13-Nov-2009

Effective date

15-Nov-2009

Prepared by

Reckitt Benckiser Regulatory Department  800-333-3899

Other information

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.
MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:

Product Name: GOJO® NATURAL* ORANGE™ PUMICE HAND CLEANER

Company Name & Address: GOJO Industries, Inc.
One GOJO Plaza, Suite 500
Akron, OH 44311

Emergency Phone: 1-800-424-9300 CHEMTREC
Non-Emergency Phone: (330) 255-6000
MSDS Request Phone: (330) 255-6000 x8804

2. INFORMATION ON INGREDIENTS:

<table>
<thead>
<tr>
<th>HAZARDOUS INGREDIENTS</th>
<th>CAS NUMBER</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>% RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Distillates (vapor)</td>
<td>64742-47-8</td>
<td>---</td>
<td>200 mg/m3</td>
<td>&lt; 10%</td>
</tr>
</tbody>
</table>

Other ingredient(s) with notification requirements:

<table>
<thead>
<tr>
<th>CAS NUMBER</th>
<th>List</th>
</tr>
</thead>
<tbody>
<tr>
<td>64742-47-8</td>
<td>MA 1; NJ 1; PA 1</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW
When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 1 Flammability 1 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.
Skin Contact: No irritation or reaction expected.
Inhalation: Not applicable.
Ingestion: May cause upset stomach, nausea (Abnormal entry route).
Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.
5. **FIRE FIGHTING MEASURES:**
   - NFPA: Health 1 Fire 1 Reactivity 0
   - Flashpoint °F°C (PMCC method): Not determined.
   - Unusual Fire and Explosion Hazards: None known.
   - Special Fire Fighting Procedures: None known.
   - Extinguishing Media: X Water Fog X Alcohol Foam X CO₂ X Dry Chemical Other

6. **ACCIDENTAL RELEASE MEASURES:**
   No special requirements. Water clean up and rinse. CAUTION – WILL CAUSE SLIPPERY SURFACES.

7. **HANDLING AND STORAGE:**
   Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION:**
   - Eye Protection: None required under normal conditions.
   - Skin Protection: None required under normal conditions.
   - Respiratory Protection: None required under normal conditions.
   - Ventilation: None required under normal conditions.
   - Protective Equipment or Clothing: None required under normal conditions.

9. **PHYSICAL AND CHEMICAL PROPERTIES:**
   - Appearance and Odor: Gray, opaque liquid with abrasives, light citrus fragrance.
   - pH (undiluted): 5.0-7.0
   - VOC, %: < 1%

10. **STABILITY AND REACTIVITY:**
    Stable/Non reactive product.

11. **TOXICOLOGICAL INFORMATION:**
    No acute or chronic toxic effects expected when used according to directions.

12. **ECOLOGICAL CONSIDERATIONS:**
    No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

13. **DISPOSAL CONSIDERATIONS:**
    No special considerations when disposed according to local, state and Federal regulations.

14. **TRANSPORT INFORMATION:**
    Not classified as a hazardous material.

15. **REGULATORY AND OTHER INFORMATION:**
    TSCA: All ingredients are listed or exempt per reference 15 USC 2602 (2)(B)(iv).
GOLDEN HARVEST PASTE FOR UNPASTED WALLPAPER
GH-34

MATERIAL SAFETY DATA SHEET

Section 1

Manufacturer's Name: Roman Decorating Products
824 State Street
Calumet City, Illinois 60409

Emergency Assistance: 1-800-488-6117

HMIS Hazard Rating:

FIRE=0 Least=0
HEALTH=1 Slight=1
REACTIVITY=1 Moderate=2
PERSONAL PROTECTION=B High=3
Extreme=4

Reviewed: January 1, 2011

Trade name and Synonyms:
GOLDEN HARVEST PASTE FOR UNPASTED WALLPAPER GH-34, 209814, 209820

Chemical Name and Synonyms: Vinyl Wallcovering Adhesive
Chemical Family: Vegetable based (wheat) adhesive

Section 2-Hazardous Ingredients/Identity Information

CAS No. Chemical Name(s) OSHA PEL ACGIH TLV max %
No Hazardous Ingredients

Section 3-Physical/Chemical Characteristics

Appearance and Odor: Off-white viscous paste, Mild, slight soap odor
Specific Gravity (water=1): 1.04
Percent Solids by Weight: approx. 15
by Volume: approx. 12
Solubility in Water: Miscible in all proportions
Boiling Point: 212°F
Vapor Density: Same as water
Vapor Pressure: Same as water
Evaporation Point: Same as water
Melting Point: n.a.

Volatile Organic Compounds (VOC, less water): 34 g/l (0.28 lb/gal)

VOC as a percent of the product: 0.4

Section 4-Fire and Explosion Hazard Data

Flash Point (methods used) n.a.
Extinguishing Methods:
Special Fire Fighting Procedures:
Self contained breathing apparatus should be worn in fighting all fires involving general chemicals.
Unusual Fire and Explosion Hazards: None

Section 5-Health Hazard Data

Carcinogenicity: NTP:no IARC:no OSHA regulated: no
Overexposure—Under current OSHA criteria this product is considered non-hazardous.
Section 6-Reactivity Data

This product is stable and compatible with all compounds that are compatible with water and water solutions. Hazardous polymerization does not occur.

Section 7-Precautions for Safe Handling and Use

Steps to be taken in case the product is released or spilled:
Small spills: Spills of 1-2 gallons or less may be diluted 50:1 with water and washed down the drain.
Large spills should be recovered as much as possible and disposed of as non-hazardous industrial waste. Remaining residues may be flushed away as in "small spill" procedure. Consult Federal, State and Local regulations. Product residues may pose a slip hazard; personnel should be careful during clean-up.

Section 8-Control Measures

Respiratory protection is not usually required, however any room where this product is used should have good ventilation, i.e., open windows, exhaust fans, etc. A good, normal precaution is to wear protective gloves and glasses. No other protection equipment is necessary.

Section 9-Special Precautions

Store at moderate temperatures (50-100 F). Protect from freezing. Keep out of the reach of children. Keep container closed when not in use.

SUPPLEMENTAL INFORMATION

Waste Disposal
This product can be handled as a non-hazardous industrial waste.

REGULATORY INFORMATION

Workplace Classifications
This Product is considered non-hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200).
This product is not a "controlled product" under the Canadian Workplace Hazardous Materials Information System (WHMIS).

Transportation Classifications
US DOT Shipping Class --- 60
US DOT Description --- Adhesive Paste NOI

Emergency Planning and Community Right to Know (SARA Title 3)
Section 311/312 Categorizations (40CFR 370)
This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.
Section 313 Information (40CFR 372)
This product does not contain a chemical which is listed in Section 313 above de minimis concentrations.

CERCLA Information (40CFR 302.4)
Releases of this material to air, land or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation and Liability Act or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act, Title III, Section 304.
EnviroX LLC

MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT INFORMATION

PRODUCT NAME: Water Dilutions for H2Orange2 Concentrate 117
Light Duty (Green) Dilution: 1 oz product to 127 oz water

PRODUCT CLASSIFICATION: Water Soluble Cleaner

MANUFACTURER: EnviroX LLC
P.O. Box 2327, Danville, IL. 61834-2327
1938 E. Fairchild St. Danville, IL. 61832

TELEPHONE: 217-442-8596
EMERGENCY TELEPHONE: 800-255-3924

SECTION II - INGREDIENTS

HAZARDOUS INGREDIENTS: Hydrogen Peroxide < 4% - CAS No. 7722-84-1

SECTION III - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: None
FLAMMABLE EXPLOSIVE LIMITS % BY VOLUME: Lower: None
Upper: None
FIRE EXTINGUISHING MEDIA: CO2 or Dry Chemical
SPECIAL FIRE-FIGHTING PROCEDURES: None known
UNUSUAL FIRE AND EXPLOSION HAZARD: None known

SECTION IV - PHYSICAL DATA

BOILING POINT: 212 Degrees F.
SPECIFIC GRAVITY (Water=1): 1.0
SOLUBILITY IN WATER: Complete
MELTING POINT: Unknown
PH: Neutral
APPEARANCE: Clear
ODOR: Citrus

SECTION V - PRODUCT HEALTH HAZARD DATA

PRINCIPAL ROUTES OF ABSORPTION:
Inhalation - Not Applicable
Ingestion - May cause stomach upset
Skin - May cause minor skin irritation if left on for long periods of time.
Eye - May cause minor eye irritation
SECTION V - PRODUCT HEALTH HAZARD DATA (continued)

POSSIBLE SYMPTOMS OF OVEREXPOSURE:  Dry skin

EMERGENCY AND FIRST AID PROCEDURES:
Inhalation - Not Applicable
Ingestion - Drink several glasses of water and consult physician.
Skin - If irritation occurs, rinse thoroughly with water for at least 5 minutes. Apply moisturizing cream. If irritation persists, consult physician.
Eye - Flush eyes with water for at least 15 minutes holding lids apart to ensure complete irrigation. If irritation persists, consult physician.

SECTION VI - REACTIVITY DATA

STABLE: Yes
STABILITY CONDITIONS TO AVOID: None known
INCOMPATIBILITY (Materials to Avoid): None
HAZARDOUS DECOMPOSITION PRODUCTS: None known
HAZARDOUS POLYMERIZATION: Will not occur

SECTION VII - SPILL, LEAK OR DISPOSAL PROCEDURES

WASTE DISPOSAL METHOD: Biodegradable Product. Dispose of container according to state, federal and local laws.

PRECAUTIONS IN HANDLING AND STORING: None
OTHER PRECAUTIONS TO BE TAKEN: None known

SECTION VIII - SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS: Local Exhaust OK
PROTECTIVE EQUIPMENT: Skin - None

OTHER PROTECTIVE PRECAUTION: None

HMIS Codes:  Health: 0  Flammability: 0  Reactivity: 0

The exact composition of this material is a trade secret.

The information contained herein is correct to the best of our knowledge. The recommendations or suggestions contained in this Data Sheet are made without guarantee or representation as to results. We suggest that you evaluate these recommendations and suggestions in your own laboratory prior to use. Our responsibility for claims arising from breach of warranty, negligence, or otherwise is limited to the purchase price of the material. Freedom to use any patent owned by anyone is not to be inferred from any statement contained herein. WITH REGARD TO THE MATERIAL, SELLER MAKES NO WARRANTY OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED, AND ALL WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED BY SELLER.

DATE: 08/12

By: Josh Clemence
1. Product And Company Identification

**Supplier**
HENRY COMPANY
999 N. Sepulveda Blvd., Suite 800
El Segundo, CA 90245-2716

**Company Contact:** Technical Services
**Telephone Number:** (800) 486-1278
**Web Site:** www.henry.com www.bakor.com

**Manufacturer**
HENRY COMPANY
999 N. Sepulveda Blvd., Suite 800
El Segundo, CA 90245-2716

**Company Contact:** Technical Services
**Telephone Number:** (800) 486-1278
**Web Site:** www.henry.com www.bakor.com

**Issue Date:** 12/29/2011

**Product Name:** HE287SF - 287 SOLAR-FLEX WHITE ROOF COATING
**Product Code:** HE287SF

2. Composition/Information On Ingredients

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS Number</th>
<th>Percent Of Total Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>acrylic polymer blend</td>
<td>not avail.</td>
<td>15 - 25</td>
</tr>
<tr>
<td>calcium carbonate</td>
<td>1317-65-3</td>
<td>20 - 40</td>
</tr>
<tr>
<td>chlorothalonil</td>
<td>1897-45-6</td>
<td>0.1 - 0.5</td>
</tr>
<tr>
<td>silica, quartz</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>titanium dioxide</td>
<td>13463-67-7</td>
<td>3 - 7</td>
</tr>
<tr>
<td>water</td>
<td>7732-18-5</td>
<td>35 - 55</td>
</tr>
</tbody>
</table>

Substances in this product have been pre-registered in accordance with the REACH Regulation - (EC) No. 1907/2006. See Section 15 for additional information.

**EMERGENCY OVERVIEW**

**CAUTION!** Skin and eye contact may cause irritation. Ingestion may cause gastric distress. Inhalation may cause irritation to the respiratory tract.

**Appearance/Odor:** Creamy, white liquid, paint-like odor

3. Hazards Identification

**Primary Routes(s) Of Entry**
Inhalation

**Eye Hazards**
May cause eye irritation (burning, tearing, redness or swelling).

**Skin Hazards**
None expected, however, prolonged contact may cause irritation.
### 3. Hazards Identification - Continued

**Ingestion Hazards**
May cause liver and kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea.

**Inhalation Hazards**
None expected, however, certain individuals may experience minor nausea or headaches.

**Chronic/Carcinogenicity Effects**
This product or one of its ingredients present at 0.1% or more is listed as a carcinogen by NTP, IARC or OSHA. See Section 11 (Toxicological Information) for more details.

### 4. First Aid Measures

**Eye**
In case of contact, hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately if irritation develops and persists.

**Skin**
Remove contaminated clothing and shoes. Wash affected areas with soap and water.

**Ingestion**
Get medical attention immediately. DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious victim.

**Inhalation**
Remove the person from the contaminated area to fresh air. If breathing is difficult, give oxygen. Contact a physician if symptoms develop.

### 5. Fire Fighting Measures

**Flash Point:** >212 °F  
**Flash Point Method:** Setaflash  
**Lower Explosive Limit:** not available  
**Upper Explosive Limit:** not available  

**Fire And Explosion Hazards**
Product is not considered flammable or combustible. Products of combustion include compounds of carbon, hydrogen, oxygen, aluminium and zinc, including carbon monoxide.

**Extinguishing Media**
Carbon dioxide, water, water fog, dry chemical, chemical foam.

**Fire Fighting Instructions**
Keep containers cool with water spray to prevent container rupture due to steam buildup; floor will become slippery if material is released. Firefighters should wear self-contained breathing apparatus and full protective gear.

### 6. Accidental Release Measures

Contain and/or absorb spill with inert material (e.g. sand, vermiculite). Collect and dispose in accordance with applicable regulations.

### 7. Handling And Storage

**Handling And Storage Precautions**
Keep containers tightly closed. Store in a cool, dry, well-ventilated area. Protect from physical damage. Protect from extreme temperatures. Keep out of reach of children.
8. Exposure Controls/Personal Protection

**Engineering Controls**
Use with adequate general and local exhaust ventilation. When used outdoors, stay well away from building air intakes or close and seal the intakes to prevent product from entering building.

**Eye/Face Protection**
Safety glasses with side shields or goggles recommended.

**Skin Protection**
Use with chemical-protective gloves to prevent skin contact.

**Respiratory Protection**
This product is an encapsulated mixture which reduces the likelihood of exposure to hazardous particulates. Airborne exposures to hazardous dusts or mists may be generated by spraying, sanding or grinding.

The level of respiratory protection needed should be based on the evaluation of chemical exposures by a health or safety professional. If required, use a NIOSH-approved air purifying respirator with organic vapor cartridge and particulate filter or supplied air respirator. Respirator use may be required due to secondary operations such as mixing, spraying, sanding, buffing, etc.

Occupational Exposure Limits for individual ingredients (if available) are listed below.

**Ingredient(s) - Exposure Limits**

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>OSHA PEL-TWA 15 mg/m³ (total dust)</th>
<th>OSHA PEL-TWA 5 mg/m³ (respirable dust)</th>
<th>ACGIH TLV-TWA 0.025 mg/m³</th>
<th>OSHA PEL-TWA 30 mg/m³ / (%SiO₂+2) (total dust)</th>
<th>OSHA PEL-TWA 10 mg/m³ / (%SiO₂+2) (respirable dust)</th>
</tr>
</thead>
<tbody>
<tr>
<td>calcium carbonate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>silica, quartz</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH TLV-TWA 0.025 mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA PEL-TWA 30 mg/m³ / (%SiO₂+2) (total dust)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA PEL-TWA 10 mg/m³ / (%SiO₂+2) (respirable dust)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>titanium dioxide</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH TLV-TWA 10 mg/m³ (respirable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA PEL-TWA 15 mg/m³ (total dust)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Physical And Chemical Properties

**Appearance**
Creamy, white liquid

**Odor**
Paint-like odor

**Chemical Type:** Mixture

**Physical State:** Liquid

**Melting Point:** 32 °F 0 °C

**Boiling Point:** 212 °F

**Specific Gravity:** 1.44

**Vapor Pressure:** 760@ 212°F

**Vapor Density:** >1

**pH Factor:** 8.0-9.0

**Solubility:** dispersible

**Evaporation Rate:** <1
10. Stability And Reactivity

**Stability:** Stable  
**Hazardous Polymerization:** Will not occur

**Conditions To Avoid (Stability)**  
Extreme temperatures

**Incompatible Materials**  
Strong oxidizers, strong acids

**Hazardous Decomposition Products**  
Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, aluminum and zinc fumes and smoke may be produced.

**Conditions To Avoid (Polymerization)**  
none

11. Toxicological Information

**Chronic/Carcinogenicity**  
IARC has concluded that the following chemicals in this product are carcinogenic to humans (Group 1): silica, quartz  
IARC has concluded that the following chemicals in this product are possibly carcinogenic to humans (Group 2B): titanium dioxide, chlorothalonil  
ACGIH has designated the following chemicals in this product as suspected human carcinogens (A2): silica, quartz  
NTP has listed the following chemicals in this product as known human carcinogens: silica, quartz

Risk of cancer depends on duration and level of exposure to this product as a dust or aerosol mist.

**Miscellaneous Toxicological Information**  
Toxicological testing has not been conducted for this product overall. Available toxicological data for individual ingredients are summarized below.

**Ingredient(s) - Carcinogenicity**  
chlorothalonil  
Listed In The IARC Monographs

**Ingredient(s) - Toxicological Data**  
calcium carbonate  
oral-rat LD50: 6450 mg/kg  
chlorothalonil  
LD50 (oral-rat) - 4200 mg/kg  
LD50 (dermal-rabbit) - >20,000 mg/kg  
silica, quartz  
iv-rat LD50: 500 mg/kg bw/Quartz (10-200 um)

12. Ecological Information

13. Disposal Considerations

Dispose in accordance with applicable federal, state and local government regulations.

14. Transport Information

Ground    Not Restricted  
IMDG       Not Restricted
14. Transport Information - Continued

IATA        Not Restricted

15. Regulatory Information

**SARA Hazard Classes**
Acute Health Hazard

**Ingredient(s) - U.S. Regulatory Information**
chlorothalonil
  - SARA Title III - Section 313 Form "R"/TRI Reportable Chemical

**State Regulations**
Warning: This product contains substances known to the state of California to cause cancer.

**Ingredient(s) - State Regulations**
calcium carbonate
  - Pennsylvania - Workplace Hazard
clorothalonil
  - New Jersey - Workplace Hazard
  - New Jersey - Environmental Hazard
  - California - Proposition 65
  - Massachusetts - Hazardous Substance
  - New York City - Hazardous Substance
silica, quartz
  - New Jersey - Workplace Hazard
  - Pennsylvania - Workplace Hazard
  - California - Proposition 65
  - Massachusetts - Hazardous Substance
titanium dioxide
  - New Jersey - Workplace Hazard
  - Pennsylvania - Workplace Hazard
  - New York City - Hazardous Substance

**Canadian Regulatory Information**
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR. WHMIS Classification: D2A - Very Toxic

**Ingredient(s) - Canadian Regulatory Information**
silica, quartz
  - WHMIS - Ingredient Disclosure List

**European Union (EU) Regulatory Information**
REACH Pre-registration Information:

<table>
<thead>
<tr>
<th>Substance (CAS#)</th>
<th>Reference Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Carbonate (1317-65-3)</td>
<td>05-2114501824-55-0000</td>
</tr>
<tr>
<td>Titanium Dioxide (13463-67-7)</td>
<td>05-2114367060-59-0000</td>
</tr>
<tr>
<td>Styrene Butadiene Polymer</td>
<td>NA - Polymer (the monomers below have been pre-registered)</td>
</tr>
<tr>
<td>-Styrene (100-42-5)</td>
<td>05-2114367032-58-0000</td>
</tr>
<tr>
<td>Water</td>
<td>NA - Naturally occuring substance</td>
</tr>
</tbody>
</table>
16. Other Information

Revision/Preparer Information
This MSDS Supersedes A Previous MSDS Dated: 11/04/2010

Disclaimer

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purposes(s).

HENRY COMPANY
MATERIAL SAFETY DATA SHEET
FOR COATINGS, RESINS AND RELATED MATERIALS

Section I

MANUFACTURER’S NAME: Iowa Paint Manufacturing Company, Incorporated
STREET ADDRESS: 17th  Grand Avenue
CITY, STATE, ZIP CODE: Des Moines, Iowa 50305
EMERGENCY TELEPHONE NO.: (412) 434-4515
PRODUCT CLASS: STERL ACRY HS PAINT BLACK

Section II - HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>NE = Not Established</th>
<th>PERCENT BY WEIGHT</th>
<th>TLV PPM</th>
<th>mg/m³</th>
<th>LEL</th>
<th>VAPOR PRESSURE @ 20°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOLCANIC GLASS (NUISANCE DUST)</td>
<td></td>
<td>10.50</td>
<td>10.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH (UNCALCINED) (RESP.)</td>
<td></td>
<td>2.91</td>
<td>3.00</td>
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<td></td>
<td></td>
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<tr>
<td>ETHYLENE GLYCOL (OSHA:TWA)</td>
<td></td>
<td>2.44</td>
<td>50</td>
<td>3.6</td>
<td>0.8</td>
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<tr>
<td>DIPROPYLENE GLYCOL MONOBUTYL ETHER</td>
<td></td>
<td>1.81</td>
<td>**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CALCIUM CARBONATE [ACGIH: NUISANCE DUST]</td>
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<td>17.50</td>
<td>10.00</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>IRON OXIDE FUME (OSHA:TOTAL PARTICULATE)</td>
<td></td>
<td>7.87</td>
<td>10.00</td>
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</tbody>
</table>

Section III - PHYSICAL DATA

<table>
<thead>
<tr>
<th>BOILING RANGE</th>
<th>OVER 212°F</th>
<th>VAPOR DENSITY</th>
<th>HEAVIER</th>
<th>LIGHTER, THAN AIR</th>
<th>PERCENT VOLATILE WEIGHT PER GALLON</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVAPORATION RATE:</td>
<td>FASTER</td>
<td>SLOWER, THAN ETHER</td>
<td>44.23</td>
<td>11.2 - 11.6 lbs/gal</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section IV - FIRE AND EXPLOSION HAZARD DATA

**DOT CLASSIFICATION:** Not Regulated  
**OSHA CLASSIFICATION:** Combustible Liquid Class IIIB  
**EXTINGUISHING MEDIA:** MATERIAL VOC 0.48 lbs./gal  
**UNUSUAL FIRE AND EXPLOSION HAZARDS:** MATERIAL VOC 0.48 lbs./gal  
**SPECIAL FIRE FIGHTING PROCEDURES:** COATING VOC 1.01 lbs./gal  
**Flash Point:** Above 200° F  
**LEL:** 3.6

Section V - HEALTH HAZARD DATA

**THRESHOLD LIMIT VALUE:** SEE SECTION II  
**PRIMARY ROUTES OF EXPOSURE:** INHALATION: Fumes. SKIN AND/OR EYES: Liquid. INGESTION: Wet or dry paint.  
**EFFECTS OF OVER EXPOSURE:** ACUTE: Inhalation: Fumes or spray mist may be irritating to eyes, nose, throat and/or mucous membranes of respiratory tract. Prolonged skin contact may cause irritation, characterized by red and/or cracked skin. Eye contact may cause severe tearing and/or irritation due to particulate matter and amine or ammonia compounds present in the liquid paint. Irritation of gastrointestinal tract due to amine or ammonia compounds present in the liquid paint. For paints containing ethylene glycol: Ethylene glycol may be poisonous if ingested in sufficient amount; characterized by central nervous system stimulation, followed by depression and characterized by kidney failure which may be fatal. Chronically, normally not a hazard unless sprayed, then it becomes a nuisance dust. (Note: Acute Ingestion comments concerning paints containing ethylene glycol.) Skin or Eye Contact: Repeated skin contact with paint may cause skin irritation and/or dermatitis. EMERGENCY AND FIRST AID PROCEDURES: INHALATION: Remove from exposure. Restore breathing. Keep warm and quiet. EYES: Flush immediately with copious quantities of water for at least 15 minutes. SKIN: Wash affected areas with soap and water. Remove contaminated clothing. If drenched, wash clothing before reuse. INGESTION: If victim is conscious, give 2 glasses of water. CAUTION: IN ALL CASES, NOTIFY OR CONSULT A PHYSICIAN.  

Section VI - REACTIVITY DATA

**STABILITY:** Unstable: X Stable:  
**INCOMPATIBILITY (Materials to avoid):** Any chemical products which react violently with water.  
**CONDITIONS TO AVOID:** None.  
**HAZARDOUS DECOMPOSITION PRODUCTS:** None  
**HAZARDOUS POLYMERIZATION:** May occur X Will not occur  
**CONDITIONS TO AVOID:** None  
**REACTIVITY:** 

Section VII - SPILL OR LEAK PROCEDURES

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Caution: floors are slippery. Keep unnecessary people away. Dike and contain spill with inert material and transfer the liquid and coagulum to containers for recovery or disposal. Keep spill out of sewers and open bodies of water.  
**WASTE DISPOSAL METHOD:** Dispose in accordance with local, state and federal regulations. Incinerate in approved facility. Do not incinerate closed containers.  

Section VIII - SPECIAL PROTECTION EQUIPMENT

**RESPIRATORY PROTECTION:** In outdoor or open areas, use NIOSH/MSA approved mechanical filter respirator to remove solid airborne particles of overspray during spray application. In restricted ventilation areas, use NIOSH/MSA approved chemical-mechanical filters, designed to remove a combination of particulate, gas and vapor. In confined areas, use NIOSH/MSA approved air line type respirator or hoods.  
**VENTILATION:** Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredients in Section II below acceptable limit. LEL in Section IV below stated limit, and to remove decomposition products during welding or flame cutting on surface coated with this product.  
**PROTECTIVE GLOVES:** Required for prolonged or repeated contact.  
**EYE PROTECTION:** Use safety eyewear to protect against splash of liquid.  
**OTHER PROTECTIVE EQUIPMENT:** Prevent prolonged skin contact to contaminated clothing.  

Section IX - SPECIAL PRECAUTIONS

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Do not store above 140° F. Precautionary labeling: KEEP FROM FREEZING. Store above 34° F.  
**OTHER PRECAUTIONS:** Keep out of reach of children. Do not take internally. Use with adequate ventilation. Do not breathe vapors or spray mist. Wear an appropriate, properly fitted respirator (NIOSH/MSA approved) during and after application unless air monitoring demonstrates vapor/mist levels are below applicable limits. Follow respirator manufacturer’s directions for respirator use. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Thoroughly clean contaminated clothes before reuse. Do not transfer to unmarked containers.  

**NOTICE:** INGREDIENTS WITH "SARA 313" LISTING ARE SUBJECT TO THE REPORTING REQUIREMENTS OF THE SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 (40 CFR 372)
Section I

MANUFACTURER'S NAME: Iowa Paint Manufacturing Company, Incorporated
STREET ADDRESS: 17th Grand Avenue
CITY, STATE, ZIP CODE: Des Moines, Iowa 50305
EMERGENCY TELEPHONE NO.: (412) 434-4515
PRODUCT CLASS: STERL ACR H.P. SNOW WHITE

Section II - HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>** NE = Not Established</th>
<th>PERCENT BY WEIGHT</th>
<th>TLV</th>
<th>PPM</th>
<th>mg/m³</th>
<th>LEL</th>
<th>VAPOR PRESSURE mmHg @ 20°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAOLIN [OSHA: TOTAL DUST]</td>
<td>11.34</td>
<td>10.00</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>*01332-58-7</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>ETHYLENE GLYCOL (OSHA:TWA)</td>
<td>2.11</td>
<td>50</td>
<td>3.6</td>
<td>.08</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>*00107-21-1 SARA 313</td>
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<tr>
<td>TEXANOL</td>
<td>1.43</td>
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<td>*25265-77-4</td>
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</tr>
<tr>
<td>MICA [OSHA: RESP. DUST:TWA]</td>
<td>1.77</td>
<td>3.00</td>
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<tr>
<td>*12001-26-2</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>NEPHELINE SYENITE (AS NUISANCE DUST)</td>
<td>2.26</td>
<td>10.00</td>
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<td></td>
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</tr>
<tr>
<td>*37244-96-5</td>
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</tr>
<tr>
<td>TITANIUM DIOXIDE (OSHA: TOTAL DUST)</td>
<td>16.61</td>
<td>10.00</td>
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<tr>
<td>*13463-67-7</td>
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<td></td>
</tr>
</tbody>
</table>

Section III - PHYSICAL DATA

<table>
<thead>
<tr>
<th>BOILING RANGE</th>
<th>VAPOR DENSITY</th>
<th>HEAVIER</th>
<th>LIGHTER, THAN AIR</th>
<th>PERCENT VOLATILE</th>
<th>WEIGHT PER GALLON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 212°F</td>
<td>10.8 - 11.2 lbs/gal</td>
<td>50.07</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section IV - FIRE AND EXPLOSION HAZARD DATA

**DOT CLASSIFICATION:** Not Regulated  
**OSHA CLASSIFICATION:** Combustible Liquid Class IIIIB  
**EXTINGUISHING MEDIA:**

**UNUSUAL FIRE AND EXPLOSION HAZARDS:**
Product will not burn. When temperature exceeds boiling point, material may spatter.

**SPECIAL FIRE FIGHTING PROCEDURES:**
Use water for cooling closed containers to prevent pressure build-up when exposed to extreme heat. Firefighters should be equipped with masks and self-contained respirators.

**WASTE DISPOSAL METHOD:**
Dispose in accordance with local, state and federal regulations. Incinerate in approved facility. Do not incinerate closed containers.

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>VOLATILE ORGANIC COMPOUND (VOC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATERIAL VOC</td>
<td>.39 lbs./gal</td>
</tr>
<tr>
<td>COATING VOC</td>
<td>.95 lbs./gal</td>
</tr>
</tbody>
</table>

Section V - HEALTH HAZARD DATA

**THRESHOLD LIMIT VALUE:** See Section II  
**PRIMARY ROUTES OF EXPOSURE:**

<table>
<thead>
<tr>
<th>EFFECTS OF OVER EXPOSURE</th>
<th>INHALATION</th>
<th>SKIN AND/OR EYES</th>
<th>INGESTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACUTE:</td>
<td>Fumes,</td>
<td>Liquid.</td>
<td>Wet or dry paint.</td>
</tr>
<tr>
<td></td>
<td>Ingestion:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin or Eye Contact:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ingestion of Wet Paint:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHRONIC:</td>
<td>Inhalaion:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin or Eye Contact:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMERGENCY AND FIRST AID PROCEDURES:</td>
<td>Inhalation:</td>
<td>Remove from exposure.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eyes:</td>
<td>Flush immediately with copious quantities of water for at least 15 minutes.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin:</td>
<td>Wash affected areas with soap and water. Remove contaminated clothing.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ingestion:</td>
<td>If victim is conscious, give 2 glasses of water.</td>
<td></td>
</tr>
</tbody>
</table>

**STABILITY:** Unstable  
**STABILITY:** Stable  
**INCOMPATIBILITY:** Any chemical products which react violently with water.  
**INCOMPATIBILITY:** Any chemical products which react violently with water.  
**CONDITIONS TO AVOID:** None.

**HAZARDOUS DECOMPOSITION PRODUCTS:** None  
**HAZARDOUS POLYMERIZATION:** May occur  
**CONDITIONS TO AVOID:** None

Section VI - REACTIVITY DATA

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**
Caution: floors are slippery. Keep unnecessary people away. Dike and contain spill with inert material and transfer the liquid and coagulum to containers for recovery or disposal.

Keep spill out of sewers and open bodies of water.

**WASTE DISPOSAL METHOD:** Dispose in accordance with local, state and federal regulations. Incinerate in approved facility. Do not incinerate closed containers.

Section VIII - SPECIAL PROTECTION EQUIPMENT

**RESPIRATORY PROTECTION:**
In outdoor or open areas, use NIOSH/MSA approved mechanical filter respirator to remove solid airborne particles of overspray during spray application. In restricted ventilation areas, use NIOSH/MSA approved chemical-mechanical filters, designed to remove a combination of particulate, gas and vapor. In confined areas, use NIOSH/MSA approved air line type respirator or hoods.

**VENTILATION:**
Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredients in Section II below acceptable limit.

**PROTECTIVE GLOVES:**
Required for prolonged or repeated contact.

**EYE PROTECTION:**
Use safety eyewear to protect against splash of liquid.

**OTHER PROTECTIVE EQUIPMENT:**
Prevent prolonged skin contact to contaminated clothing.

Section IX - SPECIAL PRECAUTIONS

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**
Do not store above 140° F. Precautionary labeling: KEEP FROM FREEZING. Store above 34° F.

**OTHER PRECAUTIONS:**
Keep out of reach of children. Do not take internally.

Use with adequate ventilation. Do not breathe vapors or spray mist. Wear an appropriate, properly fitted respirator (NIOSH/MSA approved) during and after application unless air monitoring demonstrates vapor/mist levels are below applicable limits. Follow respirator manufacturer's directions for respirator use. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Thoroughly clean contaminated clothes before reuse.

Do not transfer to unmarked containers.

**NOTICE:**
INGREDIENTS WITH "SARA 313" LISTING ARE SUBJECT TO THE REPORTING REQUIREMENTS OF THE SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 (40 CFR 372)
1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND SUPPLIER

Product Name: Straitline Marking Chalk Blue
Other Names: Sodium Aluminium Sulfosilicate, Pigment Blue 29, C.I. 77007
Recommended use: Blue pigment for line marking applications.
Supplier: Irwin Industrial Tool Company Pty Ltd
ABN: 30 005 543 966
Address: 2 National Drive
Lyndhurst VIC 3975
Australia
Telephone: +61 8 9277 5277 (WA) or +61 3 8787 3888 (all other states)
Facsimile: +61 8 9277 6277 (WA) or +61 3 8787 3800 (all other states)
Emergency Phone: (08) 9277 5277 (WA; 8.30 am – 5 pm) or (03) 8787 3888 (Vic: 8 am – 6 pm)

2. HAZARDS IDENTIFICATION

NON-HAZARDOUS SUBSTANCE – NON-DANGEROUS GOOD

DG Class: None allocated
Subsidiary Risk: None allocated
Packing Group: None allocated
Risk phrases: None allocated
Safety phrases: None allocated

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Identify</th>
<th>CAS Number</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.I. Pigment Blue 29</td>
<td>57455-37-5</td>
<td>100 % by weight</td>
</tr>
</tbody>
</table>

All components in this product are listed on the Australian Inventory of Chemical Substances (AICS).
4. FIRST AID MEASURES

A low hazard solid. Inhalation of dust may cause slight, temporary breathing difficulties.

Swallowed: Not considered a normal route of exposure. Never give anything by mouth to an unconscious person. Do not induce vomiting unless directed to do so by a physician. Adverse effects not anticipated.

Eye: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Seek medical advice.

Skin: Immediately wash skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and thoroughly clean before re-use. Seek medical advice.

Inhaled: Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing difficulties are experienced, give oxygen. Seek medical advice.

Notes to doctor: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Specific hazards: Non-combustible solid. Will not burn in a fire. Not considered to be a fire hazard.

Extinguishing media: Water, dry chemical foam or alcohol-resistant foam. Use extinguishing agents appropriate for surrounding combustible materials.

Fire fighting procedures: As with any fire, wear full protective clothing and approved self-contained breathing apparatus with full face-mask. If safe to do so, remove containers from path of fire. Continue to cool fire exposed containers with water until well after flames are extinguished.

Hazardous Decomposition Products: Sulfur dioxide gas may be released.

Hazchem Code: None allocated

6. ACCIDENTAL RELEASE MEASURES

Take precautionary measures against static discharges. Evacuate all personnel from the affected area. Ventilate area well and ensure appropriate personal protective equipment is worn. Refer Section 8. Sweep or scoop up all spills and place in suitable marked containers for re-use or disposal. Advise the appropriate authorities if any material has leaked into drains, waterways, sewer, etc.
7. HANDLING AND STORAGE

Handling: Avoid breathing dust. Avoid contact with skin and eyes. Wash hands and face thoroughly after handling product. Keep container tightly closed. Wear appropriate personal protective equipment as specified in Section 8.

Storage: Store in a tightly closed container in a cool, dry location. Ensure storage area is well-ventilated. Keep containers closed at all times – check regularly for leaks. Do not smoke in areas of use or storage. Avoid dust generation. Store away from heat sources, combustible materials and moisture.

Incompatibilities: Hydrogen sulfide may be released in contact with acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National occupational exposure standards

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA</th>
<th>STEL</th>
<th>Carcinogen Category</th>
<th>Notices</th>
</tr>
</thead>
<tbody>
<tr>
<td>total dusts</td>
<td>-</td>
<td>10 mg/m³</td>
<td>None allocated</td>
<td>None allocated</td>
</tr>
</tbody>
</table>


Engineering controls: Local exhaust ventilation and/or mechanical (dust) exhaust is recommended, provided these are fitted with flame and explosion proof electrical fittings. Keep containers tightly closed when not in use. Use adequate ventilation to keep airborne concentrations low.

Personal Protection

Skin: Avoid skin contact by the use of appropriate protective clothing and PVC gloves to prevent skin exposure.

Eye: Avoid eye contact by wearing eye protection, e.g. protective safety glasses with side-shields or chemical safety goggles.

Respiratory: Wear an approved disposable dust mask with filter class P1 or P2 if dust exposure is likely or expected.

Do not smoke while handling product. Ensure adequate ventilation. Ensure eyewash station and safety shower are readily available and tested regularly.
### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>blue solid with no odour</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>no data available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>&gt; 1000°C</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>not applicable</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>2.35 g/cm³</td>
</tr>
<tr>
<td>Flash Point</td>
<td>non-flammable</td>
</tr>
<tr>
<td>pH</td>
<td>7 – 9 (100 g/L)</td>
</tr>
<tr>
<td>Flammability Limits</td>
<td>% by volume lower: not applicable</td>
</tr>
<tr>
<td></td>
<td>% by volume upper: not applicable</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>insoluble</td>
</tr>
<tr>
<td>Vapour Density</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical stability</td>
<td>Stable under normal temperatures and pressures.</td>
</tr>
<tr>
<td>Hazardous polymerization</td>
<td>None.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Hydrogen sulfide may be released into contact with acids.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Sulfur dioxide gas is released at temperatures above 400°C.</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Sulfur dioxide, hydrogen sulfide.</td>
</tr>
</tbody>
</table>

### 11. TOXICOLOGICAL INFORMATION

**Swallowed:** Not considered a likely route of exposure. May cause harmful effects if large amounts are ingested. May also cause gastrointestinal tract irritation with nausea, vomiting and diarrhoea.

**Eye:** Contact with eyes may cause slight, temporary irritation.

**Skin:** Contact with skin may cause slight, temporary irritation. May cause an allergic reaction in certain individuals.

**Inhaled:** Inhalation of dust may result in slight, temporary respiratory irritation.

**Chronic:** Prolonged or repeated exposure may cause severe irritation and dermatitis. Repeated inhalation of product may cause chronic bronchitis.

**Acute toxicity:**
- LD₅₀/oral/rat: > 10 g/kg
- Carcinogenicity: Not a human carcinogen
- Mutagenicity: Not mutagenic
- Teratogenicity: Not teratogenic
- Reproductive: Not toxic for reproduction

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity:**
- Toxicity to fish (acute): LC₅₀ >32000 mg/L

**Environmental fate:** This material is not expected to biodegrade when released into the soil. This material is not expected to significantly bioaccumulate.
13. DISPOSAL CONSIDERATIONS

Suitable for incineration by approved agent under controlled conditions if permitted by local authorities, otherwise disposal of containers and contents to approved landfill must be in accordance with local waste authority requirements. Product must not be disposed to sewerage systems, drains or waterways.

14. TRANSPORT INFORMATION

Road and Rail Transport (Australian Dangerous Goods Code):

- UN Number: None allocated
- Proper Shipping Name: None allocated
- Class: None allocated
- Hazchem Code: None allocated
- Packing Group: None allocated

Marine Transport (International Maritime Dangerous Goods Code):

- UN Number: None allocated
- Proper Shipping Name: None allocated
- Class: None allocated
- Packing Group: None allocated
- Marine Pollutant: No

Air Transport (International Air Transport Association Dangerous Goods Regulations):

- UN Number: None allocated
- Proper Shipping Name: None allocated
- Class: None allocated
- Subsidiary Risk: None allocated
- Packing Group: None allocated
- Limitations: None

15. REGULATORY INFORMATION

Classification: Not classified as hazardous according to criteria of NOHSC.
- Not classified as a Dangerous Good according to criteria of the Australian Dangerous Goods Code.

Poisons Schedule: Not Scheduled
16. OTHER INFORMATION

This Material Safety Data Sheet has been prepared by Hodson & Associates Pty Ltd on behalf of Irwin Industrial Tool Company Pty Ltd.

Contact Point: Hodson & Associates Pty Ltd, MSDS Services
Within Australia: Telephone: (03) 9572 1303
Facsimile: (03) 9572 1393
Outside Australia: Telephone: +61 3 9572 1303
Facsimile: +61 3 9572 1393

Issue Date: 10/JUN/06/AH Supercedes Issue Date: 15 March 2004

Reasons for Issue: General update and revision.

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).
1. Product and Company Identification

Product Code: 104D
Product Name: Jasco / Bix Varnish & Stain Remover
Manufacturer Information

Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113

Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com
Preparer Name: W.M. Barr EHS Dept (901)775-0100

Synonyms

PJBV01011, QJBV00102, GJBV00103

2. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>OSHA TWA</th>
<th>ACGIH TWA</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene (Benzene, Methyl-; Toluol)</td>
<td>108-88-3</td>
<td>10.0 -20.0 %</td>
<td>200 ppm</td>
<td>50 ppm</td>
<td>No data.</td>
</tr>
<tr>
<td>Methanol (Methyl alcohol; Carbinol; Wood alcohol)</td>
<td>67-56-1</td>
<td>30.0 -50.0 %</td>
<td>200 ppm</td>
<td>200 ppm</td>
<td>No data.</td>
</tr>
<tr>
<td>Dichloromethane (Methylene chloride)</td>
<td>75-09-2</td>
<td>25.0 -40.0 %</td>
<td>25 ppm</td>
<td>50 ppm</td>
<td>No data.</td>
</tr>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>10.0 -25.0 %</td>
<td>1000 ppm</td>
<td>500 ppm</td>
<td>No data.</td>
</tr>
<tr>
<td>Oleic acid (9-Octadecenoic acid (Z)-)</td>
<td>112-80-1</td>
<td>0.5 -1.5 %</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>Potassium hydroxide</td>
<td>1310-58-3</td>
<td>1.0 -5.0 %</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>

3. Hazards Identification

Emergency Overview
Danger! Poison! Flammable liquid and vapor. Vapor harmful. May be fatal or cause blindness if swallowed. Harmful if inhaled or absorbed through the skin. Causes eye burns. Causes skin and respiratory tract irritation.

OSHA Regulatory Status:
This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic)
Potential Acute Health Effects:

EYE: Vapors can cause eye irritation. Contact can produce redness, inflammation, pain and temporal eye damage.

SKIN: Causes irritation, redness, pain, drying and cracking of the skin. Prolonged contact can cause burns. May be absorbed through skin.
INGESTION: May cause irritation of the gastrointestinal tract and/or abdominal spasms. Symptoms parallel inhalation. Aspiration of material into the lungs can cause chemical pneumonitis.

INHALATION: Causes irritation to the respiratory tract. Causes formation of carbon monoxide in blood which affects cardiovascular system and central nervous symptoms. Symptoms of overexposure may include skin sensations (e.g. pins and needles), fatigue, confusion, headaches, dizziness and drowsiness. Very high concentrations or continued exposure may cause increased light-headedness, vomiting, blurred vision, blindness, staggering, unconsciousness, comas, and even death.

CHRONIC EXPOSURE: Methylene Chloride may cause headache, mental confusion, depression, liver effects, kidney effects, bronchitis, loss of appetite, nausea, lack of balance, and visual disturbances. Prolonged and/or repeated skin contact can cause severe irritation or dermatitis. Methylene chloride may cause cancer in humans. Toluene may affect the developing fetus. Toluene chronic poisoning describe anemia, decreased blood cell count and bone marrow hypoplasia. Methanol report impaired vision.

Target Organs: eyes, skin, respiratory system, liver, kidneys, pancreas, heart, lungs, brain, central nervous system

Signs and Symptoms Of Exposure
See Potential Health Effects.

Medical Conditions Generally Aggravated By Exposure
Those of the skin, eye, and lungs/respiratory system. This may include dermatitis; asthma and other breathing disorders; chronic lung disease; coronary artery disease; anemia;

4. First Aid Measures

Emergency and First Aid Procedures

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and seek medical attention immediately.

SKIN: Immediately wash with mild soap and water for 15 minutes, while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical attention.

EYE: Immediately flush with water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

INGESTION: Aspiration hazard. Do not take internally. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately. If vomiting occurs, keep head below hips to prevent aspiration into lungs.
Note to Physician
This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by hemodialysis.

5. Fire Fighting Measures

Flammability Classification: IB
Flash Pt: 26.00 F  Method Used: Pensky-Marten Closed Cup
Explosive Limits: LEL: No data.  UEL: No data.

Fire Fighting Instructions
Evacuate personnel to a safe area. Keep containers cool with water spray.
Avoid breathing decomposition products. Firefighters should wear NIOSH approved self-contained breathing apparatus
and full body protection. Vapors can flow along surfaces to distant ignition source and flash back.

Flammable Properties and Hazards
Flammable Liquid and Vapor!
Dangerous fire hazard when exposed to heat or flame. Vapors can flow along surfaces to distant ignition source and flash back.

Hazardous Combustion Products
Carbon monoxide and carbon dioxide, hydrogen chloride, and trace amounts of phosgene, chlorine.

Extinguishing Media
Use alcohol foam, carbon dioxide, and dry chemical. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

Unsuitable Extinguishing Media
None known.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled
Ventillate area of leak or spill. Remove all sources of ignition. Use non-sparking tools and equipment. Clean up remaining materials from spill with suitable absorbent. Small spills may be absorbed with nonreactive absorbent (sand) and placed in suitable, covered, labeled containers. For large spills provide diking or other appropriate containment to keep material from spreading. Prevent large spills from entering sewers or waterways. If diked material can be pumped, store recovered material in compatible drums for recovery or disposal. Observe all personal protection equipment recommendations.

7. Handling and Storage

Precautions To Be Taken in Handling
No smoking or eating. Keep container closed when not in use. Keep away from heat, sparks, open flames and other sources of ignition. Containers of this material may be hazardous when empty since they retain product residues. Separate from incompatibles. This material may corrode plastic and rubber. KEEP OUT OF REACH OF CHILDREN.

Precautions To Be Taken in Storing
Store in a cool, dry well-ventilated location. Protect against physical damage.
8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)
Avoid breathing vapor. Use NIOSH approved pressure demand or other positive pressure SCBA or airline respirators.

Eye Protection
Use chemical goggles or glasses with side shields. A faceshield in combination with safety glasses or chemical goggles is recommended when the potential exists for spraying or splashing of liquid to the face.

Protective Gloves
Use chemical resistant gloves based on chemical compatibility and job task.

Other Protective Clothing
Full Protective Clothing.
Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

Engineering Controls (Ventilation etc.)
Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Use only with adequate ventilation to prevent buildup of vapors. Do not use in areas where vapors can accumulate and concentrate, such as basements, bathrooms or small enclosed areas. Whenever possible, use outdoors in an open air area. If using indoors open all windows and doors and maintain a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea or eye-watering -- STOP -- ventilation is inadequate. Leave area immediately and move to fresh air.

Work/Hygienic/Maintenance Practices
Have an eyewash and safety shower available.

The usual precaution for the handling of chemicals must be observed.

Wash hands thoroughly after use and before eating, drinking, or smoking. Do not eat, drink, or smoke in the work area. Discard any clothing or other protective equipment that cannot be decontaminated.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical States:</th>
<th>[ ] Gas</th>
<th>[X] Liquid</th>
<th>[ ] Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting Point:</td>
<td>No data.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>132.80 F - 140.00 F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autoignition Pt:</td>
<td>No data.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Pt:</td>
<td>26.00 F Method Used: Pensky-Marten Closed Cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive Limits:</td>
<td>LEL: No data. UEL: No data.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Gravity (Water = 1):</td>
<td>0.92 - 0.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density:</td>
<td>7.746 LB/GL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure (vs. Air or mm Hg):</td>
<td>&gt; 134 MM HG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Density (vs. Air = 1):</td>
<td>&lt; 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate (vs Butyl Acetate=1):</td>
<td>&gt; 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>Slight</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Percent Volatile: 97.0 % by weight.
VOC / Volume: 463.0000 G/L
Viscosity: 2000 CPS
Corrosion Rate: No data.
pH: 6.0 - 7.0

Appearance and Odor
Viscous, opaque white or clear liquid with aromatic ether like odor.

10. Stability and Reactivity

Stability: Unstable [ ] Stable [ X ]

Conditions To Avoid - Instability
No data available.

Incompatibility - Materials To Avoid
Strong oxidizers, strong caustics, acids, water + heat, and chemically active metals. May attack some forms of plastics, rubber, and coatings.

Moisture, heat, flame, ignition sources and incompatibles.

Hazardous Decomposition Or Byproducts
Carbon monoxide, carbon dioxide, formaldehyde, hydrochloric acid and toxic gas phosgene.

Hazardous Polymerization: Will occur [ ] Will not occur [ X ]

Conditions To Avoid - Hazardous Polymerization
No data available.

11. Toxicological Information

There is no data available for the product.

The following are known component data:

Toluene (108-88-3):
Inhalation LC50 Rat: 12.5 mg/L/4H;
Inhalation LC50 Rat: > 26700 ppm/1H;
Oral LD50 Rat: 636 mg/kg;
Dermal LD50 Rabbit: 8390 mg/kg;
Dermal LD50 Rat: 12124 mg/kg

Methanol (67-56-1):
Inhalation LC50 Rat: 83.2 mg/L/4H;
Inhalation LC50 Rat: 64000 ppm/4H;
Oral LD50 Rat: 5628 mg/kg;
Dermal LD50 Rabbit: 15800 mg/kg

Methylene Chloride (75-09-2):
Oral LD50 Rat: >2000 mg/kg;
Inhalation LC50 Rat: 76000 mg/m3/4H

Acetone (67-64-1):
Oral LD50 Rat: 5800 mg/kg

Oleic Acid (112-80-1):
Oral LD50 Rat: 25 g/kg
Potassium Hydroxide (1310-58-3):
Oral LD50 Rat: 214 mg/kg

**Carcinogenicity/Other Information**

Methylene Chloride has been shown to increase the incidence of malignant tumors in mice and benign tumors in rats. Other animal studies, as well as several human epidemiology studies, failed to show a tumorigenic response.

-Methylene Chloride (Dichloromethane) (CAS 75-09-2) is on the IARC list as a Group 2B: Possibly Carcinogenic to Humans, and on the NTP list as Reasonably anticipated to be a human carcinogen.

-Toluene (CAS 108-88-3) is on the IARC list as a Group 3: Not Classifiable as to Carcinogenicity in Humans.

**Hazardous Components (Chemical Name)**

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Toluene (Benzene, Methyl-; Toluol)</td>
<td>108-88-3</td>
<td>No</td>
<td>3</td>
<td>A4</td>
<td>n.a.</td>
</tr>
<tr>
<td>2. Methanol (Methyl alcohol; Carbinol; Wood alcohol)</td>
<td>67-56-1</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>3. Dichloromethane (Methylene chloride)</td>
<td>75-09-2</td>
<td>Possible</td>
<td>2B</td>
<td>A3</td>
<td>Yes</td>
</tr>
<tr>
<td>5. Oleic acid (9-Octadecenoic acid (Z)-)</td>
<td>112-80-1</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

**12. Ecological Information**

**ENVIRONMENTAL TOXICITY:**

No environmental toxicity studies have been conducted on the product. The following are known component data:

Toluene (108-88-3): Freshwater Algae Data = 96 Hr EC50 Selenastrum capricornutum: >433 mg/L; Freshwater Fish Species Data = 96 Hr LC50 Pimephales promelas: 25 mg/L [flow-through] (1 day old); 96 Hr LC50 Oncorhynchus mykiss: 24.0 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 24.0 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 13 mg/L [static]; Microtox Data = 30 min EC50 Photobacterium phosphoreum: 19.7 mg/L; 48 Hr EC50 Water Flea Data: 11.3 mg/L; 48 Hr EC50 water flea: 310 mg/L; 48 Hr EC50 Daphnia magna: 11.3 mg/L

Methanol (67-56-1): Freshwater Fish Species Data = 96 Hr LC50 Pimephales promelas: 28100 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 13200 mg/L; Microtox Data = 5 min EC50 Photobacterium phosphoreum: 43000 mg/L; 15 min EC50 Photobacterium phosphoreum: 40000 mg/L; 25 min EC50 Photobacterium phosphoreum: 39000 mg/L

Methylene Chloride (75-09-2): Freshwater Algae Data = 96 Hr EC50 Selenastrum capricornutum: >660 mg/L; Freshwater Fish Species Data = 96 Hr LC50 Pimephales promelas: 193 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 310 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 10.95 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 193 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 193 mg/L [flow-through]; Microtox Data = 24 Hr EC50 Nitrosomonas: 1 mg/L; 15 min EC50 Photobacterium phosphoreum: 2.88 mg/L; Water flea data = 48 Hr EC50 water flea: 140mg/L [Static]

Acetone (67-64-1): Freshwater Fish Species Data = 96 Hr LC50 Oncorhynchus mykiss: 5540 mg/L [static]; 96 Hr LC50 Pimephales promelas: 193 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 193 mg/L [flow-through]; Microtox Data = 24 Hr EC50 Nitrosomonas: 1 mg/L; 15 min EC50 Photobacterium phosphoreum: 2.88 mg/L; Water flea data = 48 Hr EC50 water flea: 140mg/L [Static]
LC50
Pimephales promelas: 6210 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 8300 mg/L [static];
Microtox Data =
15 min EC50 Photobacterium phosphoreum: 14500 mg/L; Water flea data = 48 Hr EC50 water flea: 0.0039 mg/L;
48 Hr
EC50 Water flea: 12700 mg/L [Static]; 48 Hr EC50 Daphnia magna: 12600 mg/L

Oleic Acid (112-80-1): Freshwater Fish Species Data = 96 Hr LC50 Pimephales promelas: 205 mg/L [Static]

Potassium Hydroxide (1310-58-3): Freshwater Fish Species Data = 24 Hr LC50 Gambusia affinis: 80.0 mg/L

ENVIRONMENTAL FATE:
No data available.

13. Disposal Considerations

Waste Disposal Method
Dispose of in accordance with all applicable local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name
Paint related material

DOT Hazard Class:
3

DOT Hazard Label:
FLAMMABLE LIQUID

UN/NA Number:
UN1263

Packing Group:
II

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

Flammable material products shipped in containers less that 1L (0.3 gallons) in volume: Per 49 CFR 173.150, Limited Quantities of flammable liquids (Class 3), Packing Group II that are shipped in packaging not over 1.0 L net capacity packed in strong outer packaging are exempted from labeling requirements and specification packaging requirements, unless offered for transportation by aircraft. Limited quantities are not subject to Subpart F (Placarding).

Each package must be packed in strong outer packaging and can not exceed 30 kg (66 lbs).

Consumer commodities (per 173.150): A limited quantity that conforms to the paragraph above and is a consumer commodity (per 49 CFR 171.8) can be renamed “Consumer commodity” and reclassified as an ORM-D Material. In addition to the exceptions for labeling and placarding provided by paragraph 173.150, shipments of ORM-D Material are not subject to the shipping paper requirements of subpart C of part 172 of this subchapter, unless the material meets the definition of a hazardous substance, hazardous waste, marine pollutant, or are offered for transportation and transported by aircraft. Additional exceptions, as provided in §173.156 may also apply.
### 15. Regulatory Information

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS</th>
<th>Sec.302 (EHS)</th>
<th>Sec.304 RQ</th>
<th>Sec.313 (TRI)</th>
<th>Sec.110</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Toluene (Benzene, Methyl-; Toluol)</td>
<td>108-88-3</td>
<td>No</td>
<td>Yes 1000 LB</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2. Methanol (Methyl alcohol; Carbinol; Wood alcohol)</td>
<td>67-56-1</td>
<td>No</td>
<td>Yes 5000 LB</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>3. Dichloromethane (Methylene chloride)</td>
<td>75-09-2</td>
<td>No</td>
<td>Yes 1000 LB</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>4. Acetone</td>
<td>67-64-1</td>
<td>No</td>
<td>Yes 5000 LB</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>5. Oleic acid (9-Octadecenoic acid (Z)-)</td>
<td>112-80-1</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>6. Potassium hydroxide</td>
<td>1310-58-3</td>
<td>No</td>
<td>Yes 1000 LB</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:**

- **Sec.302:** EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.
- **Sec.304:** EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.
- **Sec.313:** EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.
- **Sec.110:** EPA SARA 110 Superfund Site Priority Contaminant List

**EPA Hazard Categories:**

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

- [X] Yes  [ ] No  Acute (immediate) Health Hazard
- [X] Yes  [ ] No  Chronic (delayed) Health Hazard
- [X] Yes  [ ] No  Fire Hazard
- [ ] Yes  [X] No  Sudden Release of Pressure Hazard
- [ ] Yes  [X] No  Reactive Hazard

### 16. Other Information

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.