

Designer Molecules, Inc.

Safety Data Sheet

Product: BMI-1500 (75 wt.%) in MEK
MSDS ID: R1378

Revised Date: 01/01/19
Replaces Date: 05/18/18

1. General Information

Product Code: R1378
Trade Name(s): BMI-1500 (75 wt.%) in MEK
Product Type: Bismaleimide oligomer solution
Recommended Use: Adhesives formulations
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:

Other hazards which do not result in classification:

Possible sensitizer.

GHS Classification:

Flammable liquids (Category 2)

Eye irritation (Category 2A)

Specific target organ systemic toxicity – single exposure – (Category 3), Central nervous system

GHS Label Elements, including precautionary statements:



Signal Word: **Danger**

H225: Flammable liquid and vapor.

H302: Harmful if swallowed.

H319: Causes eye irritation.

H336: May cause drowsiness or dizziness.

P210: Keep away from heat/sparks/open flames/hot surfaces.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical, ventilation and lighting equipment.
P264: Wash thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P280c: Wear protective gloves/protective clothing.
P303+P353+ P361: IF ON SKIN (or hair): Remove, take off immediately all contaminated clothing.

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Wash with plenty of soap and water.

P304+P340+P312: IF INHALED: Remove victim to fresh air and keep at rest in a position for breathing.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

P280d: Wear protective gloves.

P370+P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

P332+P313: If skin irritation occurs: Get medical advice/attention.

P362: Take off contaminated clothing and wash before reuse.

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

Synonyms: R1378, BMI-1500 in MEK, BMI Oligomer solution

COMPONENT	CAS#	CONCENTRATION
Amines, C36-alkylenedi-, polymers with 5,5'-oxybis[1,3-isobenzofurandione], reaction products with maleic anhydride	1290041-56-3	75 – 76%
Ethyl Methyl Ketone	78-93-2	23 - 26%

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. Rinse mouth with 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.

5. Fire and Explosion Hazard Data

Conditions of flammability:

Flammable

Suitable extinguishing media:

Alcohol-resistant form, 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. Nature of decomposition products not known.

6. Accidental Release Measures

Personal Precautions:

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

Environmental precautions:

Do not let product enter drains.

Methods and materials for containment and cleaning up:

Pick-up and arrange for disposal. Absorb 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 dust and aerosols. Keep container closed. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage:

Store at Room temperature or colder away from light and incompatible materials identified in the *Stability and Reactivity Section*.

8. Exposure Controls and Personal Protection Measures

Components with workplace control parameters:

Component	CAS No.	Value	Control Parameter	Basis
Ethyl methyl ketone	78-93-3	TWA	200 ppm	USA. ACGIH threshold Limit Values (TLV)
		STEL	300 ppm	
		REL	200 PPM	NIOSH/Guide
STEL	300 ppm			
		PEL	200 ppm	OSHA Trans

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:	Liquid
Color:	Amber
Odor:	Solvent odor
Odor threshold:	no data available

Other properties:

pH:	no data available
Melting Point:	no data available
Boiling Point:	no data available
Flash Point:	-4°C (25°F) closed cup <solvent>
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
Specific Gravity (H ₂ O=1):	no data available
Solubility in water:	Insoluble
n-Octanol/water partition coefficient:	no data available
Evaporation rate (BuAc=1):	no data available
Percent volatile (weight):	24 – 26 wt.%

10. Reactivity Hazard Data

Chemical stability:

Stable under recommended storage conditions.

Conditions to avoid:

Elevated temperatures.

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:

Material will cure with the release of substantial heat if polymerization is initiated by temperatures > 130°C

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11. Toxicological Information

Target organs:

Eyes
Skin
Respiratory system
Central nervous system

Acute Toxicity:

Oral LD50

LD50 Rat: 3,400 mg/kg <ethyl methyl ketone>

Inhalation LC50

Possible damages, mucosal irritations

Dermal LD50

LC50 Rabbit: > 8,000 mg/kg <ethyl methyl ketone>

Other information on acute toxicity

No data available

Skin Corrosion/irritation:

No data available

Serious eye damage/eye irritation:

Rabbit, sever irritations

Respiratory or skin sensitization:

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

Germ cell mutagenicity:

No data available

Carcinogenicity:

This product contains a component that is not classifiable as to its cancinogenicity based on IARC, ACGIH, NTP or EPA classification.

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

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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 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

Additional Information:

RETCS: Not 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.

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Contaminated packaging:
Dispose of as unused product.

14. Transport Information

US DOT CLASSIFICATION:

UN1993 Flammable Liquid N.O.S. (Methyl Ethyl Ketone), Class 3, Group II

CANADIAN TDG SURFACE:

Class B Flammable liquid, div.2, (Methyl Ethyl Ketone)

IMDG CLASSIFICATION:

UN1993 Flammable Liquid N.O.S. (Methyl Ethyl Ketone Class 3, Group II

ICAO CLASSIFICATION:

UN1993 Flammable Liquid N.O.S. (Methyl Ethyl Ketone), Class 3, Group II

IATA CLASSIFICATION:

UN1993 Flammable Liquid N.O.S. (Methyl Ethyl Ketone), Class 3, Group II

15. Regulatory Information

TSCA Status:

Components of R1378 are listed or exempt from listing on the US TSCA inventory.

OSHA Hazards:

Harmful by ingestion. Harmful by skin contact/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 MSDS. 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.