

Material Safety Data Sheet

Version 4.0

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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

Telephone : +1 800-325-5832

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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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

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

Formula : C₈H₁₂N₂
Molecular Weight : 136.19 g/mol

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

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.

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.

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.

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 ³	1994-09-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Skin contact does contribute to exposure.				
		CEIL	0.1 mg/m ³	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 ³ at 25 °C (77 °F)
Water solubility	soluble

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 (NO_x)

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

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

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

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.

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)

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.

16. OTHER INFORMATION**Further information**

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