



SAFETY DATA SHEET

Issuing Date 02-Aug-2013

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Revision Number 4

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name **POLYLINK PACM**

Other means of identification

Product Code 3611400
CAS Number 1761-71-3
Formula C13H26N2
Synonyms Cyclohexanamine, 4,4'- Methylenebis; 4,4'- Diaminodicyclohexylmethane
UN-No UN2735

Recommended use of the chemical and restrictions on use

Recommended Use Coatings
Uses advised against Avoid contact with food. Avoid prolonged contact with eyes, skin, and clothing.

Details of the supplier of the safety data sheet

Supplier Address ACETO CORPORATION
4 Tri Harbor Court
Port Washington, NY 11050-4661
Phone: (516) 627-6000
Fax: (516) 627-6093
Email: aceto@aceto.com

Emergency Telephone Number(s)

ChemTrec: 1-800-424-9300 Outside of the United States: 1-703-527-3887

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin Corrosion/Irritation	Category 1
Serious eye damage/eye irritation	Category 1
Respiratory Sensitization	Category 1
Skin Sensitization	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Emergency Overview

Signal Word**DANGER****Hazard statements**

Harmful if swallowed
 Harmful in contact with skin
 Harmful if inhaled
 Causes severe skin burns and eye damage
 May cause allergy or asthma symptoms or breathing difficulties if inhaled
 May cause an allergic skin reaction
 May cause damage to organs through prolonged or repeated exposure
 Very toxic to aquatic life Very toxic to aquatic life with long lasting effects

**Appearance**

Colorless to Slightly Yellow

Physical State

Liquid To Solid (depending on temperature)

Odor

Ammonia-like

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Wear protective gloves/protective clothing/eye protection/face protection
 Use only outdoors or in a well-ventilated area
 Do not breathe dust/fume/gas/mist/vapors/spray
 In case of inadequate ventilation wear respiratory protection
 Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

Specific treatment (see supplemental first aid instructions on this label)
 Immediately call a POISON CENTER or doctor/physician
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor/physician
 Call a POISON CENTER or doctor/physician if you feel unwell
 Wash contaminated clothing before reuse
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 If skin irritation or rash occurs: Get medical advice/attention
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a POISON CENTER or doctor/physician if you feel unwell
 Immediately call a POISON CENTER or doctor/physician
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth
 Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None known

Other Information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS**Synonyms** Cyclohexanamine, 4,4'- Methylenebis; 4,4'- Diaminodicyclohexylmethane**Formula** C13H26N2

Chemical Name	CAS No	Weight-%	North American Hazard Indicator
Bis(P-Amino Cyclohexyl)Methane	1761-71-3	100	True

4. FIRST AID MEASURES**First Aid Measures**

- General Advice** Show this safety data sheet to the doctor in attendance.
- Eye Contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician or poison control center immediately.
- Skin Contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Destroy contaminated shoes. Call a physician or poison control center immediately.
- Inhalation** Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician or poison control center immediately.
- Ingestion** Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.
- Self-Protection of the First Aider** Use personal protective equipment as required. Avoid contact with eyes, skin and clothing.
- Most important symptoms and effects, both acute and delayed**
- Signs and Symptoms** No information available.
- Indication of any immediate medical attention and special treatment needed**
- Notes to Physician** Treat symptomatically.

5. FIRE-FIGHTING MEASURES

- Flammable properties** Not available.
- Suitable Extinguishing Media** Water spray. Carbon dioxide (CO2). Dry chemical. Alcohol-resistant foam. Halon extinguisher.
- Unsuitable Extinguishing Media** No information available.
- Hazardous Combustion Products** Thermal decomposition or combustion may produce hazardous gases and/or materials.
- Explosion Data** Not available
- Sensitivity to mechanical impact** Not available.
- Sensitivity to static discharge** Not available.

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures**Personal Precautions**

Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment as required. Avoid contact with eyes, skin and clothing. In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental Precautions

Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

Methods and material for containment and cleaning up**Methods for Clean-up**

Evacuate personnel to safe areas. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for Safe Handling**Handling**

Use only in an area equipped with a safety shower. Ensure adequate ventilation. Use only in well-ventilated areas. Do not breathe vapours/dust. Do not breathe vapours or spray mist. Avoid contact with eyes, skin and clothing. Avoid repeated exposure. Destroy contaminated shoes.

Conditions for safe storage, including any incompatibilities**Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible Materials

Acids. Acid chlorides. Acid anhydrides. Cadmium. Isocyanides. Halogenated organics. Peroxides. Phenols (acidic). Epoxides. Anhydrides. Acid halides.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Bis(P-Amino Cyclohexyl)Methane 1761-71-3	-	-	-

Appropriate engineering controls**Engineering Controls**

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment**Eye/Face Protection**

Tight sealing safety goggles. Face protection shield.

Skin and body protection	Use suitable eye protection and gloves.
Respiratory Protection	In case of insufficient ventilation, wear suitable respiratory equipment.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Colorless to Slightly Yellow
Physical State	Liquid To Solid (depending on temperature)
Odor	Ammonia-like
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	
Melting point / Freezing point	33.5 - 44 °C	Literary Reference
Boiling point / boiling range	320 °C	
Flash Point	159 °C	CC (closed cup)
Evaporation Rate		
Flammability (solid, gas)		
Flammability Limit in Air		
Upper flammability limit	No information available	
Lower flammability limit	Not available	
Vapor Pressure	0.0003 mmHg @ 20°C	
Vapor Density	Not available	
Specific Gravity	0.95 g/cm ³	
Water Solubility	Soluble in water	
Solubility in other solvents	No information available	
Partition coefficient: n-octanol/water	Not available	
Autoignition temperature °C	No data available	Estimated
Decomposition temperature	No data available	
Kinematic Viscosity	No information available	
Dynamic Viscosity	Not available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

Other Information

Softening Point	No information available
Molecular Weight	210.37
VOC content	No information available
Density	No information available
Bulk Density	No information available
Corrosion characteristics	No information available

10. STABILITY AND REACTIVITY

Reactivity	Not applicable.
Chemical Stability	Stable under normal conditions
Conditions to Avoid	Heat, flames and sparks.
Incompatible Materials	Acids. Acid chlorides. Acid anhydrides. Cadmium. Isocyanides. Halogenated organics. Peroxides. Phenols (acidic). Epoxides. Anhydrides. Acid halides.
Hazardous Decomposition Products	Carbon monoxide. Carbon dioxide (CO ₂). Nitrogen oxides (NO _x).
Possibility of Hazardous Reactions	Flammable gaseous hydrogen is generated in combination with strong reducing agents such as hydrides

11. TOXICOLOGICAL INFORMATION

Product Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Bis(P-Amino Cyclohexyl)Methane 1761-71-3	= 1000 mg/kg (Rat)	-	-

The following values are calculated based on chapter 3.1 of the GHS document .

Information on likely routes of exposure

Eyes	Corrosive. Causes burns. Avoid contact with eyes.
Skin	Harmful in contact with skin. Corrosive. Causes burns. May cause sensitization by skin contact. Avoid contact with skin.
Inhalation	Harmful by inhalation. Corrosive. Causes burns. High concentrations are extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Avoid breathing vapors or mists.
Ingestion	Harmful if swallowed. Do not take internally.

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	Eye, rabbit: 10 ul /24H SEV
Serious eye damage/irritation	No information available.
Corrosivity	Causes burns.
Skin Corrosion/Irritation	No information available.
Sensitization	May cause sensitization of susceptible persons. [Immune System].
Reproductive Effects	No information available.
Mutagenic Effects	No information available.
Developmental Effects	No information available.
STOT - single exposure	No information available.
STOT - Repeated Exposure	No information available.
Chronic Toxicity	Avoid repeated exposure. [Immune system]. May cause damage to organs through prolonged or repeated exposure.
Target Organ Effects	Eyes, Skin, Respiratory system.
Aspiration Hazard	No information available.

Numerical measures of toxicity - Product Information

ATEmix (inhalation-dust/mist) 1.5 mg/L

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Very toxic to aquatic life with long lasting effects Avoid release to the environment

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence/Degradability No information available.**Bioaccumulation/Accumulation** No information available.**Mobility in Soil** No information available.

Chemical Name	log Pow =
Bis(P-Amino Cyclohexyl)Methane 1761-71-3	2.03

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Disposal Methods** Contact waste disposal services. Dispose of in accordance with local regulations.**Contaminated Packaging** Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.**14. TRANSPORT INFORMATION****DOT**

UN-No UN2735
Proper Shipping Name Amines, liquid, corrosive, n.o.s.
Hazard Class 8
Packing Group II
Description UN2735, Amines or polyamines, liquid, corrosive, n.o.s (Bis(P-Amino Cyclohexyl)Methane), 8, II
Emergency Response Guide Number 153

TDG

UN-No UN2735
Proper Shipping Name Amines, liquid, corrosive, n.o.s.
Hazard Class 8
Packing Group II
Description UN2735, Amines or polyamines, liquid, corrosive, n.o.s (Bis(P-Amino Cyclohexyl)Methane), 8, II

MEX

UN-No Not regulated
Proper Shipping Name UN2735
Hazard Class Amines, liquid, corrosive, n.o.s.
Hazard Class 8

Packing Group	II
Description	UN2735, Amines or polyamines, liquid, corrosive, n.o.s, 8, II
ICAO	
UN-No	UN2735
Proper Shipping Name	Amines, liquid, corrosive, n.o.s.
Hazard Class	8
Packing Group	II
Description	UN2735, Amines or polyamines, liquid, corrosive, n.o.s, 8, II
IATA	
UN-No	UN3265
Hazard Class	8
Packing Group	III
IMDG/IMO	
UN-No	UN2735
Proper Shipping Name	Amines, liquid, corrosive, n.o.s.
Hazard Class	8
Packing Group	II
EmS No.	F-A, S-B
Description	UN2735, Amines or polyamines, liquid, corrosive, n.o.s (Bis(P-Amino Cyclohexyl)Methane), 8, II
RID	
	Not regulated
UN-No	UN2735
Proper Shipping Name	Amines, liquid, corrosive, n.o.s.
Hazard Class	8
Packing Group	II
Classification Code	C7
Description	UN2735, Amines or polyamines, liquid, corrosive, n.o.s (Bis(P-Amino Cyclohexyl)Methane), 8, II
ADR	
UN-No	UN2735
Proper Shipping Name	Amines, liquid, corrosive, n.o.s.
Hazard Class	8
Packing Group	II
Classification Code	C7
Tunnel Restriction Code	(E)
Description	UN2735, Amines or polyamines, liquid, corrosive, n.o.s (Bis(P-Amino Cyclohexyl)Methane), 8, II, (E)
ADR/RID-Labels	8
ADN	
	Not regulated
Proper Shipping Name	Amines, liquid, corrosive, n.o.s.
Hazard Class	8
Packing Group	II
Classification Code	C7
Special Provisions	274
Description	UN2735, Amines or polyamines, liquid, corrosive, n.o.s (Bis(P-Amino Cyclohexyl)Methane), 8, II
Limited Quantity	1 L

15. REGULATORY INFORMATION

International Inventories

U.S.A. (TSCA)	Complies
Canada (DSL)	Complies
EU (EINECS)	Complies
EU (ELINCS)	Does not comply
Japan (ENCS)	Complies

China (IECSC)	Complies
Korea (KECL)	Complies
Philippines (PICCS)	Complies
Australia (AICS)	Complies
Mexico INV	Does not comply
Taiwan INV	Complies

Chemical Name	U.S.A. (TSCA)	Canada (DSL)	EU (EINECS)	EU (ELINCS)	
Bis(P-Amino Cyclohexyl)Methane	Present	Present	Present	-	
Component	Japan (ENCS)	China (IECSC)	Korea (KECL)	Philippines (PICCS)	Australia (AICS)
Bis(P-Amino Cyclohexyl)Methane 1761-71-3 (100)	Present (4)-101;(3)-2272	Present	Present	Present	Present
Chemical Name	Mexico INV		Taiwan INV		
Bis(P-Amino Cyclohexyl)Methane 1761-71-3	-		Present		

Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

State Right-to-Know

This product does not contain any State Right-to-Know chemicals.

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

*Canada***WHMIS Statement**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

NFPA**Health** 3**Flammability** 1**Instability** 0**Physical Hazard** 0**Issuing Date**

02-Aug-2013

Revision Date

28-Mar-2018

Revision Summary

Not available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet