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according to 1907/2006/EC, Article 31

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

· **1.1 Product identifier**
· Trade name: **Rust Remover**

· Article number: 10814, 10815, 10870, 10867, 10876, 10437
· UFI: 43E7-M0JY-500M-MJ61
· **1.2 Relevant identified uses of the substance or mixture and uses advised against** No further relevant information available.
· Application of the substance / the mixture Cleaning agent/ Cleaner

· **1.3 Details of the supplier of the safety data sheet**
· Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH
Lechstrasse 28
D 90451 Nürnberg
Tel. +49(0)911-642960
Fax. +49(0)911-644456
e-mail info@akemi.de

· Further information obtainable from: Laboratory
· **1.4 Emergency telephone number:** Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH
Tel. +49(0)911-64296-59
Reachable during the following office hours:
Monday – Thursday from 07:30 a.m. to 16:30 p.m.
Friday from 07:30 a.m. to 13:30 p.m.

* **SECTION 2: Hazards identification**

· **2.1 Classification of the substance or mixture**
· Classification according to Regulation (EC) No 1272/2008
Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

· **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: phosphoric acid
Alcohols, C13-C15 branched and linear, ethoxylated
· Hazard statements H314 Causes severe skin burns and eye damage.
· Precautionary statements
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read carefully and follow all instructions.
P260 Do not breathe mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
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.

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P312	Call a POISON CENTER/doctor if you feel unwell.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/ regional/national/international regulations.

· Additional information: Contains Reaction product of Maleic anhydride, 2-Ethylhexylamine and Triethanolamine. May produce an allergic reaction.

· **2.3 Other hazards**
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.
· Determination of endocrine-disrupting properties: For information on endocrine disrupting properties see section 11.

*
SECTION 3: Composition/information on ingredients

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

· Dangerous components:

CAS: 7664-38-2 EINECS: 231-633-2 Index number: 015-011-00-6 Reg.nr.: 01-2119485924-24	phosphoric acid Met. Corr.1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318 Acute Tox. 4, H302 Specific concentration limits: Skin Corr. 1B; H314: C ≥ 25 % Skin Irrit. 2; H315: 10 % ≤ C < 25 % Eye Irrit. 2; H319: 10 % ≤ C < 25 %	25-50%
CAS: 157627-86-6 EC number: 935-523-1 Reg.nr.: 02-2119548515-35-0000	Alcohols, C13-C15 branched and linear, ethoxylated Eye Dam. 1, H318 Acute Tox. 4, H302 Aquatic Chronic 3, H412	1-5%
CAS: 1471311-93-9 Reg.nr.: 01-2119980932-27	Reaction product of Maleic anhydride, 2-Ethylhexylamine and Triethanolamine Eye Dam. 1, H318 Skin Irrit. 2, H315; Skin Sens. 1B, H317	<1%

· Regulation (EC) No 648/2004 on detergents / Labelling for contents

non-ionic surfactants	<5%

· 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.
· After inhalation: Supply fresh air.
In case of unconsciousness place patient stably in side position for transportation.
· After skin contact: Immediately wash with water and soap and rinse thoroughly.
· After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
· After swallowing: Drink plenty of water and provide fresh air. Call for a doctor immediately.
· **4.2 Most important symptoms and effects, both acute and delayed**
Gastric or intestinal disorders
Acidosis

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· **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: CO_2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
· **5.3 Advice for firefighters**
· Protective equipment: No special measures required.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures** Particular danger of slipping on leaked/spilled product.
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** Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
· Information about fire - and explosion protection: No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**
· Storage:
· Requirements to be met by storerooms and receptacles: No special requirements.
· Information about storage in one common storage facility: Not required.
· Further information about storage conditions: Protect from frost.
Keep container tightly sealed.
· Storage class: 8 B
· **7.3 Specific end use(s)** No further relevant information available.

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* **SECTION 8: Exposure controls/personal protection**

· **8.1 Control parameters**

· Ingredients with limit values that require monitoring at the workplace:

7664-38-2 phosphoric acid

IOELV	Short-term value: 2 mg/m³ Long-term value: 1 mg/m³

· DNELs

7664-38-2 phosphoric acid

Dermal	DNEL (Langzeit-wiederholt)	0.1 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	2 mg/m³ Air (ARB)
	DNEL (Langzeit-wiederholt)	1-10.7 mg/m³ Air (ARB)
		0.36-4.57 mg/m³ Air (BEV)

1471311-93-9 Reaction product of Maleic anhydride, 2-Ethylhexylamine and Triethanolamine

Oral	DNEL (Langzeit-wiederholt)	5 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	10 mg/kg bw/day (ARB)
		5 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	35.26 mg/m³ Air (ARB)
		8.7 mg/m³ Air (BEV)

· PNECs

1471311-93-9 Reaction product of Maleic anhydride, 2-Ethylhexylamine and Triethanolamine

PNEC (wässrig)	100 mg/l (KA)
	0.01 mg/l (MW)
	0.1 mg/l (SW)
	1 mg/l (WAS)
PNEC (fest)	0.909 mg/kg Trockengew (BO)
	0.485 mg/kg Trockengew (MWS)
	4.85 mg/kg Trockengew (SWS)

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

· **8.2 Exposure controls**

· Appropriate engineering controls No further data; see section 7.

· Individual protection measures, such as personal protective equipment

· General protective and hygienic measures:
Do not eat, drink, smoke or sniff while working.
Use skin protection cream for skin protection.
Clean skin thoroughly immediately after handling the product.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
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.
Combination filter B-P2

· Hand protection Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.

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Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:
STOKO EMULSION (http://www.stoko.com)
Skin protection recommendation for skin cleaning after product handling:
FRAPANTOL (http://www.stoko.com)
Skin protection agent recommendation for skin aftercare:
STOKO VITAN (http://www.stoko.com)
The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type.
The mentioned permeation times´ data were generated and verified with material samples of the recommended protection glove type in the scope of laboratory anylyses of the company KCL GmbH in compliance with EN374.
This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In case of product dilution or in case of mixture with different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH, Germany, 36124 Eichenzell, internet: http://www.kcl.de).

· Material of gloves
Butyl rubber, BR
Nitrile rubber, NBR
Fluorocarbon rubber (Viton)
Chloroprene rubber, CR
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.

· Penetration time of glove material
Value for the permeation: Level ≤ 6, 480 min
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· For the permanent contact gloves made of the following materials are suitable:
Butyl rubber, BR
Butoject (KCL, Art_No. 897, 898)
Nitrile rubber, NBR
Camatril (KCL, Art_No. 730, 731, 732, 733)
Fluorocarbon rubber (Viton)
Vitoject (KCL, Art_No. 890)
Chloroprene rubber, CR
Camapren (KCL, Art_No. 720, 722, 726)

· As protection from splashes gloves made of the following materials are suitable:
Nitrile rubber, NBR

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	Camatril (KCL, 730, 731, 732, 733) Chloroprene rubber, CR
· Not suitable are gloves made of the following materials:	Leather gloves Strong material gloves
· Eye/face protection	 Tightly sealed goggles
· Body protection:	Protective work clothing

*

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· General Information	
· Colour:	Yellowish
· Odour:	Alcohol-like
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	100 °C (7732-18-5 water, distilled, conductivity or of similarpurity)
· Flash point:	Not applicable.
· pH at 20 °C	<1
· Viscosity:	
· Kinematic viscosity at 20 °C	11 s (DIN 53211/4)
· Dynamic:	Not determined.
· Solubility	
· water:	Not miscible or difficult to mix.
· Vapour pressure at 20 °C:	23 hPa (7732-18-5 water, distilled, conductivity or of similarpurity)
· Density and/or relative density	
· Density at 20 °C:	1.24 g/cm³
· **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.
· Solvent content:	
· Water:	56.9 %
· Solids content:	36.9 %
· 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

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· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· 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** Reacts with alkali and metals.
Reacts with strong oxidising agents.
Reacts with metals forming hydrogen.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** Phosphorus oxides (e.g. P2O5)
Irritant gases/vapours

*
SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)		
Oral	LD50	>2,175-3,124 mg/kg (rat)

7664-38-2 phosphoric acid		
Oral	LD50	1,250 mg/kg (rat)
	NOAEL	≥410 mg/kg (rat)
Dermal	LD50	2,740 mg/kg (rabbit)
Inhalative	LC50	850 mg/l (rat)
	LC50/1h	1.69 mg/l (rat)
157627-86-6 Alcohols, C13-C15 branched and linear, ethoxylated		
Oral	LD50	>300-2,000 mg/kg (rat) (OECD 401)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402)
	LC50/48h	1-10 mg/l (Oncorhynchus mykiss)
1471311-93-9 Reaction product of Maleic anhydride, 2-Ethylhexylamine and Triethanolamine		
Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)

· 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 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.

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· 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:	
7664-38-2 phosphoric acid	
EC50	270 mg/l (BES)
	270 mg/l (bacteria)
EC50/48h	>100 mg/l (daphnia magna) (OECD 202)
NOELR/72h	100 mg/l (Desmodesmus subspicatus) (OECD 201)
EC50/72h	>100 mg/l (Desmodesmus subspicatus) (OECD 201)
LC50/96h	138 mg/l (Gambusia affinis)
	98-106 mg/l (lem)
	3-3.25 mg/l (lepomis macrochirus)
157627-86-6 Alcohols, C13-C15 branched and linear, ethoxylated	
EC50/48h	1-10 mg/l (daphnia magna)
EC10	>1,000 mg/l (BES)
EC50/72h	1-10 mg/l (Scenedesmus subspicatus)
1471311-93-9 Reaction product of Maleic anhydride, 2-Ethylhexylamine and Triethanolamine	
EC10/16h	>1,000 mg/l (pseudomonas putida)
EC10	>1 mg/l (Pseudokirchneriella subcapitata)
EC50/48h	>100 mg/l (daphnia magna)
EC50/72h	>100 mg/l (Pseudokirchneriella subcapitata)
LC50/96h	>100 mg/l (Leuciscus idus)

· **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: 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.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

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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	
20 00 00	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01 00	separately collected fractions (except 15 01)
20 01 29*	detergents containing hazardous substances

· Uncleaned packaging:
· Recommendation: Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

*

SECTION 14: Transport information

· **14.1 UN number or ID number**
· ADR, IMDG, IATA: UN3264

· **14.2 UN proper shipping name**
· ADR: 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID)
· IMDG, IATA: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID)

· **14.3 Transport hazard class(es)**

· ADR

· Class: 8 (C1) Corrosive substances.
· Label: 8

· IMDG, IATA

· Class: 8 Corrosive substances.
· Label: 8

· **14.4 Packing group**
· ADR, IMDG, IATA: III

· **14.5 Environmental hazards:**
· Marine pollutant: No

· **14.6 Special precautions for user**: Warning: Corrosive substances.
· Hazard identification number (Kemler code): 80
· EMS Number: F-A,S-B
· Segregation groups: (SGG1) Acids
· Stowage Category: A

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· Segregation Code	SG36 Stow "separated from" SGG18-alkalis. SG49 Stow "separated from" SGG6-cyanides
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID), 8, III

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.

· REGULATION (EC) No 1907/2006 ANNEX XVII: Conditions of restriction: 3

· 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:

· Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients is listed.

· VOC EU 0.0 g/l

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

* **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.
This Safety Data Sheets is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· Department issuing SDS: Laboratory
· Date of previous version: 03.06.2022
· Version number of previous version: 7
· 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
ATE: Acute toxicity estimate values
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1B: Skin sensitisation – Category 1B
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3