

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

- 1.1 Product identifier
- Trade name: Epifanes PP Varnish Extra Comp. B (cure)
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
 - Product category PC9a Coatings and paints, thinners, paint removers
 - Process category PROC10 Roller application or brushing
 - Environmental release category ERC2 Formulation into mixture
- Application of the substance / the mixture
See our technical datasheet for application of this product.
Curing component of a high build two-component varnish
- 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
W.Heeren & Zoon bv.
P.O. box 166
1430 AD Aalsmeer
Netherlands
tel.+31-(0)297-360366
fax +31-(0)297-342078
email: r&d@epifanes.nl
- Further information obtainable from: Research & Development.
- 1.4 Emergency telephone number:
W.Heeren & Zoon bv. tel: +31 297 360678, E-mail: rend@epifanes.nl
Office hours: weekdays from 08:00 to 17:00.
The National Poisons Information Service; dial 111
Solely intended to inform professionals in acute poisoning!
see manufacturer

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H336 May cause drowsiness or dizziness.

Aquatic Chronic 3 H412 Harmful 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.

(Contd. on page 2)

Trade name: Epifanes PP Varnish Extra Comp. B (cure)

(Contd. of page 1)

· Hazard pictograms



GHS02 GHS07 GHS08

· Signal word Danger

· Hazard-determining components of labelling:

aromatische polyisocyanaat
Solvent naphtha (petroleum), light arom.
m-tolylidene diisocyanate

· Hazard statements

H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

· Precautionary statements

P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information:

Contains isocyanates. May produce an allergic reaction.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

- PBT: Not applicable.
- vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

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

· Dangerous components:

CAS: 53317-61-6	aromatische polyisocyanaat	25-50%
Reg.nr.: niet van toepassing	⚠ Eye Irrit. 2, H319; Skin Sens. 1, H317	

(Contd. on page 3)

Trade name: Epifanes PP Varnish Extra Comp. B (cure)

(Contd. of page 2)

CAS: 1330-20-7 EINECS: 215-535-7 Index number: 601-022-00-9 Reg.nr.: 01-2119488216-32	xylene Flam. Liq. 3, H226 Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	25-50%
CAS: 64742-95-6 EINECS: 265-199-0 Index number: 649-356-00-4 Reg.nr.: 01-2119486773-24	Solvent naphtha (petroleum), light arom. Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 STOT SE 3, H335-H336	10-25%
CAS: 108-65-6 EINECS: 203-603-9 Index number: 607-195-00-7 Reg.nr.: 01-2119475791-29	2-methoxy-1-methylethyl acetate Flam. Liq. 3, H226	2.5-10%
CAS: 100-41-4 EINECS: 202-849-4 Index number: 601-023-00-4 Reg.nr.: 01-2119489370-35	ethylbenzene Flam. Liq. 2, H225 STOT RE 2, H373; Asp. Tox. 1, H304 Acute Tox. 4, H332	≤ 2.5%
CAS: 26471-62-5 EINECS: 247-722-4 Index number: 615-006-00-4 Reg.nr.: 01-2119454791-34	m-tolyldiene diisocyanate Acute Tox. 2, H330 Resp. Sens. 1, H334; Carc. 2, H351 Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 Aquatic Chronic 3, H412	≤0.5%

Additional information:

Note P: The substance does not have to be classified as a carcinogen or mutagen as can be shown that the substance contains less than 0.1% (w / w) benzene (EINECS No 200-753-7.). This note applies only to certain complex oil-derived substances in Part 3.

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 and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- After skin contact:
Immediately wash with water and soap and rinse thoroughly.
Immediately rinse with water.
- After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- 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.

Trade name: Epifanes PP Varnish Extra Comp. B (cure)

(Contd. of page 3)

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:
Prevent seepage into sewage system, workpits and cellars.
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).
Dispose contaminated material as waste according to item 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: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed.
- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical facilities:
No further data; see item 7.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

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Trade name: Epifanes PP Varnish Extra Comp. B (cure)

(Contd. of page 4)

· 8.1 Control parameters

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

1330-20-7 xylene

Inhalative	(Tgg)time weighted average 8 hours / Exposure time	210 mg/m ³ (Algemene bevolking/ General population)
	(Tgg)time weighted average 15 min. / Exposure time	442 mg/m ³ (Algemene bevolking/ General population)

108-65-6 2-methoxy-1-methylethyl acetate

Inhalative	(Tgg)time weighted average 8 hours / Exposure time	550 mg/m ³ (Algemene bevolking/ General population)
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100-41-4 ethylbenzene

Inhalative	(Tgg)time weighted average 8 hours / Exposure time	215 mg/m ³ (Algemene bevolking/ General population)
	(Tgg)time weighted average 15 min. / Exposure time	430 mg/m ³ (Algemene bevolking/ General population)

1330-20-7 xylene

WEL	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV
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108-65-6 2-methoxy-1-methylethyl acetate

WEL	Short-term value: 548 mg/m ³ , 100 ppm Long-term value: 274 mg/m ³ , 50 ppm Sk
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100-41-4 ethylbenzene

WEL	Short-term value: 552 mg/m ³ , 125 ppm Long-term value: 441 mg/m ³ , 100 ppm Sk
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26471-62-5 m-tolyldiene diisocyanate

WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
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· DNELs

1330-20-7 xylene

Dermal	Long-term - local effects, worker	180 --- (Werker/Worker)
Inhalative	Acute-local effects, worker	289 mg/m ³ (Werker/Worker)
	Acute - systemic effects, worker	289 mg/m ³ (Werker/Worker)
	Long-term - local effects, worker	77 mg/m ³ (Werker/Worker)

· PNECs

1330-20-7 xylene

Aquatic compartment - freshwater	0.327 mg/L (not specified)
Aquatic compartment - marine water	0.327 mg/L (not specified)
Aquatic compartment - water, intermittent releases	0.327 mg/L (not specified)
Aquatic compartment - sediment in freshwater	12.46 mg/kg sed dw (not specified)
Aquatic compartment - sediment in marine water	12.46 mg/kg sed dw (not specified)
Terrestrial compartment - soil	2.31 mg/kg dw (not specified)

(Contd. on page 6)

Trade name: Epifanes PP Varnish Extra Comp. B (cure)

(Contd. of page 5)

Sewage treatment plant	6.58 mg/L (not specified)
· Ingredients with biological limit values:	
1330-20-7 xylene	
BMGV	650 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid

- Additional information: The lists valid during the making were used as basis.
- 8.2 Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:
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 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.
Filter AX
- Protection of hands:



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

- 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.
- Penetration time of glove material
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:
PVA, fluorinated rubber
Glove thickness > 0.7mm, breakthrough time > 480 min. To EN374
nitrile rubber;
recommended glove thickness > 0.45mm. permeability / permeation time: > 480 min. according to EN 374.
- As protection from splashes gloves made of the following materials are suitable:
Nitrile
Glove thickness > 0.45 mm, breakthrough time > 30 min. to EN374

(Contd. on page 7)

Trade name: Epifanes PP Varnish Extra Comp. B (cure)

(Contd. of page 6)

- Eye protection:



Tightly sealed goggles

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties
- General Information
- Appearance:

Form:	Fluid
Colour:	According to product specification
- Odour: Characteristic
- Odour threshold: Not determined.
- pH-value: Not determined.
- Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	137 °C
- Flash point: 25 °C
- Flammability (solid, gas): Not applicable.
- Ignition temperature: 315 °C
- Decomposition temperature: Not determined.
- Auto-ignition temperature: Product is not selfigniting.
- Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- Explosion limits:

Lower:	1.1 Vol %
Upper:	7.0 Vol %
- Vapour pressure at 20 °C: 6.7 hPa
- Density at 20 °C: 1.03698 g/cm³
- Relative density: Not determined.
- Vapour density: Not determined.
- Evaporation rate: Not determined.
- Solubility in / Miscibility with water: Not miscible or difficult to mix.
- Partition coefficient: n-octanol/water: Not determined.
- Viscosity:

Dynamic:	Not determined.
Kinematic at 20 °C:	40 s (ISO 6 mm)
- Solvent content:

Organic solvents:	60.2 %
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(Contd. on page 8)

Trade name: Epifanes PP Varnish Extra Comp. B (cure)

(Contd. of page 7)

VOC content:	60.2 %
VOC content:	624.4 g/l / 5.21 lb/gl

Solids content:	39.5 %
· 9.2 Other information	No further relevant information available.

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 toxicological effects
- Acute toxicity
Based on available data, the classification criteria are not met.

- LD/LC50 values relevant for classification:

1330-20-7 xylene

Oral	LD50	4300 mg/kg bw (rat)
Dermal	LD50	2000 mg/kg bw (rabbit)

64742-95-6 Solvent naphtha (petroleum), light arom.

Oral	LD50	3592 mg/kg (rat)
Dermal	LD50 (Konijn)	3160 mg/kg (rabbit)
Inhalative	LC50 (rat)	>6193 mg/m ³ (rat)

108-65-6 2-methoxy-1-methylethyl acetate

Oral	LD50	8532 mg/kg bw (rat)
Inhalative	LC50/4 h	35.7 mg/l (rat)

100-41-4 ethylbenzene

Oral	LD50	3500 mg/kg bw (rat)
Dermal	LD50	17800 mg/kg bw (rabbit)

- Primary irritant effect:
- Skin corrosion/irritation
Causes skin irritation.
- Serious eye damage/irritation
Causes serious eye irritation.
- Respiratory or skin sensitisation
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity
Based on available data, the classification criteria are not met.

(Contd. on page 9)

Trade name: Epifanes PP Varnish Extra Comp. B (cure)

(Contd. of page 8)

- 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
May cause drowsiness or dizziness.
- 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.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

1330-20-7 xylene

EC50 1 mg/l (daphnia magna) (48 uur/hour)

LC50 13.5-2.6 mg/l (Fish Acute Toxicity Study) (96 uur/hour)

108-65-6 2-methoxy-1-methylethyl acetate

EC50 408-500 mg/l (daphnia magna) (48 uur/hour)

IC 50 >1000 mg/l (Algae, Growth inhibition test) (72 uur/hour)

LC50 100-180 mg/l (Fish Acute Toxicity Study) (96 uur/hour)

· 12.2 Persistence and degradability No further relevant information available.

· 12.3 Bioaccumulative potential

1330-20-7 xylene

Log Kow 3 (not specified)

· 12.4 Mobility in soil No further relevant information available.

· Ecotoxicological effects:

· Remark: Harmful to fish

· Additional ecological information:

· General notes:

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

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

Harmful to aquatic organisms

· 12.5 Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

· 12.6 Other adverse effects No further relevant information available.

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

(Contd. on page 10)


Trade name: Epifanes PP Varnish Extra Comp. B (cure)

(Contd. of page 9)

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

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

SECTION 14: Transport information

- 14.1 UN-Number
· ADR, IMDG, IATA UN1263
- 14.2 UN proper shipping name
· ADR 1263 PAINT
· IMDG, IATA PAINT
- 14.3 Transport hazard class(es)
· ADR, IMDG, IATA

· Class 3 Flammable liquids.
· Label 3
- 14.4 Packing group
· ADR, IMDG, IATA III
- 14.5 Environmental hazards:
· Marine pollutant: No
- 14.6 Special precautions for user Warning: Flammable liquids.
· Danger code (Kemler): 30
· EMS Number: F-E, S-E
· Stowage Category A

· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 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 D/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

(Contd. on page 11)

Trade name: Epifanes PP Varnish Extra Comp. B (cure)

(Contd. of page 10)

· UN "Model Regulation": UN 1263 PAINT, 3, 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.
- 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
- National regulations:
- Technical instructions (air):

Class	Share in %
I	≤0.5
NK	50-100
- Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.
- 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.

- Relevant phrases
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
- 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 européen sur le transport 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

(Contd. on page 12)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 24.02.2017

Version number 8

Revision: 24.02.2017

Trade name: Epifanes PP Varnish Extra Comp. B (cure)

(Contd. of page 11)

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)
VOC: Volatile Organic Compounds (USA, EU)
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. 2: Flammable liquids - Category 2
Flam. Liq. 3: Flammable liquids - Category 3
Acute Tox. 4: Acute toxicity - Category 4
Acute Tox. 2: Acute toxicity - Category 2
Skin Irrit. 2: Skin corrosion/irritation - Category 2
Eye Irrit. 2: Serious eye damage/eye irritation - Category 2
Resp. Sens. 1: Respiratory sensitisation - Category 1
Skin Sens. 1: Skin sensitisation - Category 1
Carc. 2: Carcinogenicity - Category 2
STOT SE 3: Specific target organ toxicity (single exposure) - Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2
Asp. Tox. 1: Aspiration hazard - Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard - Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard - Category 3
* Data compared to the previous version altered.