

Printing date 06.02.2025 Version: 28 (replaces version 27) Revision: 06.02.2025

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· 1.1 Product identifier

· Trade name: 2 V 31 VERHARDER

Article number: 2V31-2D19
 UFI: 0R94-H1A1-H00P-AVS4

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 epoxy 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 Antipoison 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

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+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

Acute Tox. 4 H302 Harmful if swallowed.

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

Eye Dam. 1 H318 Causes serious eye damage.

Repr. 2 H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

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Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

- · 2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS05







· Signal word Danger

· Hazard-determining components of labelling:

Epoxy Amine Resin 4-nonylphenol, branched

Hazard statements

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P260 Do not breathe dusts or mists.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water

[or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

· 2.3 Other hazards

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable. · **vPvB:** Not applicable.

Determination of endocrine-disrupting properties

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List I

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

| | Epoxy Amine Resin Repr. 2, H361d; Skin Corr. 1B, H314; Aquatic Chronic 2, | 50-75% |
|--------------------------------------|--|---------|
| 040,04050,45,0 | H411; 1 Acute Tox. 4, H302 | 40.500/ |
| CAS: 84852-15-3 FINECS: 284-325-5 | 4-nonylphenol, branched A Repr. 2 H361fd: Skin Corr. 1B H311: A Aquatic Acute 1 | 10-50% |
| | Repr. 2, H361fd; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302 | |
| Reg.nr.: 01-2119510715-45 | | |

·SVHC

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

- EU





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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.

- · After inhalation: 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: Use fire extinguishing methods suitable to surrounding conditions.
- 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 product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

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.

Open and handle receptacle with care.

Prevent formation of aerosols.

- Information about fire and explosion protection: 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.

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- · Further information about storage conditions: Keep container tightly sealed.
- Recommended storage temperature: 5 30 °C
- 7.3 Specific end use(s) No further relevant information available.

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 (Da | • | | |
|--|--|--------------------------------|--|
| • | rived No Effect Level) for workers: | | |
| | 3 4-nonylphenol, branched | | |
| Dermal | • | | w/day (worker) |
| | Long-term - systemic effects, worker 7 | | , |
| Inhalative | Acute - systemic effects, worker 1 | mg/m³ (w | orker) |
| | Long-term - systemic effects, worker 0 | .5 mg/m³ (| (worker) |
| DNEL (De | rived No Effect Level) for the general | polulatio | n: |
| 84852-15- | 3 4-nonylphenol, branched | | |
| Oral | Acute - systemic effects, general popul | ation | 0.4 mg/kg bw/day (general population) |
| | Long-term - systemic effects, general p | opulation | 0.08 mg/kg bw/day (general population) |
| Dermal | Acute - systemic effects, general polula | ation | 7.6 mg/kg bw/day (general population) |
| | Long-term - systemic effects, general p | opulation | 3.8 mg/kg bw/day (general population) |
| Inhalative | Acute - systemic effects, general popul | ation | 0.8 mg/m³ (general population) |
| Long-term - systemic effects, general population | | 0.4 mg/m³ (general population) | |
| PNEC (Pro | edicted No Effect Concentration) valu | ies: | |
| 84852-15- | 3 4-nonylphenol, branched | | |
| Aquatic co | mpartment - freshwater | 0.00061 | 4 mg/L (not specified) |
| Aquatic co | mpartment - marine water | 0.00052 | 7 mg/L (not specified) |
| Aquatic co | mpartment - water, intermittent releases | s 0.00017 | mg/L (not specified) |
| Aquatic co | mpartment - sediment in freshwater | 4.62 mg | /kg sed dw (not specified) |
| Aquatic co | mpartment - sediment in marine water | 1.23 mg | /kg sed dw (not specified) |
| Terrestrial | compartment - soil | 2.3 mg/l | kg dw (not specified) |
| Sewage tr | eatment plant | 9.5 mg/l | _ (not specified) |

- Additional information: The lists valid during the making were used as basis.
- · 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.

- Appropriate engineering controls No further data; see section 7.
- Individual protection measures, such as personal protective equipment
- · General protective and hygienic measures:

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.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

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

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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

- · 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.

SECTION 9: Physical and chemical properties

- · 9.1 Information on basic physical and chemical properties
- · General Information

· Physical state

Liquid

· Colour: · Odour:

According to product specification Characteristic

Not determined.

· Odour threshold: · Melting point/freezing point:

Undetermined.

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Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

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· Boiling point or initial boiling point and boiling

range Undetermined.
• Flammability Not applicable.

Lower and upper explosion limit

Lower: 1 Vol %
Upper: 13 Vol %
Flash point: >120 °C
Auto-ignition temperature: 370 °C

Decomposition temperature: Not determined.pH Not determined.

Viscosity:

• Kinematic viscosity at 40 °C: > 20,5 mm²/s

· Dynamic at 20 °C: 1,000 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: 1 g/cm³

Relative density

Vapour density

Not determined.

Not determined.

· 9.2 Other information

· Appearance:

· Form: Fluid

Important information on protection of health and environment, and on safety.

• **Ignition temperature:** Product is not selfigniting.

• Explosive properties: Product does not present an explosion hazard.

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 Void · Flammable solids Void · Self-reactive substances and mixtures Void · Pyrophoric liquids Void · Pyrophoric solids Void · Self-heating substances and mixtures Void Substances and mixtures, which emit flammable gases in contact with water Void Oxidising liquids Void · Oxidising solids Void Organic peroxides Void

SECTION 10: Stability and reactivity

- · 10.1 Reactivity No further relevant information available.
- · 10.2 Chemical stability

Corrosive to metals

· Desensitised explosives

• Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Void

Void

- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.

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- 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:

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Oral LD50 >300-2,000 mg/kg (rat)

- · 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 Based on available data, the classification criteria are not met.
- · 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 Suspected of damaging fertility. Suspected of damaging the unborn child.
- 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

| | | properties |
|--|--|------------|
| | | |
| | | |
| | | |

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SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity:

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EC50/72 h >0.1-1 mg/l (Pseudokirchnerella subcapitata)

EC50/48 h >0.01-0.1 mg/l (Daphnia magna)

LC50/96 h >0.1-1 mg/l (pimephales promelas)

- 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 For information on endocrine disrupting properties see section 11.
- · 12.7 Other adverse effects
- · Remark: Very toxic for fish
- Additional ecological information:
- · General notes:

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

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.

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|----------------------------|---|--|--|--|
| · European waste catalogue | | | | |
| | 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 | | | |
| HP6 | Acute Toxicity | | | |
| HP8 | Corrosive | | | |
| HP10 | Toxic for reproduction | | | |
| HP14 | Ecotoxic | | | |

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

| 4441111 1 15 1 | | |
|---|---|--|
| · 14.1 UN number or ID number · ADR/RID/ADN, IMDG, IATA | UN3066 | |
| · 14.2 UN proper shipping name · ADR/RID/ADN · IMDG, IATA | 3066 PAINT, ENVIRONMENTALLY HAZARDOUS PAINT | |
| · 14.3 Transport hazard class(es) | | |
| · ADR/RID/ADN, IMDG | | |
| | | |
| · Class | 8 Corrosive substances. | |
| · Label | 8 | |
| | | |
| Class | 8 Corrosive substances. | |
| · Label | 8 | |
| · 14.4 Packing group · ADR/RID/ADN, IMDG, IATA | II | |
| · 14.5 Environmental hazards: | Product contains environmentally hazardous substant 4-nonylphenol, branched | |
| · Marine pollutant: | Yes | |
| Special marking (ADR/RID/ADN): | Symbol (fish and tree) Symbol (fish and tree) | |
| 14.6 Special precautions for user | Warning: Corrosive substances. | |
| · Hazard identification number (Kemler code): · EMS Number: | 80 F-A,S-B | |
| · EMS Number: · Stowage Category | F-A,5-B B | |
| Stowage Code | SW2 Clear of living quarters. | |

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| 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 | E |
| IMDG | |
| Limited quantities (LQ) | 1L |
| Excepted quantities (EQ) | Code: E2 |
| (3) | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 500 ml |
| UN "Model Regulation": | UN 3066 PAINT, 8, II, ENVIRONMENTALLY |
| - | HAZARDOUS |

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 E1 Hazardous to the Aquatic Environment
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t
- · Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- · REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

| , | | |
|------------------------------------|------|-------------|
| Regulation (EU) No 649/2012 | | |
| 84852-15-3 4-nonylphenol, branched | Anne | ex I Part 1 |
| | Anne | ex I Part 2 |

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.

- · National regulations:
- · Other regulations, limitations and prohibitive regulations
- · Substances of very high concern (SVHC) according to REACH, Article 57

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

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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: 19.04.2023 · Version number of previous version: 27

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

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 SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

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 Repr. 2: Reproductive toxicity – Category 2 Repr. 2: Reproductive toxicity – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard - 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.