



# MadeSolid

## Material Safety Data Sheet

MS Resin

Colors: White, Blue, Pink, Green, Orange, Red

Prepared: January 15, 2014

## 1. Product and Company Identification

Company: MadeSolid, Inc  
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### Product Identification

Generic Product Name: MS Resin

### Recommended Use

General Purpose UV Cure Resin

### Product Class

Mixture of acrylate monomers, photoinitiator, pigments, and proprietary additives

## 2. Hazards Identification

### TARGET ORGANS OR SYSTEMS

Skin, Eyes, Respiratory System, Central Nervous System

### ROUTE OF EXPOSURE

Skin Contact, Eye Contact, Inhalation, Ingestion

### SIGNS AND SYMPTOMS OF EXPOSURE

Acute:

Skin Irritation -- May cause minor skin irritation. Symptoms of irritation may include a slightly localized redness or rash and swelling. Repeated exposure may cause sensitization and allergic skin reaction in some individuals resulting in contact dermatitis, severe irritation, dryness and cracking.

Eye Contact -- May cause eye irritation. Symptoms or irritation may include excessive tearing, burning sensation, itching, irritation, blinking, redness or swelling. Damage is reversible.

Inhalation -- No significant signs or symptoms indicative of any adverse health hazard are expected to occur at standard conditions. Elevated processing temperatures may generate aerosols or vapors, which may cause respiratory tract irritation. Symptoms of irritation may include coughing, headache and nausea, mucous production and shortness of breath.

Ingestion -- This material is expected to be a slight ingestion hazard, although no appropriate human or animal health effects are known to exist. It may cause nausea, headache, vomiting, diarrhea, and/or central nervous system effects. Keep all food in an area separate from storage and use locations. Prohibit eating, drinking and smoking in areas where there is a potential for significant exposure to this material. Thoroughly wash hands before eating.

Chronic:

Inhalation -- Prolonged or repeated overexposure may cause irritation, headache, and nausea.

Skin Contact -- May cause sensitization and allergic reaction. May cause more significant irritation in people with pre-existing skin conditions.

Eye Contact -- May cause redness of eye tissue.

Ingestion -- May be a slight ingestion hazard if swallowed. Chronic ingestion of high doses may cause damage to testes, as shown in animal studies.

Carcinogens: There are no carcinogens in concentrations of 0.1 percent or greater in this product.

### 3. Composition/Information on Ingredients

Components	CAS No.	Approximate % by Weight
A. Acrylate Monomers	Proprietary	Proprietary
B. Photoinitiator(s)	Proprietary	< 2
C. Pigments	Proprietary	< 10

### 4. First-Aid Measures

General Advice: Remove contaminated clothing. Avoid UV-radiation/sunlight exposure. If symptoms persist, obtain medical attention.

Inhalation: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention.

Eye Contact: In case of eye contact, immediately rinse with clean water for 20 - 30 minutes. Hold eyelids apart to ensure flushing. Seek medical attention immediately.

Skin Contact: Avoid UV-radiation/sunlight. Remove contaminated clothing as needed. Wash skin thoroughly with mild soap/water. Flush with lukewarm water for 15 minutes. Wash clothing before reuse. If irritation develops, consult a physician.

Ingestion: If a large quantity is swallowed, give lukewarm water (pint) if the victim is completely conscious and alert. Do not give anything by mouth if the victim is rapidly losing consciousness, is unconscious, or convulsing. Do not induce vomiting as the risk of damage to the lungs exceeds poisoning risk. Obtain emergency medical attention.

Note to physician: Treat according to symptoms (decontamination, vital functions). No known specific antidote.

## 5. Fire-Fighting Measures

Flash point: > 93°C / 200°F

Method: Estimated

Ignition temperature: N/DA

Lower explosion limit: N/DA

Upper explosion limit: N/DA

Extinguishing media: Dry chemical, carbon dioxide (CO<sub>2</sub>), or foam. Use water spray/water fog for cooling.

Special firefighting procedures: Do not enter fire area without proper protection. Firefighters should wear full protection clothing and self-contained breathing apparatus (SCBA). Fight fire from a safe distance and protected location. Heat and impurities may increase temperature, build pressure, and/or rupture closed containers, spreading the fire and increasing risk of burn and injuries.

Unusual Fire & Explosion: Emits irritating vapors. High temperatures, inhibitor depletion, accidental impurities, or exposure to radiation or oxidizers may cause spontaneous polymerization generating heat/pressure. Closed containers may rupture or explode during runaway polymerization.

## 6. Accidental release measures

Precautions if Material is Spilled or Released:

Wear protective equipment during cleanup. Spilled or released material may polymerize and release heat/gas. Extinguish all ignition sources and ventilate the area. Dike and recover large spills to avoid spread into drains, sewers, water supplies, or soils. Soak up small spills with inert solids and sweep / shovel into a vented disposal container. Wash spill area with a strong detergent and water solution; rinse with water but minimize water use during clean up.

Waste Disposal Method: Do not dispose to sewers, lakes, rivers or streams. Scoop all contaminated material into compatible bottles or drums for proper disposal. Dispose of in accordance with all applicable federal, state and local regulations. National or regional provisions may also be in force.

## 7. Handling and Storage

**Handling Precautions: User Exposure** -- This product should be used in well-ventilated areas. Product may cause irritation. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash hands with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing before reuse. Solvents should never be used to clean hands or skin because they increase the penetration of the material into skin.

**Storage Precautions: Suitable** -- Store in a cool, dry place out of direct sun light, in aluminum, opaque or amber containers. Store the containers at 10-35°C (50-95°F). Do not exceed 60°C (140°F) when in storage. Keep containers closed. Avoid ignition sources.

**Special Requirements:** Do not heat containers with steam or electrical equipment. Heating this product above 150°C (300°F) in the presence of air may cause slow oxidative decomposition; above 260°C (500°F) polymerization may occur. Fumes and vapors from this thermal decomposition may be dangerous (nitrous vapors, carbon monoxide-carbon dioxide). Do not breathe fumes.

## 8. Exposure Controls and Personal Protection

**Respiratory Protection:** In general, respirators are not needed under the normal conditions of use. If this material is handled at elevated temperature or under mist forming conditions, NIOSH/MSHA approved respiratory protection equipment should be used

**Eye Protection:** Eye protection, such as chemical splash goggles and/or face shield must be worn when the possibility of eye contact exists from splashing, spraying, or vapor. Contact lenses should not be worn.

**Skin Protection:** Avoid all skin contact. Depending on the conditions of use, protective gloves, apron, boots, head and face protection should be worn. Equipment should be cleaned after use.

**Engineering Controls:** If handling results in aerosol or vapor generation, local exhaust ventilation is recommended, especially in confined areas.

**Other Controls:** Emergency eye wash fountains and safety showers should be available in locations where physical contact can occur. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove soiled clothing before reuse. Shower after work with plenty of soap and water.

## 9. Physical and Chemical Properties

Form: liquid  
Odor: ester-like  
Color: white, blue, red,  
green, orange, pink  
Appearance: viscous

## 10. Stability and Reactivity

**Stability:** Stable when stored in original container designed for use with light sensitive materials under 35°C (95°F) in dark, cool place.

**Conditions to Avoid:** Storage >100°F, exposure to light, loss of dissolved air, loss of polymerization inhibitor, contamination with incompatible materials.

**Incompatible Materials to Avoid:** Polymerization initiators, including peroxides, strong oxidizing agents, alcohols, copper, copper alloys, carbon steel, iron, rust, and strong bases.

**Hazardous Decomposition Products:** Hazardous decomposition products may include oxides of carbon, nitrogen and various hydrocarbon fragments.

**Hazardous Polymerization:** Hazardous polymerization may occur. Uncontrolled polymerization may cause rapid evolution of heat and increase in pressure that could result in violent rupture of sealed storage vessels or containers.

## 11. Toxicological information

Component	Oral	Dermal
A. Acrylate Monomers	No data available	No data available
B. Photoinitiator(s)	Oral LD50 > 2,000 mg/kg (tested in rats)	Dermal LD50 > 2,000 mg/kg (tested in rats)
C. Pigments	Oral LD50 > 5,000 mg/kg (tested in rats)	Dermal LD50 > 10,000 mg/kg (tested in rabbits)

## 12. Ecological Information

Product is toxic to aquatic life. Keep product from waterways and watersheds. This substance is not readily biodegradable. Dispose of in accordance with all applicable federal, state and local regulations.

A. Acrylate Monomers	No data available
B. Photoinitiator(s)	No data available
C. Pigments	No data available

## 13. Disposal Considerations

Do not discharge into drains/surface waters/groundwater. Dispose of in accordance with governmental regulations (community, national or regional). Contact a licensed professional waste disposal service to dispose of this mixture. Release to the Environment.

Contaminated Packaging: Dispose of as unused product. Expose the open emptied container to light, then dispose.

## 14. Transport Information

### Land transport

USDOT Not classified as a dangerous good under transport regulations

### Sea transport

IMDG Not classified as a dangerous good under transport regulations

### Air transport

IATA/ICAO Not classified as a dangerous good under transport regulations

## 15. Regulatory Information

### TSCA Status:

TSCA status: All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

### TSCA Section 12(b):

TSCA Section 12(b) – Export Notification: This product does not contain any chemicals at concentrations subject to Section 12(b) export notification.

### California Proposition 65:

This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity.

## 16. Other Information

HMIS III rating

Health: 2

Flammability: 1

Physical Hazard: 2

Personal Protection: D

### References:

None