

Safety data sheet

acc. to EU regulations 1272/2008 and 1907/2006 incl. all amendments

Printing date 14.08.2015

Revision: 14.08.2015

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name: DINITROL 552 PMMA PRIMER****1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

Sector of Use SU3, SU17, SU21, SU22**Product category** PC1 Adhesives, sealants**Process category** PROC1-5, PROC7, PROC8a, PROC8b, PROC9-11, PROC13-14, PROC 19, PROC21**Environmental release category** ERC5, ERC8c, ERC8d, ERC8f**Article category** Not applicable**Application of the substance / the mixture** Primer**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Hersteller/ Producer: EFTEC AG, Hofstrasse 31, CH-8590 Romanshorn

EU-Importeur/ EU-Importer: EFTEC Ltd., Rhigos/Aberdare, GB-Mid Glamorgan CF44 9UE (Responsible for chemical registration in EU)

Lieferant/ Supplier: DINOL GmbH, Pyrmonterstrasse 76, D-32676 Lügde

Further information obtainable from: msds@dinol.com**1.4 Emergency telephone number:** Giftnotruf D-Berlin +49(0)30 30686 790 Beratung in Deutsch und Englisch.**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS08 health hazard

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



GHS07

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.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xn; Sensitising

R42/43: May cause sensitisation by inhalation and skin contact.



Xi; Irritant

R36: Irritating to eyes.

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**F+; Highly flammable****R11:** Highly flammable.**R67:** Vapours may cause drowsiness and dizziness.**Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Has a narcotising effect.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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

GHS02



GHS07



GHS08

Signal word *Danger***Hazard-determining components of labelling:**

n-butyl acetate

Thionophosphorsäure-tris-(*p*-isocyanatophenylester)

HMDI-Oligomere

ethyl acetate

Hazard statements

H225 Highly flammable liquid and vapour.

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.

Precautionary statements

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

P405 Store locked up.

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

Additional information:

EUH204 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 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

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Dangerous components:		
CAS: 123-86-4 EINECS: 204-658-1	n-butyl acetate R10-66-67 ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	25-50%
CAS: 141-78-6 EINECS: 205-500-4	ethyl acetate ⚠ Xi R36; ⚠ F R11 R66-67 ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	20-<25%
CAS: 78-93-3 EINECS: 201-159-0	butanone ⚠ Xi R36; ⚠ F R11 R66-67 ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	20-<25%
CAS: 4151-51-3 EINECS: 223-981-9	Thionophosphorsäure-tris-(p-isocyanatophenylester) ⚠ Xn R42; ⚠ F R11 R18 ⚠ Flam. Liq. 1, H224; ⚠ Resp. Sens. 1, H334	5-<10%
CAS: 1333-86-4 EINECS: 215-609-9	Carbon black substance with a Community workplace exposure limit	5-<10%
CAS: 108-65-6 EINECS: 203-603-9	2-methoxy-1-methylethyl acetate R10 ⚠ Flam. Liq. 3, H226	1-5%
CAS: 28182-81-2 NLP: 500-060-2	HMDI-Oligomere ⚠ Xn R20; ⚠ Xi R37; ⚠ Xi R43 ⚠ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	1-5%
CAS: 9016-87-9 EC number: 618-498-9	diphenylmethanediisocyanate, isomeres and homologues ⚠ Xn R20-40-48/20; ⚠ Xn R42/43; ⚠ Xi R36/37/38 Carc. Cat. 3 ⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	0,1-<1%
CAS: 77-58-7 EINECS: 201-039-8	dibutyltin dilaurate ⚠ T R60-61-48/25; ⚠ C R34; ⚠ Xn R68; ⚠ Xi R43; ⚠ N R50/53 ⚠ Muta. 2, H341; Repr. 1B, H360FD; STOT SE 1, H370; STOT RE 1, H372; ⚠ Skin Corr. 1C, H314; Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Sens. 1, H317	0,1-<0,25%

SVHC The mixture of substances contain no SVHC (Substances of Very High Concern, <http://echa.europa.eu>)**Additional information:** For the wording of the listed risk phrases refer to section 16.**SECTION 4: First aid measures****4.1 Description of first aid measures****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.**After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: Seek immediate medical advice.**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

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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:** CO₂, sand, extinguishing powder. Do not use water.**For safety reasons unsuitable extinguishing agents:**

Water

Water with full jet

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**

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

Prevent seepage into sewage system, workpits and cellars.

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.

Do not flush with water or aqueous cleansing agents

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**

No special measures required.

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.

7.2 Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:** Store in a cool location.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Maximum storage temperature: < 35 °C**Minimum storage temperature:** > 0 °C**Storage temperature:** 0 - 35 °C

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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.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

123-86-4 n-butyl acetate

AGW (DACH)	Long-term value: 300 mg/m ³ , 62 ppm 2(I);Y, AGS
WEL (Great Britain english)	Short-term value: 966 mg/m ³ , 200 ppm Long-term value: 724 mg/m ³ , 150 ppm

141-78-6 ethyl acetate

AGW (DACH)	Long-term value: 1500 mg/m ³ , 400 ppm 2(I);DFG, Y
WEL (Great Britain english)	Short-term value: 400 ppm Long-term value: 200 ppm

78-93-3 butanone

AGW (DACH)	Long-term value: 600 mg/m ³ , 200 ppm 1(I);DFG, EU, H, Y
WEL (Great Britain english)	Short-term value: 899 mg/m ³ , 300 ppm Long-term value: 600 mg/m ³ , 200 ppm Sk, BMGV

1333-86-4 Carbon black

WEL (Great Britain english)	Short-term value: 7 mg/m ³ Long-term value: 3,5 mg/m ³
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108-65-6 2-methoxy-1-methylethyl acetate

AGW (DACH)	Long-term value: 270 mg/m ³ , 50 ppm 1(I);DFG, EU, Y
WEL (Great Britain english)	Short-term value: 548 mg/m ³ , 100 ppm Long-term value: 274 mg/m ³ , 50 ppm Sk

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

AGW (DACH)	Long-term value: 0,05 E mg/m ³ 1;=2=(I);DFG, H, Sah, Y, 12
WEL (Great Britain english)	Short-term value: 0,07 mg/m ³ Long-term value: 0,02 mg/m ³ Sen; as -NCO

77-58-7 dibutyltin dilaurate

AGW (DACH)	Long-term value: 0,009 mg/m ³ , 0,0018 ppm 1(I);H, Z, 10, 11, AGS
WEL (Great Britain english)	Short-term value: 0,2 mg/m ³ Long-term value: 0,1 mg/m ³ as Sn; Sk

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Ingredients with biological limit values:**78-93-3 butanone**

BGW (DACH)	5 mg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: Expositionsende bzw. Schichtende Parameter: 2-Butanon
BMGV (Great Britain english)	70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one

*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.**Avoid contact with the eyes and skin.***Respiratory protection:***Use suitable respiratory protective device in case of insufficient ventilation.*

Filter A

Protection of hands:*Protective gloves (DIN EN 374)**Chemical resistant protective gloves with CE-labeling**To minimise the wetness in the glove due to perspiration changing of gloves during a shift is required.**Softening of the callus when wearing air-impermeable gloves is possible.**Check the permeability prior to each anewed use of the glove.***Material of gloves**

Butyl rubber

*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.***Eye protection:***Safety glasses (DIN EN 166)*

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Body protection:

Protective work clothing

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Liquid
Colour:	Black
Odour:	Characteristic
Odour threshold:	Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	79 °C

Flash point: -5 °C

Flammability (solid, gaseous): Not applicable.

Ignition temperature: > 300 °C

Decomposition temperature: Not determined.

Self-igniting: Product is not selfigniting.

Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

Explosion limits:

Lower:	1,8 Vol %
Upper:	11,5 Vol %

Vapour pressure at 20 °C: 105 hPa

Density at 20 °C:	0,91 g/cm ³
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: Not determined.

Solvent content:

Organic solvents: 79,2 %

Solids content: 20,3 %

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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****LD/LC50 values relevant for classification:****ATE (Acute Toxicity Estimates)**

Inhalative	LC50/ 4h	306 mg/l
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9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

Oral	LD50	> 10000 mg/kg (rat) (OECD-Prüfrichtlinie 401)
Dermal	LD50	> 9400 mg/kg (rabbit) (OECD-Prüfrichtlinie 402)
Inhalative	LC50/ 4h	310 mg/l (rat) (OECD-Prüfrichtlinie 403)

77-58-7 dibutyltin dilaurate

Oral	LD50	2071 mg/kg (rat) (equivalent or similar to OECD 401; G. Sarasin 1981)
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Primary irritant effect:**Skin corrosion/irritation** Based on available data, the classification criteria are not met.**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 (carcinogenicity, mutagenicity and toxicity for reproduction)**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**

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.

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SECTION 12: Ecological information**12.1 Toxicity****Aquatic toxicity:****9016-87-9 diphenylmethanediisocyanate, isomeres and homologues**

EC50/ 24h (static) > 1000 mg/l (daphnia) (OECD-Prüfrichtlinie 202)

EC50/ 72h > 1640 mg/l (alga) (OECD-Prüfrichtlinie 201)

LC50/ 96h (static) > 1000 mg/l (fish) (OECD-Prüfrichtlinie 203)

77-58-7 dibutyltin dilaurate

EC50/ 72h 1 mg/l (alga)

LC50/ 48h 0,463 mg/l (daphnia)

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.**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.

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
08 04 00	wastes from MFSU of adhesives and sealants (including waterproofing products)
08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances

Uncleaned packaging:**Recommendation:** Disposal must be made according to official regulations.**SECTION 14: Transport information****14.1 UN-Number****ADR, IMDG, IATA**

UN1866

14.2 UN proper shipping name**ADR**

UN1866 RESIN SOLUTION (vapour pressure at 50 °C not more than 110 kPa)

IMDG, IATA

RESIN SOLUTION

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14.3 Transport hazard class(es)**ADR**

Class 3 (F1) Flammable liquids.
Label 3

IMDG, IATA

Class 3 Flammable liquids.
Label 3

14.4 Packing group

ADR, IMDG, IATA II

14.5 Environmental hazards:

Marine pollutant: No

14.6 Special precautions for user

Warning: Flammable liquids.

Danger code (Kemler): 33

EMS Number: F-E,S-E

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: 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) 5L
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 1866 RESIN SOLUTION (VAPOUR PRESSURE AT 50 °C NOT MORE THAN 110 KPA), 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.

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National regulations:**Technical instructions (air):**

Class	Share in %
I	0.1-1
NK	50-100

Other regulations, limitations and prohibitive regulations**Substances of very high concern (SVHC) according to REACH, Article 57**

The mixture of substances contain no SVHC (Substances of Very High Concern, <http://echa.europa.eu>)

EU-VOC: 78,90 %**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

- H224 Extremely flammable liquid and vapour.
 H225 Highly flammable liquid and vapour.
 H226 Flammable liquid and vapour.
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 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.
 H341 Suspected of causing genetic defects.
 H351 Suspected of causing cancer.
 H360FD May damage fertility. May damage the unborn child.
 H370 Causes damage to organs.
 H372 Causes damage to organs through prolonged or repeated exposure.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.
- R10 Flammable.
 R11 Highly flammable.
 R18 In use, may form flammable/explosive vapour-air mixture.
 R20 Harmful by inhalation.
 R34 Causes burns.
 R36 Irritating to eyes.
 R36/37/38 Irritating to eyes, respiratory system and skin.
 R37 Irritating to respiratory system.
 R40 Limited evidence of a carcinogenic effect.
 R42 May cause sensitisation by inhalation.
 R42/43 May cause sensitisation by inhalation and skin contact.
 R43 May cause sensitisation by skin contact.
 R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
 R48/25 Toxic: danger of serious damage to health by prolonged exposure if swallowed.

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- R50/53 *Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.*
 R60 *May impair fertility.*
 R61 *May cause harm to the unborn child.*
 R66 *Repeated exposure may cause skin dryness or cracking.*
 R67 *Vapours may cause drowsiness and dizziness.*
 R68 *Possible risk of irreversible effects.*

Department issuing MSDS: Entwicklung

Contact: msds@dinol.com

Abbreviations and acronyms:

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

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)

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

Flam. Liq. 1: Flammable liquids, Hazard Category 1

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Muta. 2: Germ cell mutagenicity, Hazard Category 2

Carc. 2: Carcinogenicity, Hazard Category 2

Repr. 1B: Reproductive toxicity, Hazard Category 1B

STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1