Printing date 06.02.2025

Version: 9 (replaces version 8)

Revision: 06.02.2025

## SECTION 1: Identification of the substance/mixture and of the company/undertaking 1.1 Product identifier Trade name: 2 V 57 VERHARDER · Article number: 2V57 · Registration number 01-2119480479-24 · UFI: CMWS-G0KK-A00W-E1D2 · 1.2 Relevant identified uses of the substance or mixture and uses advised against · Sector of Use SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites SU19 Building and construction work SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen) · Product category PC9a Coatings and paints, thinners, paint removers · Process category PROC7 Industrial spraying PROC10 Roller application or brushing PROC19 Manual activities involving hand contact PROC13 Treatment of articles by dipping and pouring · Application of the substance / the mixture solvent based, two component epoxysiloxane coating hardener 1.3 Details of the supplier of the safety data sheet Manufacturer/Supplier: Zandleven Coatings B.V. Snekertrekweg 57-59, 8912 AA Leeuwarden, Netherlands Tel: +31 58 2129545 Fax: +31 58 2155996 E-mail: info@zandleven.com Internet: www.zandleven.com · Further information obtainable from: R&D department: sds@zandleven.com · 1.4 Emergency telephone number: Nationaal Vergiftigingen Informatie +31 (0)88 755 8000 ORFILA (INRS) : + 33 (0)1 45 42 59 59 Centres Àntipoison et de Toxicovigilance ANGERS: 02 41 48 21 21 BORDEAUX: 05 56 96 40 80 LILLE: 0800 59 59 59 LYON: 04 72 11 69 11 MARSEILLE: 04 91 75 25 25 NANCY: 03 83 22 50 50 PARIS: 01 40 05 48 48 STRASBOURG: 03 88 37 37 37 TOULOUSE: 05 61 77 74 47 Giftnotruf der Charité, Berlin: 030/19240 Giftinformationszentrum-Nord der Länder Bremen, Hamburg, Niedersachsen und Schleswig-Holstein (GIZ-Nord):0551/19 240 Informationszentrale gegen Vergiftungen Zentrum für Kinderheilkunde Universitätsklinikum Bonn: 0228/19240 Giftnotruf Erfurt Gemeinsames Giftinformationszentrum der Länder Mecklenburg-Vorpommern, Sachsen, Sachsen-Anhalt und Thüringen: 0361/730 730 Informations- und Beratungszentrum für Vergiftungsfälle Klinik für Kinder- und Jugendmedizin Universitätsklinikum des Saarlandes: 06841/19240 Giftinformationszentrum der Länder Rheinland-Pfalz und Hessen - Klinische Toxikologie - Universitätsmedizin der Johannes Gutenberg-Universität Mainz: 06131/19240 Vergiftungs-Informations-Zentrale Zentrum für Kinder- und Jugendmedizin Universitätsklinikum: 0761/19240 Giftnotruf München Toxikologische Abteilung der II. Med. Klinik und Poliklinik: 089/19240 Supplier +31 (0)58 2677590 (during office hours)

# SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 3 H226 Flammable liquid and vapour.

Acute Tox. 4 H302 Harmful if swallowed.

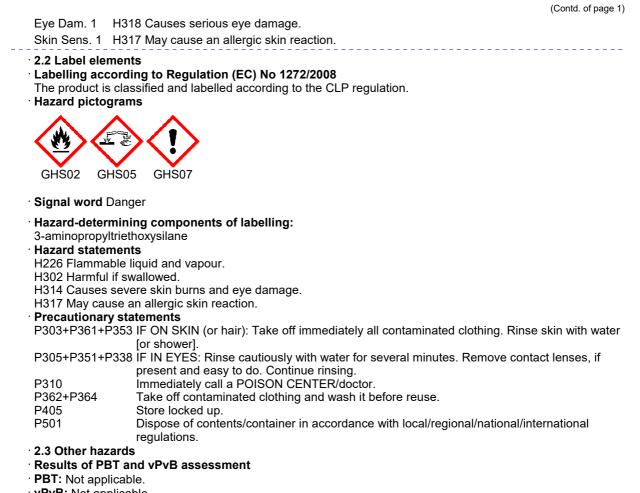
Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Printing date 06.02.2025

Version: 9 (replaces version 8)

Revision: 06.02.2025

Trade name: 2 V 57 VERHARDER



· vPvB: Not applicable.

# SECTION 3: Composition/information on ingredients

## · 3.2 Mixtures

· Description: Mixture of substances listed below with nonhazardous additions.

### Dangerous components:

Percentages of the components are expressed as a percentage by weight

<b>e</b> .		
CAS: 919-30-2	3-aminopropyltriethoxysilane	75-100%
EINECS: 213-048-4	Skin Corr. 1B, H314; () Acute Tox. 4, H302; Skin Sens. 1, H317	
Index number: 612-108-00-0		
Reg.nr.: 01-2119480479-24		
CAS: 68299-15-0	Bis(neodecanoyloxy)dioctylstannane	2.5-10%
EINECS: 269-595-4	& STOT SE 2, H371	
Reg.nr.: 01-2120770890-48		

• Additional information: For the wording of the listed hazard phrases refer to section 16.

# SECTION 4: First aid measures

· 4.1 Description of first aid measures

General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

(Contd. on page 3)

EU・

Printing date 06.02.2025

Version: 9 (replaces version 8)

Revision: 06.02.2025

## Trade name: 2 V 57 VERHARDER

(Contd. of page 2)

• After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation. After skin contact: Immediately rinse with water.

- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing:

Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available. 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

## SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- For safety reasons unsuitable extinguishing agents: Water with full jet
- · 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

- 5.3 Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

## SECTION 6: Accidental release measures

 6.1 Personal precautions, protective equipment and emergency procedures Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralising agent.

Dispose contaminated material as waste according to section 13.

- Ensure adequate ventilation.
- 6.4 Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

# SECTION 7: Handling and storage

7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.

· Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges. Keep respiratory protective device available.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

Requirements to be met by storerooms and receptacles:

Store material in original, well-closed packages in a cool, well-ventilated area according to local regulations. · Information about storage in one common storage facility: Not required.

· Further information about storage conditions: Keep container tightly sealed.

· Recommended storage temperature: 5 - 30 °C

(Contd. on page 4)

FU

Printing date 06.02.2025

Version: 9 (replaces version 8)

Revision: 06.02.2025

Trade name: 2 V 57 VERHARDER

· 7.3 Specific end use(s) No further relevant information available.

(Contd. of page 3)

SECTION 8: Exposure controls/personal protection

## · 8.1 Control parameters

- Ingredients with limit values that require monitoring at the workplace:
- The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· DNEL (De	rived No Effect Level) for workers:						
919-30-2 3-aminopropyltriethoxysilane							
Dermal	Acute - systemic effects, worker	8.3 mg/kg bw/day (worker)					
	Long-term - systemic effects, worker	3.3 mg/kg bw/day (worker)					
Inhalative	Acute - systemic effects, worker	59 mg/m³ ( <sup>•</sup>	worker)				
	Long-term - systemic effects, worker	59 mg/m³ ( <sup>v</sup>	worker)				
68299-15-	0-15-0 Bis(neodecanoyloxy)dioctylstannane						
Dermal	Long-term - systemic effects, worker (	-	0175 mg/kg bw/day (worker)				
Inhalative	Long-term - systemic effects, worker	0.0617 mg/	)617 mg/m³ (worker)				
· DNEL (De	rived No Effect Level) for the genera	l polulatio	n:				
	3-aminopropyltriethoxysilane						
Dermal	Acute - systemic effects, general polul	ation	5 mg/kg bw/day (general population)				
	Long-term - systemic effects, general	population					
Inhalative	Acute - systemic effects, general popu	lation	17.4 mg/m <sup>3</sup> (general population)				
	Long-term - systemic effects, general pop		17.4 mg/m <sup>3</sup> (general population)				
	0 Bis(neodecanoyloxy)dioctylstanna						
Oral		I population 0.00625 mg/kg bw/day (general population)					
Dermal	Long-term - systemic effects, general pop						
Inhalative	Long-term - systemic effects, general population 0.0109 mg/m³ (general population)						
•	edicted No Effect Concentration) val	ues:					
	8-aminopropyltriethoxysilane						
	Aquatic compartment - freshwater		0.33 mg/L (freshwater)				
	ic compartment - marine water		0.33 mg/L (marine water)				
	quatic compartment - water, intermittent release						
Aquatic compartment - sediment in freshwater		1.2 mg/kg sed dw (sediment fresh water)					
	mpartment - sediment in marine water	0.05 mg/kg dw (not specified) 13 mg/L (sewage treatment plant)					
	compartment - soil						
-	eatment plant						
• Additiona	I information: The lists valid during the	e making w	ere used as basis.				
<ul> <li>8.2 Exposure controls         Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.     <li>Appropriate engineering controls No further data; see section 7.</li> <li>Individual protection measures, such as personal protective equipment.</li> <li>General protective and hygienic measures:</li> </li></ul>							

Provide readily accessible eye wash stations and safety showers.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

(Contd. on page 5)

EU

Printing date 06.02.2025

Version: 9 (replaces version 8)

Revision: 06.02.2025

(Contd. of page 4)

## Trade name: 2 V 57 VERHARDER

## Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If

workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed

respirator complying with an approved standard if a risk assessment indicates this is necessary.

For organic vapors and solvents type of filter A1 or A2, for dust type of filter P (according to EN 140) Hand protection





Protective gloves

Chemical resistant gloves (EN 374)

Check protective gloves prior to each use for their proper condition.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

## Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Fluorocarbon rubber (Viton) Nitrile rubber, NBR

 Penetration time of glove material KCL Vitoject 890 breakthrough time > 480 min. thickness: 0,7 mm

at limited contact KCL Camatril 730 breakthrough time 30 min. thickness: 0,4 mm The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- · Not suitable are gloves made of the following materials: All other materials
- Eye/face protection



Tightly sealed goggles

Safety glasses according to EN 166 or equivalent

#### **Body protection:**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved before the product is used by a specialist.

If there is a risk of ignition by static electricity, anti-static protective clothing should be worn. For the best protection against static discharge, clothing should consist of anti-static overalls, boots and gloves. For further information on materials and design requirements and test methods consult the European standard EN 1149.

## · Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

(Contd. on page 6)

FU

Printing date 06.02.2025

Version: 9 (replaces version 8)

Revision: 06.02.2025

(Contd. of page 5)

Trade name: 2 V 57 VERHARDER

SECTION 9: Physical and chemical prope	rties
9.1 Information on basic physical and chemical pro	operties
General Information	-
Physical state	Liquid
Colour:	Not determined.
Odour:	Characteristic
Odour threshold:	Not determined.
Melting point/freezing point:	Undetermined.
Boiling point or initial boiling point and boiling	
range	217 °C (919-30-2 3-aminopropyltriethoxysilane)
Flammability	Flammable.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	104 °C
Auto-ignition temperature:	300 °C (919-30-2 3-aminopropyltriethoxysilane) Not determined.
Decomposition temperature:	
pH at 20 °C Viscosity:	11
Kinematic viscosity	at 40 °C: > 20,5 mm²/s
Dynamic at 20 °C:	100 mPas
Solubility	
water:	Not miscible or difficult to mix.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not determined.
Density and/or relative density	
Density at 20 °C:	0.96 g/cm³
Relative density	Not determined.
Vapour density	Not determined.
9.2 Other information Appearance: Form: Important information on protection of health and	Fluid
environment, and on safety.	
Ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of
	explosive air/vapour mixtures are possible.
Change in condition	
Evaporation rate	Not determined.
Information with regard to physical hazard classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Flammable liquid and vapour.
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures Substances and mixtures, which emit flammable	Void
gases in contact with water	Void
gases in contact with water Oxidising liquids	Void Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void

Printing date 06.02.2025

Version: 9 (replaces version 8)

Revision: 06.02.2025

(Contd. of page 6)

Trade name: 2 V 57 VERHARDER

· Desensitised explosives

Void

# SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- · 10.6 Hazardous decomposition products: No dangerous decomposition products known.

# SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

• Acute toxicity Harmful if swallowed.

· LD/LC50 values relevant for classification:

## 919-30-2 3-aminopropyltriethoxysilane

Oral LD50 1,780 mg/kg (rat)

Dermal LD50 4,000 mg/kg (rabbit)

- Primary irritant effect:
- · Skin corrosion/irritation Causes severe skin burns and eye damage.
- · Serious eye damage/irritation Causes serious eye damage.
- · Respiratory or skin sensitisation May cause an allergic skin reaction.
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- · STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.
- · 11.2 Information on other hazards
- · Endocrine disrupting properties

None of the ingredients is listed.

# SECTION 12: Ecological information

## · 12.1 Toxicity

- · Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- 12.5 Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.

## 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

- 12.7 Other adverse effects
- · Additional ecological information:
- · General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach sewage water or drainage ditch undiluted or unneutralised.

(Contd. on page 8)

EU

Printing date 06.02.2025

Version: 9 (replaces version 8)

Revision: 06.02.2025

Trade name: 2 V 57 VERHARDER

(Contd. of page 7)

# SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

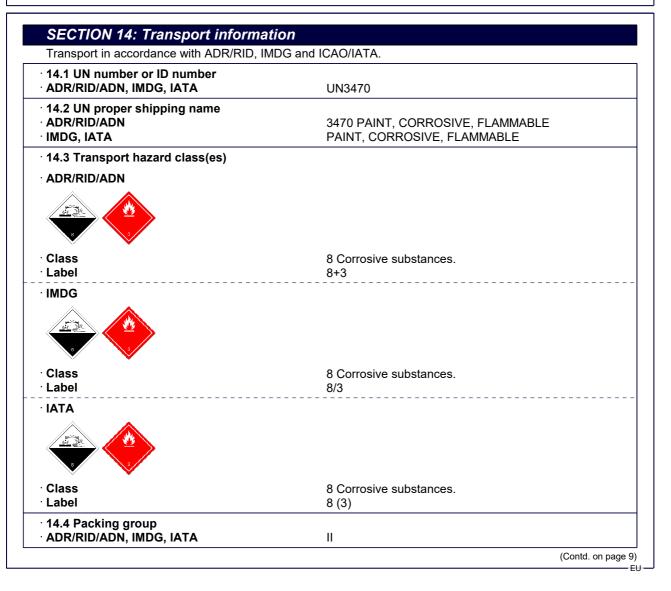
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS	
08 01 00	wastes from MFSU and removal of paint and varnish	
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances	
HP3	Flammable	
HP6	Acute Toxicity	
HP8	Corrosive	
HP13	Sensitising	

· Uncleaned packaging:

· Recommendation: Disposal must be made according to official regulations.



Printing date 06.02.2025

Version: 9 (replaces version 8)

Revision: 06.02.2025

Trade name: 2 V 57 VERHARDER

	(Contd. of page 8)	
· 14.5 Environmental hazards:	Not applicable.	
· 14.6 Special precautions for user	Warning: Corrosive substances.	
<ul> <li>Hazard identification number (Kemler code):</li> </ul>	83	
· EMS Number:	F-E,S-C	
Stowage Category	В	
· Stowage Code	SW2 Clear of living quarters.	
14.7 Maritime transport in bulk according to IMO		
instruments	Not applicable.	
Transport/Additional information:		
· ADR/RID/ADN		
Limited quantities (LQ)	1L	
Excepted quantities (EQ)	Code: E2	
	Maximum net quantity per inner packaging: 30 ml	
	Maximum net quantity per outer packaging: 500 ml	
Transport category	2	
Tunnel restriction code	D/E	
·IMDG		
Limited quantities (LQ)	1L	
Excepted quantities (EQ)	Code: E2	
	Maximum net quantity per inner packaging: 30 ml	
	Maximum net quantity per outer packaging: 500 ml	
UN "Model Regulation":	UN 3470 PAINT, CORROSIVE, FLAMMABLE, 8 (3), II	

## SECTION 15: Regulatory information

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

- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- Seveso category P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- Regulation (EU) No 649/2012

68299-15-0 Bis(neodecanoyloxy)dioctylstannane

Annex I Part 1

• DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

**REGULATION (EU) 2019/1148** 

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

• 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

(Contd. on page 10)

EU

Printing date 06.02.2025

Version: 9 (replaces version 8)

Revision: 06.02.2025

(Contd. of page 9)

**SECTION 16: Other information** This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Classification according to Regulation (EC) No 1272/2008 The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008. · Contact: J. Dijkstra Date of previous version: 20.04.2023 · Version number of previous version: 8 · Abbreviations and acronyms: ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) DNEL: Derived No-Effect Level (REACH) PNEC: Predicted No-Effect Concentration (REACH) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Liq. 3: Flammable liquids - Category 3 Acute Tox. 4: Acute toxicity – Category 4 Skin Corr. 1B: Skin corrosion/irritation – Category 1B Eye Dam. 1: Serious eye damage/eye irritation – Category 1 Skin Sens. 1: Skin sensitisation - Category 1 STOT SE 2: Specific target organ toxicity (single exposure) - Category 2 · Sources - ECHA European Chemical Agency - http://echa.europa.eu/information-on-chemicals - SDS of raw materials supplied by producer/supplier. • \* Data compared to the previous version altered. FU

# Trade name: 2 V 57 VERHARDER