

Designer Molecules, Inc.

Safety Data Sheet

Product: MM-211
MSDS ID: R1175

Revised Date: 09/01/22
Replaces Date: 01/01/19

1. General Information

Product Code: R1175
Trade Name(s): MM-211
Product Type: 6-Maleimidohexanoic acid
Recommended Use: Adhesion promoter
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: Irritant

GHS Classification Acute toxicity, Oral (Category 5)
Skin irritation (Category 2)
Serious eye damage (Category 1)
Specific target organ toxicity -single exposure (Category 3)

GHS Label Elements, including precautionary statements

Pictogram



Signal word DANGER

Hazard statement(s)

H303 May be harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/ eye protection/ face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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HMIS Classification

Health = 2
Flammability = 0
Physical = 0

NFPA Classification

Health = 2
Fire = 0
Reactivity = 0

POTENTIAL HEALTH EFFECTS:

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

3. Composition Information

Synonyms: MM-211
MCA
6-Maleimide hexanoic acid
Maleimidocaproic acid
2,5-Dihydro-2,5-dioxo-1H-pyrrole-1-hexanoic acid

Formula: $C_{10}H_{13}NO_4$
Molecular Weight: 211.21 g/mol

COMPONENT	CAS#	CONCENTRATION
6-Maleimidocaproic acid	55750-53-3	

4. First Aid Measures

GENERAL ADVICE: Consult a physician. Show this safety data sheet to the doctor in attendance.
Move out of the dangerous area.
SWALLOWING: Never give anything by mouth to an unconscious person. Rinse mouth with water.
Consult a physician.
SKIN CONTACT: Wash off with soap and plenty of water. Consult a physician.
INHALATION: If breathed in, move person into fresh air. If not breathing, give artificial respiration.
Consult a physician.
EYE CONTACT: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

5. Fire and Explosion Hazard Data

Conditions of flammability:
Not flammable or combustible.

Suitable extinguishing media:
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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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. -Carbon oxides, nitrogen oxides (NO_x).

6. Accidental Release Measures

Personal Precautions:

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions:

Do not let product enter drains.

Methods and materials for containment and cleaning up:

Pick-up and arrange for disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. Handling and Storage

Precautions for safe handling:

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

Conditions for safe storage:

Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place.

8. Exposure Controls and Personal Protection Measures

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 particle respirator type N100 (US) or type P3 (EN 143) 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 manufacturing 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.

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Hygiene measures:

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

9. Physical / Chemical Characteristics

APPEARANCE:

Form:	powder
Colour:	light yellow

SAFETY DATA:

pH:	no data available
Melting Point/Freezing Point:	melting point/range: 87 -92 °C (189 -198 °F)
Boiling Point:	no data available
Flash Point:	no data available
Ignition temperature:	no data available
Autoignition temperature:	no data available
Lower explosion limit:	no data available
Upper explosion limit:	no data available
Vapor Pressure:	no data available
Density:	no data available
Solubility in water:	no data available
n-Octanol/water partition coefficient:	no data available
Relative vapour density:	no data available
Odour:	no data available
Odour Threshold:	no data available
Evaporation rate:	no data available

10. Reactivity Hazard Data

Chemical stability:

Stable under recommended storage conditions.

Possibility of hazardous reactions:

No data available.

Conditions to avoid:

No data available.

Materials to avoid:

Strong acids and strong bases, Strong oxidizing agents, Strong reducing agents.

Hazardous decomposition products:

Other decomposition products -no data available.

Hazardous decomposition products formed under fire conditions. -Carbon oxides, nitrogen oxides (NOx)

11. Toxicological Information

ACUTE TOXICITY:

ORAL LD50:	No data available.
INHALATION LC50:	No data available

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DERMAL LD50: No data available

Other information on acute toxicity: No data available

SKIN CORROSION/IRRITATION: No data available

SERIOUS EYE DAMAGE/ EYE IRRITATION: No data available

RESPIRATORY OR SKIN SENSITIZATION: No data available

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 probable, possible or confirmed human carcinogen by ACGIH.

NTP: 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 NTP.

OSHA: 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 OSHA.

REPRODUCTIVE TOXICITY: No data available

TERATOGENICITY: 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. Causes respiratory tract irritation.
Ingestion: May be harmful if swallowed.
Skin: May be harmful if absorbed through skin. Causes skin irritation.
Eyes: Causes eye irritation.

SYNERGISTIC EFFECTS:

No data available.

ADDITIONAL INFORMATION:

RETCS: Not available

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12. Ecological Information

TOXICITY:	No data available.
PERSISTANCE 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:	None established.

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

15. Regulatory Information

OSHA Hazards:

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.

Massachusetts Right To Know Components:

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

Pennsylvania Right To Know Components:

6-Maleimidocaproic acid

CAS-No.
55750-53-3

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New Jersey Right To Know Components:

	CAS-No.	Revision Date
6-Maleimidocaproic acid	55750-53-3	

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

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgments of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user. While that data contained herein is factual, it should not be taken as warranty or representation for which the company assumes legal responsibility. It is offered solely for your consideration, investigation and verification. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.