



SAFETY DATA SHEET
Hi Def Master Copy / Master Copy HT Photopolymer

Revision date: March 2014

1. SUBSTANCE/PREPARATION and COMPANY IDENTIFICATION

HD Pattern Company
15927 Parkside Ave.
South Holland, IL 60473
(708) 333-9664

2. HAZARDS IDENTIFICATION

A. EMERGENCY OVERVIEW

This product is a colored liquid with a characteristic light odor. This product may cause skin, eyes and respiratory system irritation, and skin sensitization/allergic reaction by skin contact. Inhalation of high vapor concentration may cause irritation, headaches, dizziness and nausea.

GHS Label elements, including precautionary statements

Signal word

Warning



Irritant

Hazard statement(s) – Risk phrases

R36/37/38 -- Irritating to eyes, respiratory system and skin

Precautionary statement(s)

P280 Wear protective gloves.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

HMIS (Hazardous Materials Information System) for secondary labeling:

HEALTH	2
FIRE HAZARD	1
REACTIVITY	1
PERSONAL PROTECTIVE EQUIPMENT	D

B. TARGET ORGANS OR SYSTEMS

Skin, Eyes, Respiratory System, Central Nervous System, Kidneys

C. ROUTE OF EXPOSURE:

Skin Contact, Eye Contact, Inhalation, Ingestion

C. SIGNS AND SYMPTOMS OF EXPOSURE:

Acute:

Skin Contact -- May cause skin irritation. Symptoms 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 may include excessive tearing, itching, irritation, blinking and redness.

Inhalation -- This product is a suspect slight respiratory tract irritation hazard, especially at high vapor concentration, and if used at elevated temperature or processes which may generate aerosols or mists. Symptoms of irritation may include coughing, headache and nausea, mucous production and shortness of breath.

Ingestion -- The product may be harmful if swallowed. 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, nausea and injury to liver, kidney and blood damage.

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.

Potential Environmental Effects:

Not readily biodegradable. Avoid release to the environment. Dispose of in accordance with all applicable federal, state and local regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	Approximate % by weight	C.A.S. No. & EINECS No.	UK/EU Classification according to Directive 67/548/EEC
A. Methacrylated oligomers	Proprietary	Proprietary	Xi; Irritant, R36/37/38, R43 S3, S7/9, S20, S26, S29, S37/39
B. Methacrylated monomer	Proprietary	Proprietary	Xi; Irritant, R36/37/38, R43 S3, S7/9, S20, S26, S29, S37/39
C. Photoinitiator(s)	Proprietary	Proprietary	H303, H402
D. Pigments	< 0.1	Proprietary	H316

4. FIRST AID MEASURES

General advice

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth with water. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flash point: > 93°C / 200°F

Method: Setaflash

Ignition temperature: n.d

Lower explosion limit: n.d

Upper explosion limit: n.d

Extinguishing media: Use carbon dioxide or dry chemical for small fires; aqueous foam or water spray for large fires.

Special firefighting procedures: Firefighters should wear full protection clothing and self-contained breathing apparatus (SCBA). Thoroughly decontaminate firefighting equipment including all firefighting apparel after the incident.

Unusual Fire & Explosion: Emits irritating vapors. High temperatures, accidental impurities, or exposure to radiation or oxidizers may cause spontaneous polymerization generating heat/pressure and rupture/explosion of closed containers.

Exposure Hazard(s): Material – Irritant

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Remove ignition sources.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Normal measures for preventive fire protection.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from light and hot surfaces or open flames.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form liquid

Safety data

pH	no data available
Melting point	no data available
Boiling point	no data available
Flash point	> 93°C / 200°F
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Density	1.10 – 1.12 g/cm ³ at 25 °C (77 °F)
Water solubility	no data available
Viscosity	300 – 400 cps at 25 °C (77 °F)

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

No light exposure

Materials to avoid

Acids, Bases, Strong oxidizing agents

Hazardous polymerization

May occur

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

- | | |
|----------------------------|---|
| A. Methacrylated oligomers | No data available |
| B. Methacrylated monomer | No data available |
| C. Photoinitiator(s) | Acute Oral Toxicity LD50 > 2500 mg/kg body weight (tested in rats) (vendor literature)
Acute Dermal Toxicity LD50 > 5000 mg/kg body weight (vendor literature) |

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

May cause allergic skin reaction.

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available

Aspiration hazard

No data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information

12. ECOLOGICAL INFORMATION

Toxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

PBT and vPvB assessment

No data available

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

The following provides a summary of the legal requirements.

Ingredient	EPA* TSCA	CA Prop 65	EUROPEAN ECONOMIC COMMUNITY (EEC)			Listed as dangerous chemicals per ESIS	CANADA REGS	
			EINECS	European Community Standards	EEC Symbol		DSL	NDSL
A. Methacrylated oligomers	Yes	No	Yes	None	No	Xi; Irritant, R36/37/38, R43 S3,S7/9, S20, S26, S29, S37/39	Yes	Yes
B. Methacrylated monomer	Yes	No	Yes	None	No	Xi; Irritant, R36/37/38, R43 S3,S7/9, S20, S26, S29, S37/39	Yes	Yes
C. Photoinitiator(s)	Yes	No	Yes	None	No	H303, H402	Yes	No

All the components present in this product at concentrations equal to or greater than 0.1% are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Substance Preparation Classification:



Irritant

FULL TEXT OF ANY R-PHRASES AND S-PHRASES:

Risk Phrases:

R36/37/38 -- Irritating to eyes, respiratory system and skin

R43 -- May cause sensitization by skin contact

Safety Phrases:

S3 -- Keep in a cool place

S7/9 -- Keep container

S20 -- When using do not eat or drink

S26 -- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S29 -- Do not empty into drains

S36 -- Wear suitable protective clothing

S37/39 -- Wear suitable gloves and eye/face protection

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986, (SARA) and 40 CFR 372 Part 372, this product does not contain chemicals at levels greater or equal to 0.1wt% subject to the reporting requirements under Section 313.

California Proposition 65: This product does not contain chemicals at levels greater or equal to 0.1wt% which are known to the state of California to cause cancer.

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

No components are subject to the Pennsylvania Right to Know Act.

New Jersey Right To Know Components

No components are subject to the New Jersey Right to Know Act.

16. OTHER INFORMATION

Recommended use: FOR INDUSTRIAL USE ONLY.

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION FURNISHED BY Hi Def HEREUNDER ARE GIVEN GRATIS AND Hi Def ASSUMES NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED. ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.

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