

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : *m*-Xylylenediamine

Product Number : X1202  
Brand : Aldrich

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

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### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Toxic by inhalation., Harmful by ingestion., Harmful by skin absorption., Skin sensitiser, Corrosive

##### Target Organs

Liver, Kidney

##### GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H302 + H312 Harmful if swallowed or in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H330 Fatal if inhaled.  
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P284 Wear respiratory 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.  
P310 Immediately call a POISON CENTER or doctor/physician.

#### HMIS Classification

Health hazard: 3  
Flammability: 1  
Physical hazards: 0

#### NFPA Rating

Health hazard: 4  
Fire: 1  
Reactivity Hazard: 0

#### Potential Health Effects

**Inhalation** Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.  
**Skin** Harmful if absorbed through skin. Causes skin burns.  
**Eyes** Causes eye burns.  
**Ingestion** Harmful if swallowed. Causes burns.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 1,3-Bis(aminomethyl)benzene  
*α,α'*-Diamino-*m*-xylene

Formula : C<sub>8</sub>H<sub>12</sub>N<sub>2</sub>  
Molecular Weight : 136.19 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>1,3-Bis(aminomethyl)benzene</b>			
1477-55-0	216-032-5	-	-

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### 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 inhaled

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

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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### 5. FIRE-FIGHTING MEASURES

#### Suitable extinguishing media

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

#### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

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### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

#### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

#### 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.

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### 7. HANDLING AND STORAGE

#### Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour 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.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
1,3-Bis(aminomethyl) benzene	1477-55-0	CEIL	0.1 mg/m <sup>3</sup>	1994-09-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Skin contact does contribute to exposure.				
		CEIL	0.1 mg/m <sup>3</sup>	1989-03-01	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
	Skin contact does contribute to exposure.				

### 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.

#### Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum).

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	clear, liquid
Colour	colourless

### Safety data

pH	12 at 1 g/l at 20 °C (68 °F)
Melting point	14.1 °C (57.4 °F)
Boiling point	265 °C (509 °F) at 993 hPa (745 mmHg) - lit.
Flash point	113 °C (235 °F) - closed cup
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	0.04 hPa (0.03 mmHg) at 25 °C (77 °F) 40 hPa (30 mmHg) at 121 °C (250 °F)
Density	1.032 g/cm <sup>3</sup> at 25 °C (77 °F)
Water solubility	soluble

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Conditions to avoid

no data available

### Materials to avoid

acids, Acid chlorides, Acid anhydrides, Oxidizing agents, Chloroformates

### Hazardous decomposition products

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

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral - rat - 930 mg/kg

LC50 Inhalation - rat - 1 h - 700 ppm

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation. Respiratory disorder

LD50 Dermal - rabbit - 2,000 mg/kg

### Skin corrosion/irritation

Skin - rabbit - Severe skin irritation - 24 h

### Serious eye damage/eye irritation

Eyes - rabbit - Severe eye irritation - 24 h

### 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 (GHS)

no data available

### Specific target organ toxicity - repeated exposure (GHS)

no data available

### Aspiration hazard

no data available

### Potential health effects

<b>Inhalation</b>	Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
<b>Ingestion</b>	Harmful if swallowed. Causes burns.
<b>Skin</b>	Harmful if absorbed through skin. Causes skin burns.
<b>Eyes</b>	Causes eye burns.

### Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

**Additional Information**

RTECS: PF8970000

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**12. ECOLOGICAL INFORMATION**

**Toxicity**

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96.0 h

Toxicity to daphnia and other aquatic invertebrates. EC50 - Daphnia magna (Water flea) - 16 mg/l - 48 h

**Persistence and degradability**

Biodegradability Biotic/Aerobic  
Result: 0.40 % - Not readily biodegradable.

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

no data available

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**13. DISPOSAL CONSIDERATIONS**

**Product**

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION**

**DOT (US)**

UN-Number: 2735 Class: 8 Packing group: II  
Proper shipping name: Polyamines, liquid, corrosive, n.o.s. (1,3-Bis(aminomethyl)benzene)  
Marine pollutant: No  
Poison Inhalation Hazard: No

**IMDG**

UN-Number: 2735 Class: 8 Packing group: II EMS-No: F-A, S-B  
Proper shipping name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (1,3-Bis(aminomethyl)benzene)  
Marine pollutant: No

**IATA**

UN-Number: 2735 Class: 8 Packing group: II  
Proper shipping name: Polyamines, liquid, corrosive, n.o.s. (1,3-Bis(aminomethyl)benzene)

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**15. REGULATORY INFORMATION**

**OSHA Hazards**

Toxic by inhalation., Harmful by ingestion., Harmful by skin absorption., Skin sensitiser, Corrosive

**DSL Status**

All components of this product are on the Canadian DSL list.

**SARA 302 Components**

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

**SARA 313 Components**

SARA 313: 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**

	CAS-No.	Revision Date
1,3-Bis(aminomethyl)benzene	1477-55-0	1991-07-01

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
1,3-Bis(aminomethyl)benzene	1477-55-0	1991-07-01

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
1,3-Bis(aminomethyl)benzene	1477-55-0	1991-07-01

**California Prop. 65 Components**

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

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**16. OTHER INFORMATION****Further information**

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