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## 1. Identification

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Product identifier: Plast-aid<sup>®</sup> Brand Multipurpose Repair Plastic – Liquid & Powder

UPC Codes covered: 631914800105, 631914801003, 631914802000, and 631914804004

Product use: General purpose adhesive bonding and modeling material  
Description: Two part, acrylic based, powder and liquid that solidifies upon mixing  
Restrictions on use: None identified

Manufacturer/Supplier: Plast-aid Corporation  
P.O. Box 2156  
Estes Park, Colorado 80517 USA

Telephone: (970) 577-1000

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## 2. Hazard(s) Identification

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United States Title 49 CFR: Transportation, classifies this product as a **Limited Quantity** and is further classified as a **Consumer Commodity** based on its intended use. It is labeled in accordance with the US Consumer Product Safety Commission regulations, which take precedence over OSHA Hazard Communication labeling.

This Product is comprised of two components, one in the form of a *Liquid* and the other in the form of a *Powder*. Under each heading that follows, each of the two components is identified as “Liquid” or “Powder” as appropriate. Product is packaged in small containers, which minimizes exposure.

**Hazard Summary:** The primary reason this product is considered hazardous is due to the principal ingredient of Plast-aid Liquid, Methyl Methacrylate (CAS No: 80-62-6), which is identified as a *Flammable Liquid* and can be *Irritating* to the skin, eyes, and mucus membranes in humans. An allergic response to dermal exposure may develop in some individuals. The liquid has a strong acrid odor with a low odor threshold. Use adequate ventilation to minimize odor. Care should be taken to avoid ignition and overexposure (see Heading 8, Exposure Controls/Personal Protection).

### Liquid:

- **Hazards:**
- Flammable liquid and vapor
- May cause skin irritation
- May cause an allergic skin reaction
- May cause respiratory irritation
- **Prevention:**
- Keep away from ignition source
- Avoid prolonged skin contact. Wash after use.
- Avoid breathing vapors - use adequate ventilation

EYE: Liquid and vapors can cause moderate irritation (tears, blurred vision and redness).  
Safety glasses can be used to protect eyes.

**Liquid Continued:**

SKIN: May cause skin irritation, including redness, itching, and pain. Can cause skin sensitization.

INGESTION: Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

INHALATION: High concentration is irritating to the respiratory tract and may cause dizziness, headache and anesthetic effects.

CHRONIC INFORMATION: Prolonged and/or repeated overexposure may lead to kidney, lung, liver, and heart damage. Repeated skin exposure may cause tingling sensation of the skin. No adverse birth defects, cancer, or reproductive effects anticipated.

AGGRAVATION OF PRE-EXISTING CONDITIONS: Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

**Powder:**- **Hazards:**

- Spillages may be slippery and should be promptly cleaned up to avoid falls.
- May form combustible dust concentrations in air under abnormal conditions.
- Low toxicity under normal handling and use

- **Prevention:**

- Avoid contact with eyes
- Avoid prolonged skin contact. (Potential drying effect.) Wash after use
- Avoid breathing dust.

**3. Composition / Information on Ingredients****Liquid:**

Methyl methacrylate monomer, stabilized (CAS 80-62-6) (UN1247)	>98%
Trade Secret & Impurities	<2%

Substances in the product which may present a health or environmental hazard, or which have been assigned occupational exposure limits:

- Methyl methacrylate monomer, stabilized (CAS 80-62-6) >98%

**Powder:**

Poly(Methyl Methacrylate/Ethyl acrylate) (CAS 9010-88-2)	>94%
Trade Secret & Impurities	<6%

Substances in the product which may present a health or environmental hazard, or which have been assigned occupational exposure limits: - None

**4. First Aid Measures**

INHALATION: Remove to fresh air and keep comfortable for breathing. Obtain medical attention if ill effects occur.

SKIN CONTACT: Wash skin thoroughly with soap and water after contact. If redness or irritation develops avoid contact. Obtain medical attention if ill effects occur.

EYE CONTACT: Rinse cautiously with plenty of water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if ill effects occur.

INGESTION: Do not induce vomiting. Give 2 glasses of water. Never give anything by mouth to an unconscious person. Obtain medical attention if ill effects occur.

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## 5. Fire Fighting Measures

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Suitable extinguishing media: Water spray, foam, dry powder or CO<sub>2</sub>.

Unsuitable extinguishing media: Do not use water jet.

Special hazards: Plast-aid Liquid: Vapors are heavier than air and may travel to ignition sources and flash back.

Plast-aid Powder: Combustion or thermal decomposition will evolve toxic, irritant and flammable vapors.

Special Protective Equipment: A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions where appropriate.

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## 6. Accidental Release Measures

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**Liquid:**

Avoid breathing vapors. Remove any source of ignition. Avoid material from entering sewers or waterways. Soak up with absorbent material. Discard in plastic bags. Wash thoroughly after handling.

**Powder:**

Spillages may be slippery. Sweep up and discard to avoid slip and falls. Wash the spillage area with water as appropriate.

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## 7. Handling and Storage

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Use adequate ventilation to keep below exposure limits. Avoid contact with eyes or ingestion. Avoid prolonged contact with skin. Wash thoroughly after handling. Keep vapor and liquid away from heat, sparks, and flames. Tightly close container after each use. Protect against physical damage.

Storage Temperature: Ambient

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## 8. Exposure Controls/Personal Protection

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**Liquid Airborne Exposure Limits:**

Substance: Methyl methacrylate, CAS No. 80-62-6

PEL (OSHA) : 100 ppm, 410 mg/m<sup>3</sup>, 8 hr. TWA

TLV (ACGIA) : 100 ppm, 410 mg/m<sup>3</sup>, 8 hr. TWA

Plast-aid Corp : 50 ppm, 205 mg/m<sup>3</sup>, 8 hr. TWA; 100 ppm, 410 mg/m<sup>3</sup>, 15 min. STEL

(Note: Odor threshold is <1 ppm.)

Keep container tightly closed. Use adequate ventilation to keep below exposure limits. Keep area orderly. Use safety glasses and protective clothing where exposure warrants. Wash thoroughly after handling.

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## 9. Physical and Chemical Properties

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### Liquid:

Form : Mobile liquid  
Color : Clear, colorless  
Odor : Characteristic strong and acrid odor  
Odor Threshold : 0.5 – 1 ppm  
Boiling Point : 100.5 deg. C at 760 mm.Hg  
Melting Point : -48 deg. C  
Vapor Pressure : 28 mm/Hg at 20 deg. C  
Density : 0.949 g/ml at 15.5 deg. C  
Solubility in water : 1.6 WT% at 20 deg. C  
Vapor Density (air=1) : 3.5  
Flammable Properties:  
Flammable Liquid.  
Flash Point: 11.5 deg. C (52.7 deg. F)  
Auto ignition temperature: 421 deg. C (790 deg. F)  
Flammable limits in air, % by volume: lower limit: 2.1%; upper limit: 12.5%  
Vapors are heavier than air and may travel to ignition sources and flash back.

### Powder:

Form : Beads  
Color : White  
Odor : typical "methacrylate"  
% Volatiles : < 1%  
Specific Gravity : 1.18  
Solubility in water : Negligible

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## 10. Stability and Reactivity

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### Liquid:

**Reactivity:** Will exothermically polymerize in the presence of initiators.  
**Chemical Stability:** Stable in the presence of inhibitor. Polymerization may be caused by elevated temperature, oxidizers, peroxides, or sunlight.  
**Materials to avoid:** Incompatible with oxidizing and reducing agents. Material is a strong solvent and can soften paints, plastics and rubber.  
**Hazardous Decomposition product(s):** Does not decompose up to auto-ignition temperature. Decomposes with heat. Hazardous gases/vapors produced are carbon monoxide, carbon dioxide and smoke.

### Powder:

**Reactivity:** Non-reactive material.  
**Chemical Stability:** Stable under normal conditions.  
**Hazardous Reactions:** None known.

**Powder continued:****Conditions to avoid:** Avoid dust generation.**Materials to avoid:** None known.**Hazardous Decomposition product(s):** Methyl Methacrylate, Ethyl acrylate, Carbon dioxide, Carbon monoxide.

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**11. Toxicological Information**

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**Liquid:****Animal data:**

Inhalation 4 hr LC50: 7093 ppm in rats (Very low toxicity by inhalation)

Dermal LD50: &gt; 35,500 mg/kg in rabbits (Very low toxicity by contact)

Oral LD 50: 7900 mg/kg in rats (very low toxicity by ingestion)

**Ingestion:** Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.**Inhalation:** Irritating to respiratory system. High atmospheric concentrations may lead to irritation of the respiratory tract, dizziness, headache and anesthetic effects.**Skin Contact:** Irritating to skin. May cause sensitization by skin contact. Repeated and/or prolonged contact may cause dermatitis.**Eye Contact:** Irritating to eyes. High vapor concentrations may cause irritation.**Long Term Exposure:** Repeated exposure to high levels produces adverse effects on the heart, lungs, liver and kidneys. Repeated exposure of animals by inhalation to levels at or above the occupational exposure level produces adverse effects on the nasal epithelium (levels of 100 and 400 ppm). There is no reason to believe that methyl methacrylate represents a carcinogenic or mutagenic hazard to man based upon evidence from well conducted animal studies, relevant mutagenicity studies and adequate epidemiological studies in relevant cohorts. Recent studies in animals have show that high exposures do not produce embryo or feototoxic nor tetratogenic effects in the presence of maternal toxicity. None of these effects are likely to occur in humans provided exposure is maintained at or below the occupational exposure limit.**Powder:****Inhalation:** Unlikely to be hazardous by inhalation.

High concentrations of dust may be irritating to the upper respiratory tract.

**Skin Contact:** Unlikely to cause skin irritation. May cause dryness.**Eye Contact:** Dust may cause irritation.**Ingestion:** Low oral toxicity.**Long Term Exposure:** No known adverse effects anticipated.

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**12. Ecological Information**

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**Liquid:****Environmental Fate:** When released into the soil, this material may biodegrade to a moderate extent. When released into the water, this material may biodegrade to a moderate extent. When released into the air, this material is expected to be readily degraded by reaction with photo chemically produced hydroxyl radicals. Material has low potential for bioaccumulation.

**Liquid continued:**

**Toxicity:** Low toxicity to fish. LC50 (fish): Typically > 100 mg/L. LC 50 (fathead minnow) (96 Hr.) (static) 130 mg. /L; Toxicity to aquatic invertebrates. EC 50 (Daphnia Magna) (48 Hr.) 69 mg./L; Low toxicity to algae. EC50 (Selenastrum Capricornutum) (96 hr.) 170 mg./L.

**Effect on Effluent Treatment:** Material is substantially removed in biological treatment processes.

**Powder:**

Spillages may be slippery. Sweep up and discard to avoid slip and falls. Wash the spillage area with water as appropriate.

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### 13. Disposal Considerations

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Dispose of container and unused contents in accordance with federal, state and local requirements.

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### 14. Transportation Information

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**Limited Quantity / Consumer Commodity / ORM-D / Small Quantity:**

Under 49 CFR 173.150, this product is classified as a **Limited Quantity** with inner packaging not over 1.0 L (0.3 gal). The product also meets the definition of a **Consumer Commodity** as stated in 49 CFR 171.8 which allows the material to be renamed **Consumer Commodity** and reclassified as **ORM-D** material under 49 CFR 173.144. This material can be shipped as a **Small Quantity** (when inner packing not over 30 ml (1.0 oz)) under 49 CFR 173.4. Consult 49 CFR and/or your commercial carrier for additional information.

**United States Postal Service:**

The US Postal Service allows this material to be mailed domestically (not internationally) via surface (not air) transportation when classified as **Consumer Commodity** or **ORM-D** material and/or under the **Small Quantity** classification of 49 CFR 173.4. (For additional information, consult US Postal Service, Publication 52, "Hazardous, Restricted, and Perishable Mail", chapter 3, and USPS Packaging Instructions 3A)

**Canadian TDG (Transportation of Dangerous Goods) Regulations:**

Under Canadian TDG Regulations Part 1.17 this product is a **Limited Quantity** when less than or equal to 1 Liter. Under Part 1.17.1 this product is an **Excepted Quantity** when less than or equal to 30 ml. Consult Canadian TDG Regulations and/or your commercial carrier for additional information.

**Additional Information:**

US Department of Transportation (DOT) 49 CFR:

When liquid is in bulk quantity the following information applies:

Proper Shipping Name : Methyl Methacrylate Monomer, Inhibited  
I.D. No. (UN/NA) : UN1247  
Hazard Class : 3 (Flammable Liquid)  
Packing Group : II  
Limited Quantity : Yes  
Consumer Commodity : Yes

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## 15. Regulatory Information

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## U.S. Federal Regulations:

TSCA Inventory Status : Reported/Included  
Superfund reportable discharge : 1000 lbs  
Transportation : 49 CFR 171-177  
US Postal Service : Publication 52

## TITLE III Hazard Classifications; Sections 311,312

Acute : Yes  
Chronic : No  
Fire : Yes  
Reactivity : Yes  
Pressure : No

## Government of Canada Regulations:

TDG Regulations : Part 1, Sections 1.17 – 1.171

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## 16. Other Information

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## NFPA, NPCA-HMIS Rating

Health : 2  
Flammability : 3  
Reactivity : 2

Medical use: Do not use in medical applications involving implantation in the human body.

Disclaimer: The information herein is given in good faith but no warranty, expressed or implied, is made. Plast-aid Corporation assumes no responsibility for personal injury or property damage that may arise from use of this material. Vendees and/or users assume all risks associated with the use of this material.

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