SHIELDOKIT HARDENER (COMPONENT B) 3980

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

Product Detail : 3980 Electrically Conductive Adhesive (Shieldokit)
Application of the substance / the preparation: Hardener (component B)
Manufacturer / supplier:

Holland Shielding Systems B.V.
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3316 BP Dordrecht
the Netherlands
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2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

	Hazard categories
Skin corrosion/irritation	Skin Irrit. 2
Serious eye damage/eye irritation	Eye Irrit. 2
Respiratory or skin sensitisation	Skin Sens. 1B
Hazardous to the aquatic environment	Aquatic Chronic 2
Hazard Statements	Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling	
Reaction mass of trientine and trientine, mono- and di-propoxylated; Triethylenetetramine, ethoxylated,	
Signal word	Warning
Pictograms	
	Hazard statements
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.
	Precautionary statements
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P337+P313	If eye irritation persists: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/container to in accordance with local and national regulations.

2.3. Other hazards

No data available.

Material Safety Data Sheet

Revision date: 19-09-2017

SHIELDOKIT HARDENER (COMPONENT B) 3980

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Chemical characterization
Hardener based on aliphatic polyamines

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
-	Reaction mass of trientine and trientine, mono- and di-propoxylated; Triethylenetetramine, ethoxylated,			60- 90 %
	942-835-1		01-2120098765-38	
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1B, Aquatic Chronic 2; H315 H319 H317 H411			

Full text of H and EUH statements: see section 16.

4. FIRST AID MEASURES

4.1. Description of first aid measures

General information	Remove contaminated soaked clothing immediately. If you feel unwell, seek medical advice.
After inhalation	Move to fresh air in case of accidental inhalation of vapours or decomposition products. In the event of symptoms refer for medical treatment.
After contact with skin	Wash off immediately with soap and plenty of water. Consult a doctor if skin irritation persists.
After contact with eyes	Rinse immediately with plenty of water, also under the eyelids. Summon a doctor immediately.
After ingestion	Do not induce vomiting. Immediately give plenty of water (if possible charcoal slurry). Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed
No data available.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptoms.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media
Suitable extinguishing media
Foam, carbon dioxide (CO2), dry chemical, water-spray.

Unsuitable extinguishing media
Full water jet.

5.2. Special hazards arising from the substance or mixture
Combustion produces caustic fumes.
Fire gas of organic material has to be classed invariably as respiratory poison.

5.3. Advice for firefighters
Wear self-contained breathing apparatus and protective suit.

Additional information
Do not breathe gases from fire and explosion.
Cool containers at risk with water spray jet.
Collect contaminated firefighting water separately, must not be discharged into the drains.

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6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
In case of vapour formation use respirator.
Ensure adequate ventilation.
Use personal protective clothing.

6.2. Environmental precautions
Do not discharge into the drains or bodies of water.

6.3. Methods and material for containment and cleaning up
Take up with absorbent material (e.g. sand, sawdust, general-purpose binder).
Shovel into suitable container for disposal.
Disposal according to regulations.

6.4. Reference to other sections
Information for disposal see section 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling
Keep container tightly closed.
Use only in well-ventilated areas.
Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion
No special protective measures against fire required.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Keep container tightly closed in a dry, cool and well-ventilated place. Keep at temperatures between 5°C and 40°C.

Further information on storage conditions
Store in original container.
Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)
No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Additional advice on limit values
No data available.

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8.2. Exposure controls

Appropriate engineering controls	Ensure adequate ventilation, especially in confined areas.
Protective and hygiene measures	Wash hands before breaks and immediately after handling the product . Avoid contact with skin, eyes and clothing. At work do not eat, drink and smoke. Remove soaked clothing immediately.
Eye/face protection	Tightly fitting goggles (EN 166).
Hand protection	Glove material specification [make/type, thickness, permeation time/life, wetting resistance]: Butyl latex, 0,7 mm, 480 min., 60 min., i.e. protective glove made by www.kcl.de. Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves. This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions.
Skin protection	Protective clothing Safety Shoes.
Respiratory protection	Breathing apparatus in the event of aerosol or mist formation. In case of insufficient ventilation wear suitable respiratory equipment (gas filter type A) (EN 14387).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	Light
Odour	Similar to ammonia
pH-Value (at 20 °C)	Approx. 12 1:1 in water
	Changes in the physical state
Initial boiling point and boiling range	> 200 °C
Flash point	> 152 °C
Explosive properties	The product is considered non-explosive; nevertheless explosive vapour/air mixture can be generated.
Vapour pressure (at 20 °C)	0.003 hPa
Density (at 20 °C)	Approx. 1 g/cm³
Water solubility (at 20 °C)	Miscible
Viscosity / dynamic (at 25 °C)	10- 20 mPa·s

9.2. Other information
No data available.

10. STABILITY AND REACTIVITY

10.1. Reactivity
No data available.

10.2. Chemical stability
No data available.

10.3. Possibility of hazardous reactions
No data available.

10.4. Conditions to avoid
To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials
Strong acids and strong bases
Strong oxidizing agents.

10.6. Hazardous decomposition products
Carbon monoxide, Carbon dioxide, Nitrous gases

Further information
No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met.
Irritation and corrosivity	Causes skin irritation. Causes serious eye irritation.
Sensitising effects	May cause an allergic skin reaction. (Reaction mass of trientine and trientine, mono- and di-propoxylated; Triethylenetetramine, ethoxylated,)
STOT-single exposure	Based on available data, the classification criteria are not met.
Severe effects after repeated or prolonged exposure	Based on available data, the classification criteria are not met.
Carcinogenic/mutagenic/toxic effects for reproduction	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.
Further information	Description of possible hazards to health effects is based on experience and /or toxicological characteristics of several components.

12. ECOLOGICAL INFORMATION

12.1. Toxicity
EC50 Daphnia magna : 31 mg/l, 48 h

12.2. Persistence and degradability
Not readily biodegradable.

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.

Further information
Do not discharge into surface waters/groundwater.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Advice on disposal
Where possible recycling is preferred to disposal.
In accordance with regulations for special waste, must be taken to a special waste disposal.

Waste disposal number of waste from residues/unused products
070204 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other organic solvents, washing liquids and mother liquors; hazardous waste
Empty receptacle completely. Dispose like the product.

Contaminated packaging
Empty receptacle completely. Dispose like the product.

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14. TRANSPORT INFORMATION

Land transport (ADR/RID)	
14.1. UN number	UN 3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIETHYLENE TETRAMINE PROPOXYLATED, TRIETHYLENE TETRAMINE)
14.3. Transport hazard class(es)	9
14.4. Packing group:	III
Hazard label:	 9
Classification code	M6
Special Provisions	274 335 375 601
Limited quantity	5 L
Excepted quantity	E1
Transport category	3
Hazard No:	90
Tunnel restriction code	-

Inland waterways transport (ADN)	
14.1. UN number	UN 3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIETHYLENE TETRAMINE PROPOXYLATED, TRIETHYLENE TETRAMINE)
14.3. Transport hazard class(es)	9
14.4. Packing group:	III
Hazard label:	 9
Classification code	M6
Special Provisions	274 335 375 601
Limited quantity	5 L
Excepted quantity	E1

Marine transport (IMDG)	
14.1. UN number	UN 3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIETHYLENE TETRAMINE PROPOXYLATED, TRIETHYLENE TETRAMINE)
14.3. Transport hazard class(es)	9
14.4. Packing group:	III
Hazard label:	 9
Special Provisions	274, 335, 969
Limited quantity	5 L
Excepted quantity	E1
EmS	F-A, S-F

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	Air transport (ICAO-TI/IATA-DGR)
14.1. UN number	UN 3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIETHYLENE TETRAMINE PROPOXYLATED, TRIETHYLENE TETRAMINE)
14.3. Transport hazard class(es)	9
14.4. Packing group:	III
Hazard label:	 9
Special Provisions	A97 A158 A197
Limited quantity Passenger	30 kg G
Passenger LQ	Y964
Excepted quantity	E1
IATA-packing instructions- Passenger:	964
IATA-max. quantity- Passenger:	450 L
IATA-packing instructions- Cargo	964
IATA-max. quantity- Cargo	450 L

14.5. Environmental hazards
ENVIRONMENTALLY HAZARDOUS: yes 
Danger releasing substance: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIETHYLENE TETRAMINE PROPOXYLATED, TRIETHYLENE

14.6. Special precautions for user
No specific precautions required.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
The transport takes place only in approved and appropriate packaging.

15. REGULATORY INFORMATION

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

EU regulatory information
2004/42/EC (VOC): 0 %

National regulatory information
Water contaminating class (D): 2- water contaminating

15.2. Chemical safety assessment
Chemical safety assessments for substances in this mixture were not carried out.

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16. OTHER INFORMATION

Changes
Changes in chapter: 2, 3, 14

Abbreviations and acronyms

ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route
RID	Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN	Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
IMDG	International Maritime Code for Dangerous Goods
IATA/ICAO	International Air Transport Association / International Civil Aviation Organization
MARPOL	International Convention for the Prevention of Pollution from Ships
IBC-Code	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals
CAS	Chemical Abstract Service
EN	European norm
ISO	International Organization for Standardization
DIN	Deutsche Industrie Norm
PBT	Persistent Bioaccumulative and Toxic
LD	Lethal dose
LC	Lethal concentration
EC	Effect concentration
IC	Median immobilisation concentration or median inhibitory concentration

Relevant H and EUH statements (number and full text)

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

Further Information
Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.
The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.
The delivery specifications are contained in the corresponding product sheet.
This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.
(n.a. = not applicable; n.d. = not determined)