



SAFETY DATASHEET

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

Hardener 924 (Kontakthærdet 924)

Date of issue: 20-05-09
Replaces (previous issues): 11-12-07

Product codes:

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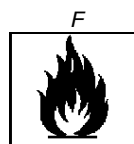
Company: Dana Lim A/S, Københavnsvej 220, DK-4600 Køge, Denmark
Ph.: (+45) 56 64 00 70 **Fax:** (+45) 56 64 00 90
E-mail: info@danalim.dk

Emergency phone number:
+45 35 31 60 60 / +45 35 31 35 31

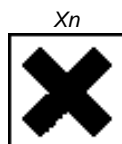
Type: Solvent based hardener.

Intended use:
Hardener for contact adhesives. For technical information, see Technical Datasheet.

2. Hazards identification:



Highly flammable



Harmful

May cause sensitization by inhalation. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

3. Composition/information on ingredients:

Classification according to EC legislation:

Name:	Conc.:	Symbol:	R-phrases*:
Tris(p-isocyanato-phenyl) thiophosphate EINECS 223-981-9 CAS 4151-51-3	15-25 %	Xn	R42
Ethyl acetate EINECS 205-500-4 CAS-nr. 141-78-6	>20 %	F, Xi	R11-36-66-67
Chlorobenzene EINECS 203-628-5 CAS 108-90-7	< 2 %	Xn, N	R10-20-51/53

*For full text see Section 16.

4. First-aid measures:

General:

In all cases of doubt, seek medical attention.

Inhalation:

Remove affected person from area. Provide fresh air and rest. If breathing has stopped, administer artificial respiration. Give nothing to mouth. If unconscious, place in the recovery position and seek medical advice.

Eye contact:

Remove contact lenses. After separating the eyelids flush with copious amounts of water, at least 15 min. Seek medical advice.

Skin contact:

Remove contaminated clothing. Thoroughly wash affected skin with soap and plenty of water. Do not use solvents or thinners. Consult a physician in case skin irritation persists.

Ingestion:

Rinse out mouth with water, drink plenty of water. Do not induce vomiting. Seek immediate medical advice.

Burn:

Rinse with cold water until the pain stops. During rinsing remove clothes which are not burned onto the skin. If medical advice is necessary, rinse until doctor takes over treatment.

5. Fire fighting measures:

Suitable extinguishing media: Carbon dioxide-, foam-extinguisher, water spray.
Do not use water jet, which spread the fire.

Fire can produce dense black smoke containing hazardous products. Exposure to decomposition products may be a hazard to health. Appropriate self-containing breathing apparatus and approved protecting clothing are required.

Cool packaging exposed to the fire with water spray.

6. Accidental release measures:

Exclude sources of ignition and ventilate the area. Avoid breathing the vapours. See protective measures listed in section 8.

In case of spills cover product with an inert adsorbent (e.g. sand, soil, granulate) and place into marked containers. Hold waste for dispose according to local regulations (see section 13).

Clean preferably with a detergent, avoid the use of solvents.

Do not allow to enter drains or water courses.

If the product enters drains or sewers the local water company should be contacted immediately.

7. Handling and storage:

Handling:

Provide good room ventilation.

Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentrations higher than the occupational exposure limits.

The product should only be used in areas from which all-naked lights and other sources of ignition have been excluded.

Electrical equipment should be protected to the appropriate standard.

The product may charge electrostatically. Operators should wear anti-static footwear. Non-sparking tools should be used.

Avoid skin and eye contact. Avoid inhalation of vapour and spray mist. Smoking, eating and drinking should be prohibited in areas of storage and use.

For personal protection, see section 8.

Storage:

Follow the technical requirements of storage of Highly Flammable Liquids.

Do not store product in direct neighbourhood of food, drinks and animal feed.

Store product out of the reach of children in tightly closed tubes in a dry, well-ventilated area.

Keep the product away from sources of ignition, oxidizing agents and strongly alkaline or acidic materials.

No smoking. Prevent unauthorised access. Keep in a cool place - protect from heat.

8. Exposure controls / personal protection:

Technical facility design:

All work shall be arranged so that inhalation of vapours and also smudge of the skin is reduced to a minimum.

Provide adequate ventilation. Where reasonable practice this should be achieved by the use of local exhaust ventilation and good general extraction.

Occupational exposure limits:

Name:	ppm	mg/m ³
Ethyl acetate	150	540
Chloro benzene	5	23

The list was valid during the compilation (Danish list, August 2007) was used as basis.

Personal protection:

Please contact your supplier of equipment for personal protection for further guidance when choosing equipment for the working situation in question.

Respiratory protective equipment:

At concentrations higher than the occupational exposure limits, air-fed respiratory protective equipment should be used.

Hand protection:

Use disposable gloves at risk of skin contact.

DIN EN 374-3:

Butyl rubber ($\geq 0,5$ mm) Break through time: ≥ 60 min.

In case of repeated or prolonged contact with the product a 4H-glove should be used (permeation rate >8 hours).

Eye protection:

Use suitable eye protection if there is a risk of splashes.

Skin protection:

Work clothes.

9. Physical and chemical properties:

Physical state:	Liquid
Colour:	Yellow
Flash point:	$< 0^{\circ}\text{C}$
Density, g/ml:	0,98 (20°C)
Water solubility:	Insoluble
Weight% organic solvents:	60-80
Product, Flammable liquid of class:	I-1

10. Stability and reactivity:

Stable under the recommended storage and handling conditions (see section 7).

Hazardous reactions: Exothermic reaction with amines and alcohols; reacts with water forming CO₂; in closed containers, risk of bursting owing to increase of pressure.

Hazardous decomposition products: No hazardous decomposition products when stored and handled correctly.

11. Toxicological information: (Properties injurious to health)

Inhalation:

Exposure to organic solvent vapours may result in adverse health effects on several organs so as the renal and central nervous system. Poisoning symptoms include loss of memory and difficulties in concentration, fatigue, irritability and in extreme cases, loss of consciousness.

Skin contact:

Repeated or prolonged contact with the product may lead to removal of natural fats from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

Eye contact:

Splashes in the eye may cause irritation.

Ingestion:

Ingestion by accident can cause vomiting and pain in the stomach. Chemical pleurisy may occur, if solvents come in the lungs at vomiting. Can cause damage of the kidney.

12. Ecological information:

Do not release product into the environment or the drains.

Biodegradability:

Ethyl acetate

100 % 28 d, i.e. readily biodegradable

Method: OECD Guideline for Testing of Chemicals, No.301 D Chlorobenzene

15 % 28 d, i.e. not readily degradable

Method: OECD Guideline for Testing of Chemicals, No.301 C

Toxicity to fish:

LC0 15,2 mg/l

Test species: *Brachydanio rerio* (zebra fish) Duration of test: 96 h

Method: OECD Test Guideline 203

Acute toxicity for daphnia:

EC0 6,6 mg/l

Test species: *Daphnia magna* (Water flea) Duration of test: 24 h

Method: OECD Test Guideline 202

Acute bacterial toxicity:

EC50 > 10.000 mg/l

Tested on: activated sludge

Method: OECD Guideline for Testing of Chemicals, No.209

Acute toxicity for algae:

EC0 2,4 mg/l

Tested on: *scenedesmus subspicatus* Duration of test: 72 h

Method: OECD Test Guideline 201

13. Disposal considerations:

Wastes incl. emptied containers are controlled wastes and should be disposed of in accordance with national or local regulations.

EWC-code: 08 04 09

14. Transport information:

Proper shipping name: *Ethyl acetate*

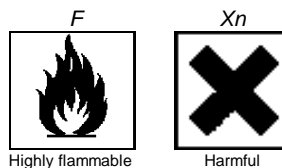
UN-nr.: 1173

ADR/RID:	Class: 3	Pk.gr: //
	Risk No.: 33	Hazard label: 3
IMDG:	Class: 3	Pk.gr: //
	IMDG-labels: 3	MP: no
ICAO/IATA:	Class: 3	Pk.gr: //

15. Regulatory information:

This product has been classified in accordance with Danish and EC Directives on Hazardous Materials:

Hazard symbol:



Contains: *Tris(p-isocyanatophenyl)thiophosphat*

R-phrases:

R36: Irritating to eyes

R42: May cause sensitization by inhalation.

R66 Repeated exposure may cause skin dryness or cracking

R67: Vapours may cause drowsiness and dizziness

S-phrases:

S2: Keep out of reach of children.

S16: Keep away from sources of ignition - No smoking.

S23: Do not breathe vapour

S46: If swallowed, seek medical advice immediately and show the container or label.

S63: In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Application restrictions: In Denmark the product may not be used of youth under eighteen years old.

16. Other information:

Text of R-phrases listed in section 3

R10: Flammable

R11: Highly flammable

R20: Harmful by inhalation.

R36: Irritating to eyes.

R42: May cause sensitization by inhalation.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R66: Repeated exposure may cause skin dryness or cracking.

R67: Vapours may cause drowsiness and dizziness.

Compared to the last safety datasheet changes has been made in the sections: 8.

The information contained in this safety data sheet is based on the present state of knowledge and current EC and Danish legislation.

The product should not be used for purposes other than those shown in Section 1.

As the specific conditions of use of the product are outside the suppliers control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

The information in this safety data sheet provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitable for particular applications.

In case of medical attention, bring this safety data sheet.