

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name(s): **Polyurock Catalyst**

Ref.: **08052135**

Index-No.: -

CAS-No.: -

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: **Preparation of polyurethane models for dental laboratories.**

Only for professional, industrial use – not for public, non-professional use. Rx only!

1.3 Details of the supplier of the safety data sheet

Cendres+Métaux SA, Rue de Boujean 122, CH-2501 Biel/Bienne

Tel. +41 (0) 58 360 2211 Fax +41 (0) 58 360 2205 <mailto:info@cmsa.ch>

1.4 Emergency telephone number

National emergency phone: 145 (24 h, Switzerland) Swiss Toxicological Information Centre

International emergency phone: +41 44 251 5151 (24h, from outside Switzerland)

2. Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):

Acute toxicity, Inhalation (Category 4), H332

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Respiratory sensitisation (Category 1), H334May

Skin sensitisation (Category 1), H317

Carcinogenicity (Category 2), H351

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Specific target organ toxicity - repeated exposure, Inhalation (Category 2), Respiratory system, H373

2.2 Label elements

Pictograms

Signal word



Danger

Hazard statement(s)

H315

Causes skin irritation.

H317

May cause an allergic skin reaction.

H319

Causes serious eye irritation.

H332

Harmful if inhaled.

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335

May cause respiratory irritation.

H351

Suspected of causing cancer.

H373

May cause damage to organs (Respiratory system) through prolonged or repeated exposure if inhaled.

Precautionary statement(s)

P201

Obtain special instructions before use.

P202

Do not handle until all safety precautions have been read and understood.

P260

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264

Wash skin thoroughly after handling.

P271

Use only outdoors or in a well-ventilated area.

P272

Contaminated work clothing should not be allowed out of the workplace.

P280

Wear protective gloves/ eye protection/ face protection.

P302 + P352

IF ON SKIN: Wash with plenty of soap and water.

P304 + P340

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable 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.

P308 + P313

IF exposed or concerned: Get medical advice/ attention.

P321

Specific treatment (see supplemental first aid instructions on this label).

P333 + P313

If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313

If eye irritation persists: Get medical advice/ attention.

P362




Take off contaminated clothing and wash before reuse.

P403 + P233

Store in a well-ventilated place. Keep container tightly closed.

P405

Store locked up.

P501		Dispose of contents/ container to an approved waste disposal plant.			
Hazard symbols		Xn	harmful		
		Xi	irritant		
R-phrases					
R20	harmful by inhalation				
R36/37/38	irritating to eyes, respiratory system and skin				
R40	limited evidence of a carcinogenic effect				
R42/43	may cause sensitisation by inhalation and skin contact				
R48/20	danger of serious damage to health by prolonged exposure through inhalation				
S-phrases					
S23	do not breathe vapour				
S36/37	wear suitable protective clothing and gloves				
S45	in case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)				
Hazardous substances					
Diphenylmethane-4,4'-diisocyanate					
2.3 Other hazards					
No hazardous reactions known when used according to the instructions for use.					
3. Composition/information on ingredients					
Chemical characterization of substance/mixture:					
Diphenylmethandiisocyanate (MDI).					
Hazardous ingredients					
Chemical name	Formula	Concentration [% by weight]	CAS-No.	H phrases	GHS Symbols
Diphenylmethane-4,4'-diisocyanate	C ₁₅ H ₁₀ N ₂ O ₂	50-100	101-68-8	H315, H317, H319, H332, H334, H335, H351, H373	
4. First-aid measures					
4.1 Description of first aid measures					
Inhalation: Move to fresh air. In case of shortness of breath, give oxygen. If not breathing, give artificial respiration. Mouth-to-mouth respiration might be hazardous, because the inhaled material is harmful. Contact doctor immediately after first aid.					
Eye contact: Rinse the opened eye immediately with running water for several minutes, then contact doctor.					
Skin contact: Immediately remove any clothing soiled by the product, then wash skin carefully with soap and water.					
Wash contaminated clothing carefully before re-use.					
Ingestion: Rinse mouth and drink water (max. two glasses). Do not induce vomiting. Call for medical help immediately.					
4.2 Most important symptoms and effects, both acute and delayed					
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the incident is recommended.					
4.3 Indication of any immediate medical attention and special treatment needed					
Contact doctor upon irritation or ill effects.					
5. Firefighting measures					
5.1 Extinguishing media					
CO ₂ and powder are appropriate. The extinguishing medium should be adapted to the surroundings. Foam and water are not recommended.					
5.2 Special hazards arising from the substance or mixture					
In case of fire, be aware of toxic gases (nitrogen oxides NO _x , carbon monoxide CO, hydrogen cyanide HCN).					
5.3 Advice for firefighters					
Wear self-contained respiratory protective device.					

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions

Prevent seepage into sewage system and cellars.

6.3 Methods and material for containment and cleaning up

Absorb spillage in suitable inert material, then dispose as hazardous waste according to local regulation. Sweep up and shovel into suitable containers for disposal.

6.4 Reference to other sections

See §13 for disposal..

7. Handling and storage

7.1 Precautions for safe handling

Handle with caution and minimize exposure. Ensure good ventilation/exhaustion at the workplace. Keep away from heat and sources of ignition. Inform personnel of risks associated with the product, the precautions to be taken and procedures to follow in case of incidents. Avoid exposure to persons having suffered from chronic respiratory affections (especially asthmatic and bronchitic persons) and those having an isocyanate allergy.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Protect from humidity, freezing and heat. Store in a refrigerator. Prevent any seepage into ground.

7.3 Specific end use(s)

Observe instructions for use.

8. Exposure control and personal protection

8.1 Control parameters

Substance	CAS-No.	Value	Control parameters	Basis
Diphenylmethane-4,4'-diisocyanate	101-68-8	TWA	0.0050 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Respiratory sensitization		
		C	0.02 ppm 0.2 mg/m ³	USA. OSHA – TABLE Z-1 Limits for Air Contaminants – 1910.1000
		The value in mg/m ³ is approximate. Ceiling limit is to be determined from breathing-zone air samples.		
		TWA	0.050 ppm 0.05 mg/m ³	USA. NIOSH Recommended Exposure Limits
		10 minute ceiling value		
		C	0.20 ppm 0.2 mg/m ³	USA. NIOSH Recommended Exposure Limits
		10 minute ceiling value		

8.2 Exposure controls

Equipment for individual protection

**It is advisable to take precautions to avoid contact with skin and eyes when handling the product.
Use only in well ventilated areas.**

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Eye protection: Wear safety goggles.



Hand protection: Wear suitable protective gloves.

Skin protection: Wear suitable laboratory coat.



Specific hygiene measures

Strictly observe the usual safety measures applied in laboratories. Wash hands carefully before breaks and at the end of work.

Environmental exposure controls

Do not allow to enter public sewers and water courses. See also §13 for disposal.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties (appearance)

Physical state: Liquid.

Colour: Amber.

Odour: Typical. Weakly aromatic.

9.2 Other information(health, safety and environment related data)

Flash point: > 200 °C.

Ignition temperature: > 500 °C.

Fire promoting properties: The product is not fire promoting.

Explosion hazard: The product is not explosive.

Vapour pressure: Not available.

Relative density: 1.2 g/cm³

Solubility: Soluble in ether, toluene, acetone, ethyl acetate.

pH-value: Not applicable.

Miscibility with water: Hydrolyses in presence of water.

Viscosity: Not available.

10. Stability and reactivity

10.1 Reactivity

The product does not react with other substances when stored and used according to the instructions for use.

10.2 Chemical stability

The product is stable when stored and used according to the instructions for use.

10.3 Possibility of hazardous reactions

Keep away from oxidising agents. Violent reactions with -NHx, -OH and -SH- groups.

Forms explosive mixture with air on intense heating.

10.4 Conditions to avoid

The product is sensitive to moisture and tends to polymerize at higher temperatures.

10.5 Incompatible materials

Copper and copper alloys, mild steel, zinc.

10.6 Hazardous decomposition products

Combustion gases: Nitrogen oxides NO_x, carbon monoxide CO and carbon dioxide CO₂, hydrogen cyanide HCN.
In the presence of water or humidity gas is produced (CO₂), possibly leading to internal pressure rises and risk of container bursting.

11. Toxicological information

11.1 Information on toxicological effects

For components:

Name: Diphenylmethane-4,4'-diisocyanate

CAS-No.: 101-68-8

Acute toxicity

LD50 (oral,rat): 9,200 mg/kg

LC50 (inhalation, rat, 1 h): > 2.24 mg/l

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Moderate eye irritation

Respiratory or skin sensitisation

in vivo assay - Guinea pig

Result: May cause sensitisation by inhalation.

in vivo assay - Mouse

Result: May cause sensitisation by skin contact.

Germ cell mutagenicity

Laboratory experiments have shown mutagenic effects.

Ames test

S. typhimurium

Result: negative

Mutagenicity (micronucleus test)

Rat - male

Result: negative

Carcinogenicity

Limited evidence of carcinogenicity in animal studies

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans

ACGIH: Not identified as a carcinogen or potential carcinogen by ACGIH.

NTP: Not identified as a known or anticipated carcinogen by NTP.

OSHA: Not identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Reproductive toxicity - Rat - Inhalation

Maternal Effects: Other effects. Specific Developmental Abnormalities: Musculoskeletal system.

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation. - Respiratory system

Specific target organ toxicity - repeated exposure

Inhalation - May cause damage to organs through prolonged or repeated exposure. - Respiratory system

Aspiration hazard

No data available

For product:

Effects of acute exposure

Primary skin irritation effects: Causes skin irritation.

Primary eye and respiratory irritation effects: Causes serious eye irritation.

Sensitizing: Sensitizing possible through inhalation or skin contact.

Sub acute to chronicle toxicity / experience on humans

May cause allergy or asthma symptoms or breathing difficulties when inhaled.

May cause an allergic skin reaction.

Suspected of causing cancer.

Additional information

After vomiting of swallowed product aspiration into lungs is likely.

12. Ecological information**12.1 Toxicity**

For components:

Name: Diphenylmethane-4,4'-diisocyanate

CAS-No.: 101-68-8

EC50 (Daphnia magna, 24 h): 0.35 mg/L

For product:

No data available. Do not allow to enter water, waste water or soil.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

13. Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Used package

Recommendation: Dispose of as unused product.

14. Transport information

14.1 UN number

UN2810

14.2 UN proper shipping name

TOXIC LIQZID; ORGANIC; N.O.S. (Diphenylmethane-4,4'-diisocyanate)

14.3 Transport hazard class(es)

6.1

14.4 Packing group

II

14.5 Environmental hazards

-

14.6 Special precautions for user

Tunnel Code E

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA 302 Components

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

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Name: Diphenylmethane-4,4'-diisocyanate

CAS-No.: 101-68-8

Revision Date: 2011-07-01

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

15.2 Chemical safety assessment

No data available.

16. Other information

Full text of Statements referred to under sections 2 and 3.

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H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs (Respiratory system) through prolonged or repeated exposure if inhaled.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable 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.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
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P362	Take off contaminated clothing and wash before reuse.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.
R20	harmful by inhalation
R36/37/38	irritating to eyes, respiratory system and skin
R40	limited evidence of a carcinogenic effect
R42/43	may cause sensitisation by inhalation and skin contact
R48/20	danger of serious damage to health by prolonged exposure through inhalation
S23	do not breathe vapour
S36/37	wear suitable protective clothing and gloves
S45	in case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

HMIS Rating

Health hazard:	2
Chronic health hazard:	*
Flammability:	1
Physical Hazard:	0

NFPA Rating

Health hazard:	2
Fire hazard:	1
Reactivity hazard:	0

This safety data sheet should be used in conjunction with technical sheets. It does not replace them and it is not thought as a quality guarantee of product characteristics. No contractual relationship is stipulated. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any purpose other than that for which it was intended. This does not in any way excuse the user from knowing all of the regulations covering his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfil obligations regarding hazardous products. This information is not exhaustive. This does not exonerate the user from ensuring the existence of legal obligations, other than those mentioned, for which he is solely responsible.

Responsible department for document release: Quality Assurance

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Changes made since last edition

Completely new edition.