

Safety Data Sheet

Elan-tron PH 04272 (EIP 4272 Hardener)

Safety Data Sheet dated 5/2/2009, version 1, #3667



1. DESIGNATION OF PRODUCT AND COMPANY

Trade name	Elan-tron PH 04272 (EIP 4272 Hardener)
Chemical description:	Diphenylmethane diisocyanate based compound.
Supplier:	Elantas Camattini spa - Via Antolini 1 - 43044 Collecchio (PR) www.elantas.com; info.elantas.camattini@altana.com
Emergency telephone number:	0039/521/304711 fax 0039/521/804679 - 804410
Competent person responsible for the safety data sheet:	MSDS.elantas.camattini@altana.com

2. HAZARDS IDENTIFICATION

The product can react if brought into contact with water releasing heat and CO₂.
The product is harmful following acute exposure to it and poses a serious health threat if inhaled.
If brought into contact with the eyes, the product causes irritation that may last for over 24h, if inhaled, it causes irritation to the airways, and if brought into contact with the skin it causes significant inflammation with erythema, scabs, and oedema.
If inhaled, the product may cause sensitisation. In hyperreactive or hypersensitive people, low concentrations may lead to asthmatic symptoms.
If brought into contact with the skin, the product may cause sensitisation of the skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components under the EEC directive 67/548 or components for which European Community exposure values exist:
75% - 100% diphenylmethane diisocyanate isomer and homologues
CAS: 9016-87-9
Xn, Xi; R20-36/37/38-42/43

4. FIRST-AID MEASURES

Contact with skin:
Immediately take off all contaminated clothing.
Remove the product with a cloth or absorbent paper. Do not use solvents.
Wash with plenty of water and soap.

Contact with eyes:
Wash immediately with water for at least 10 minutes.
Seek medical advice if irritation persists.

Swallowing:
Do not under any circumstance induce vomiting. Seek medical advice immediately.

Inhalation:
Ventilate the premises. The patient is to be removed immediately from the contaminated premises to rest in a well ventilated area. Call a physician.

5. FIRE FIGHTING MEASURES

Recommended extinguishers:
CO₂, Foam, Chemical powders or sand. Use water based extinguishing media with caution.

Extinguishers not to be used:
None in particular.

Risks arising from combustion:
Avoid inhaling the fumes. Incomplete combustion releases toxic gases.

Protective equipment:
Before entering contaminated areas, personnel wearing self-contained breathing apparatus must verify the absence of MDI. This procedure must be followed also in case of accidental release.
Use breathing protection with a complete facial mask and an air reserve. Wear protective clothes and PVC boots.

6. MEASURES IN CASE OF ACCIDENTAL RELEASE

Measures for personal safety:
Use a mask, gloves and protective clothing.

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Environmental measures:

Limit leakages with earth or sand.

If the product has flown off into a water course, into the drainage system, or has contaminated the ground or vegetation, notify the responsible authorities.

In case of product release in closed areas, provide adequate air exchange.

Cleaning methods:

Rapidly collect the product. To do so, wear a mask and protective clothing.

If the product is in a liquid form, stop it from entering the drainage system.

Cover with a moist, absorbing material (sand, sawdust). Collect the spilled product in waste containers without covering it (CO₂ is formed), and keep it moist. Dispose of the residual product according to current legislation.

After the product has been removed, rinse the involved area and materials with water that must be disposed in compliance with regulations in force.

7. HANDLING AND STORAGE

Handling precautions:

Avoid contact with and inhalation of vapours and/or dusts. See also paragraph 8 below.

Do not eat or drink or smoke while working. Wash hands before breaks and at the end of work. Maintain a sufficient personal care.

Incompatible materials:

The product reacts exothermically with materials containing active hydrogen groups (alcohols or amines). It reacts with water forming CO₂. The reaction increases progressively and is faster in case of high temperature.

Storage conditions:

The product is moisture sensitive. Keep in a dry place in the original containers tightly closed.

Instructions regarding storage facilities:

Avoid exposition to low temperature ($T > 15^{\circ}\text{C}$).

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Precautionary measures:

Provide adequate ventilation to the areas where the product is stored and/or handled.

When upon use aerosols and/or vapours can form in relatively high concentrations in the working area, it has to be prevented that the TLV is exceeded, by applying local air circulation.

Respiratory protection:

Required where ventilation/aspiration is insufficient or exposure is prolonged, or for applications in which the product is sprayed or heated.

Required in case of machining or applications that release dusts.

Protection for hands:

Use protective gloves.

For an extended exposure of the product, wear nitrile/neoprene gloves.

Eye protection:

Required in case of machining or applications that release dusts.

Safety goggles.

Protection for skin:

Use clothing that provides complete protection to the skin.

Available Exposure Limits (ACGIH) for substances of section 2:

diphenylmethanediisocyanate isomer and homologues

TLV-TWA: 0,005 ppm, 0,051 mg/m³

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and colour: Liquid bruno / blu

Odour: Earthy

pH: N.A.

Melting point: N.A.

Boiling point: N.A.

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Flash point:	> 200 °C (DIN 51758)
Autoignition temperature:	> 400 °C
Explosive properties:	N.A.
Combustion-related properties:	N.A.
Vapour pressure:	N.A.
Specific gravity ASTM D 1475:	1,21 gr/ml (25°C)
Solubility in water:	Insoluble
Lipid solubility:	N.A.
Partition coefficient (n-octanol/H ₂ O) :	n.d.
Dynamic viscosity EN13702-2:	60 - 120 mPa.s (25°C)
Vapour density:	N.A.

10. STABILITY AND REACTIVITY

Conditions to avoid:

Stable under normal conditions.

Substances to avoid:

Avoid contact with water: the increase of pressure, due to CO₂ formation, can cause bursting in closed containers.

Hazardous decomposition products:

It may generate toxic gases on contact with oxidising mineral acids, and powerful oxidising agents.

Upon combustion CO, CO₂, NO_x, MDI and HCN are formed.

11. TOXICOLOGICAL INFORMATION

No toxicological data related to the preparation are available.

When available, the toxicological information relating to the main components are listed below.

diphenylmethanediisocyanate isomer and homologues

LD₅₀ (oral): > 5.000 mg/kg (rat)

LC₅₀ (inhalation): > 370 mg/m³ (4 h aerosol - rat)

"No effect level": 0,2 mg/m³

The inhalation of vapours at high concentration may cause respiratory system irritation with headache, eye irritation and respiratory difficulties. It is possible that the symptoms appear some times after exposition. Repeated inhalation at concentration higher than TLV may cause sensibilization. Allergic or sensibilized persons may present iper-active reactions also at low concentrations. Chronic exposure by inhalation may cause a permanent decrease in lung functionality. Do not trust on smell to check MDI presence.

12. ECOLOGICAL INFORMATION

Adopt sound working practices, so that the product is not released into the environment.

When available, the toxicological information relating to the main components are listed below.

diphenylmethanediisocyanate isomer and homologues

Sinks in water. Reacts slowly with water at room temperature generating CO₂ and forming a solid, insoluble and high melting product (polyurea).

This reaction is accelerated by presence of surface-active agents and hydrosoluble solvents.

At the moment, polyurea is considered an inert and not biodegradable material.

Acute toxicity LC/EC/IC 50: > 100 mg/l

13. DISPOSAL CONSIDERATIONS

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

Do not reuse isocyanate containers.

14. TRANSPORT INFORMATION

In any case, verify the regulations in force in the countries where you have to transport.

This product is not classified as dangerous under transport regulations.

15. REGULATORY INFORMATION

Council Directive 67/548/EEC (Classification, packaging and labelling of dangerous substances) and subsequent amendments. Commission Directive 1999/45/EC (Classification, packaging and labelling of dangerous preparation) and subsequent amendments. Commission Directive 98/24/EC

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(Protection of the health and safety of workers from the risk related to chemical agent). Commission Directive 2000/39/EC (Occupational exposure limit values). Regulation (EC) No 1907/2006 (REACH).

Symbols:

Xn Harmful

R Phrases:

R20 Harmful by inhalation.

R36/37/38 Irritating to eyes, respiratory system and skin.

R42 May cause sensitization by inhalation.

R43 May cause sensitization by skin contact.

S Phrases:

S23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

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).

Contents:

diphenylmethanediisocyanate isomer and homologues

Special Provisions:

Contains isocyanates. See information supplied by the manufacturer.

Internal reference labelling: Xn/18

Where applicable, refer to the following regulatory provisions :

Directive 98/24/CE

Directive 91/156/EC; 91/689/EC; 94/62/EC (waste disposal).

Activities linked to risks of serious accidents

16. OTHER INFORMATION

R20 Harmful by inhalation.

R36/37/38 Irritating to eyes, respiratory system and skin.

R42/43 May cause sensitization by inhalation and skin contact.

Main bibliographic sources:

NIOSH - Registry of toxic effects of chemical substances

I.N.R.S. - Fiche Toxicologique

ACGIH - Threshold Limit Values

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific intended use.

This MSDS cancels and replaces any previous releases.

The information contained herein is based on what we believe to be reliable data, but it is presented without guarantee or warranty by our part and Elantas Camattini spa disclaims any liability incurred from the use thereof.

Nothing contained herein is to be construed as recommendations for use in violation of any existing patent, foreign or domestic, or of applicable laws and regulations.

Please contact Elantas Camattini spa for further information about the product and its use.

It is recommended to give this MSDS to customers and handlers.