Section I - Product Information:
Chemical Name: Methylene Chloride
DOT/UN Shipping Name: Dichloromethane
Preparation date: 29 Nov 2007
CAS Reg. No.: 75-09-2
Trade Name/Product Code: Thin Cement
Update: 3 Mar 2012
Formulation: Methylene Chloride

Section II - Hazardous Ingredients:
<table>
<thead>
<tr>
<th>Hazardous Components/Chemical Identity</th>
<th>CAS Number</th>
<th>%/ACGIHTLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene Chloride</td>
<td>75-09-2</td>
<td>99.9%/50ppm</td>
<td>25ppm</td>
</tr>
</tbody>
</table>

Section III - Physical Characteristics:
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>104˚F</td>
</tr>
<tr>
<td>Specific Gravity (H₂O=1)</td>
<td>1.32@25/25˚C</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>355 mm Hg @20˚C</td>
</tr>
<tr>
<td>Percent Volatile w/w%</td>
<td>100%</td>
</tr>
<tr>
<td>Vapor Density (Air=1)</td>
<td>2.93</td>
</tr>
<tr>
<td>Evaporation Rate (Ether=1)</td>
<td>1.8</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>2.0g/100g water @25˚C</td>
</tr>
</tbody>
</table>

Appearance and Odor: Colorless Liquid, irritating odor

Section IV - Fire and Explosion Data:
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>None</td>
</tr>
<tr>
<td>Flammable Limit</td>
<td>Air vol.%@25˚C: Lower: 14; Upper: 22</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>1033˚F</td>
</tr>
</tbody>
</table>

Extinguisher Method: Water fog or fine spray, Chemical Foam, Carbon Dioxide, Dry Chemicals

Special Fire Fighting Procedures: Keep people away. Isolate fire area and deny unnecessary entry. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire extinguishment. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Immediately withdraw all personnel for area in case of rising sound from venting safety device or discoloration of the container. Move container from fire area if this is possible without hazard. Stay upwind. Keep out of low area where gases (Fumes) can accumulate.

Protective Equipment for Fire Fighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves).

Explosion Hazard: Container may vent and/or rupture due to fire. Although this material does not have a flash point, it can burn at room temperature. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas.

Section V - Reactivity:
Stability: Stable – Under recommended storage conditions. See Section IX.

Conditions to Avoid: Product can decompose at elevated temperatures. Avoid open flames, welding arcs, or other high
temperature sources which induce thermal decomposition. Avoid direct sunlight or ultraviolet sources.

**Incompatibility (Materials to Avoid):** Avoid contact with oxidizing materials. Avoid contact with strong bases. Avoid unintended contact with amines. Avoid contact with metals such as zinc powders, aluminum powders, magnesium powders, potassium, and sodium. Water contamination may cause corrosion of metals due to formation of hydrochloric acid.

**Hazardous Decomposition Products:** During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to hydrogen chloride, carbon monoxide, carbon dioxide. Hazardous combustion products may include trace amounts of phosgene, chlorine.

**Hazardous Polymerization:** Will not occur

**Section VI-Health Hazard data:**

**Primary Routes of Entry:** Inhalation, Skin and Eyes

**Carcinogenicity:** Methylene Chloride is listed by IARC, NTP, OSHA, or ACIGH as a carcinogen.

**Target Organs:** Extremely Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching. Hazardous in case of skin contact (sensitizer). May be hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Hazardous in case of inhalation (lung irritant). Hazardous in case of ingestion.

**Threshold Limit Value (TLV):** See Section II

**Effects of Over Exposure:** See “Target Organs”

**Toxicity Information:** See “Target Organs”

**Emergency and First Aid Procedure:**

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

**Eyes:** Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

**Skin:** Wash thoroughly with soap and water.

**Ingestion:** Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

**Note to Physician:**

Carboxyhemoglobinemia may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias. If burn is present, treat as any thermal burn after decontamination. Because rapid absorption may occur through the lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Exposure may increase “myocardial irritability.” Do not administer sympathomimetic drugs unless absolutely necessary. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
Hazardous Material Identification System (HMIS) Rating:

- Health: 3
- Flammability: 1
- Reactivity: 0
- Personal Protective Equipment: Gloves, Apron & Chemical Glasses

Section VII - Spill or Leak Procedure:

Step to Be Taken in Case Material is Released or Spilled: Before cleaning any spill or leak, individuals involved must wear appropriate Personal Protective Equipment (e.g., goggles, gloves, respirator (SCBA)). Deny entry to all unprotected individuals. Contain spill, transfer to labeled closed metal container. Maximize ventilation (open doors and windows) and secure all sources of ignition. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.


Section VIII - Precautions for Safe Handling and Use:

Respiratory Protection: A respirator should be worn whenever workplace conditions warrant respirator use. Not required if airborne concentrations are maintained below the exposure limit listed.

Ventilation: Use good, local ventilation to control airborne levels below the exposure guidelines.

Protective Gloves: Gloves (latex or nitrile) recommended for any exposure.

Eye Protection: Safety glasses or Chemical Glasses recommended.

Other Protective Equipment: Suitable equipment to prevent skin contact. Ensure eyewash station is available in case of exposure to eyes.

Section IX - Special Precaution:

Precaution to Be Taken in Handling: To avoid uncontrolled emissions, vent vapor from container to storage tank. Do not eat, drink, or smoke in working area. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Vapors of this product are heavier than air and will collect in low areas such as pits, degreasers, storage tanks, and other confined areas. Do not enter these areas where vapors of this product are suspected unless special breathing apparatus is used and an observer is present for assistance. Manual operations (Such as cold cleaning or paint stripping) using methylene chloride should be engineered to provide for confining solvent vapors, adequate ventilation and/or respiratory protection to reduce the potential for overexposure to vapors. Gloves or other protective equipment should be worn if skin contact is likely.

Precaution to Be Taken in Storage: Keep containers tightly closed when not in use. Store in a dry place. Significant vapor pressures (<5 psi) can be generated above 55°F. This may result in venting or rupture. Do not store in zinc, aluminum, aluminum alloys, or plastics. Product should not be packaged in aluminum aerosol cans or with finely divided aluminum or its alloys in an aerosol can. Product is denser than water. Design storage containers appropriately.

Other Precautions: Avoid contact with the product. Wash face and hands thoroughly with soap and water after handling and before eating, drinking or smoking.
OSHA HAZARD COMMUNICATION STANDARD:
This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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