

Designer Molecules, Inc.

Safety Data Sheet

Product: PEAM-645
MSDS ID: R1096

Revised Date: 01/01/19
Replaces Date: 08/27/18

1. General Information

Product Code: PEAM-645
Trade Name(s): R1096
Product Type: Difunctional (Meth)Acrylate Oligomer
Recommended Use: Thermoset resin
Restrictions: None identified

Company: Designer Molecules, Inc.
10080 Willow Creek Rd.
San Diego, CA 92131
Telephone: 858-348-1122

Emergency phone number (spill, leak, fire, exposure or accident):
US Domestic (800) 535-5053 (INFOTRAC) Includes Canada and Mexico
International +1 (352) 323-3500
China Specific (86) 400-120-0761
Germany Specific (49) 0800-181-2924
Australia Specific (61) 1-300-366-961

2. Hazards Identification

EMERGENCY OVERVIEW:

OSHA Hazards:

Harmful by ingestion, Harmful by skin absorption, Irritant.

Other hazards which do not result in classification:

Possible sensitizer.

GHS Classification:

Acute toxicity, Oral (Category 4)
Acute toxicity, Dermal (Category 4)
Skin Irritation (Category 2)

GHS Label Elements, including precautionary statements:



Signal Word: **Warning**

H315: Causes skin irritation.

H319 Causes serious eye irritation

H335 May cause respiratory irritation

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P280: Wear protective gloves/protective clothing./eye protection/face protection.
P281 Use personal protective equipment as required.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lens, if present and easy to do. Continue rinsing.
P304+P340: IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing.
P362 Take off contaminated clothing before reuse.

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P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
P332+P313: If skin irritation occurs: Get medical advice/attention.

HMIS Classification:

Health Hazard: 1
Flammability: 1
Physical Hazards: 1

NFPA Rating:

Health Hazard: 1
Fire: 1
Reactivity Hazard: 1

POTENTIAL HEALTH EFFECTS:

INHALATION: May be harmful if inhaled. Causes respiratory tract irritation.

EYE CONTACT: Causes eye irritation

SKIN CONTACT: Harmful if absorbed through skin. Causes skin irritation.

SWALLOWING: Harmful if swallowed.

3. Composition/ Information On Ingredients

Synonyms: PEAM-645, R1096
Polyester Acrylate Methacrylate Oligomer

COMPONENT	CAS#	CONCENTRATION
1,3-Benzenedicarboxylic acid, polymer with tricyclodecanedimethanol, mixed bis(acrylates and methacrylates)	921213-39-0	100%

4. First Aid Measures

GENERAL ADVICE:

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

If swallowed:

Do not induce vomiting. Give person large amounts of water. Get immediate medical attention.

In case of skin contact:

Wash area with soap and water. Consult a physician.

If inhaled:

Remove person to fresh air. If breathing has stopped, perform artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

In case of eye contact:

Flush with water for 15 minutes as a precaution.

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5. Fire and Explosion Hazard Data

Conditions of flammability:

Will burn.

Suitable extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters:

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products:

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

6. Accidental Release Measures

Personal Precautions:

Wear 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:

Absorb with liquid-binding material and arrange for disposal. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. Handling and Storage

Precautions for safe handling:

Avoid contact with skin eyes. Avoid formation of aerosols. Keep container closed. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage:

Store at +5°C or colder away from light and incompatible materials identified in the *Stability and Reactivity Section*.

8. Exposure Controls and Personal Protection Measures

Contains no substances with occupational exposure limit values

Personal protective equipment:

Respiratory protection:

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. 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 manufacturing practices. Wash and dry hands.

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Eye protection:

Safety glasses with side shields conforming to EN166. 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.

9. Physical / Chemical Characteristics

Appearance:

Physical State:	Viscous Liquid
Color:	Dark amber to brown
Odor:	None to slight
Odor threshold:	no data available

Other properties:

pH:	no data available
Melting Point:	>375°C (>707°F) dec
Boiling Point:	no data available
Flash Point:	> 204°C (> 400°F) closed cup
Ignition temperature	no data available
Autoignition temperature	not self igniting
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapor Pressure:	no data available
Specific Gravity (H ₂ O=1):	1.00 g/cc
Solubility in water:	Insoluble
n-Octanol/water partition coefficient:	no data available
Evaporation rate (BuAc=1):	< 1
Avg. Molecular Weight:	no data available
Percent volatile (weight):	<0.1%

10. Reactivity Hazard Data

Chemical stability:

Stable under recommended storage conditions.

Conditions to avoid:

Elevated temperatures in the presence of initiators and loss or inhibitors.

Materials to avoid:

Strong oxidizing, strong reducers, free radical initiators, inert gases, oxygen scavengers.

Hazardous decomposition products:

Acrid smoke-fumes/carbon monoxide/carbon dioxide and perhaps other toxic vapors may be released during a fire involving this product.

Possibility of hazardous reactions:

May generate significant heat if cured in bulk.

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11. Toxicological Information

Acute Oral Toxicity:

GHS Category 4: LD50 > 300 mg/kg < 2000 mg/kg

Inhalation LC50

No data available

Acute Dermal Toxicity:

GHS Category 4: LD50 > 1000 mg/kg < 2000 mg/kg

Other information on acute toxicity

No data available

Skin Corrosion/Irritation:

Causes skin irritation. GHS Category 2 skin irritant.

Serious eye damage/eye irritation:

May cause serious eye irritation.

Respiratory or skin sensitization:

Prolonged or repeated exposure may cause allergic reactions in certain individuals.

Germ cell mutagenicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) does not contain mutation data for this material.

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:

The Registry of Toxic Effects of Chemical Substances (RTECS) does not contain reproductive data for this material.

Teratogenicity:

No data available

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

May cause respiratory irritation.

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

No effects known.

Aspiration hazard

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No effects known.

Potential health affects:

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	Harmful if swallowed.
Skin	Harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

Signs and Symptoms of Exposure:

Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

Synergistic effects:

No data available

12. Ecological Information

Toxicity:

No data available

Persistence and degradability:

No data available

Bioaccumulation potential:

No data available

Mobility in soil:

No data available

PBT and vPvP 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. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging:

Dispose of as unused product.

14. Transport Information

DOT (US):

Not dangerous goods

IMDG:

Not dangerous goods

IATA:

Not dangerous goods

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15. Regulatory Information

TSCA Status:

Listed

OSHA Hazards:

Harmful by ingestion. Harmful by skin absorption. Irritant.

SARA 302 Components:

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

SARA 313 Components:

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards:

Acute health hazard

CALIFORNIA PROPOSITION 65:

This product does not contain any chemicals that are known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other Information

The opinions expressed herein are those of qualified experts within Designer Molecules Inc. We believe that the information contained herein is current, as of the date of this Safety Data Sheet. Because the use of this information and of these opinions, and the conditions of use of this product, are not within the control of Designer Molecules Inc., it is the user's legal obligation to determine the conditions of safe use of this product.