

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.05.2021

Version number 7

Revision: 26.05.2021

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

1.1 Product identifier

- Trade name: **Transformer MAX**
- Article number: 12042, 12043, 12044, 12049
- UFI: J3R0-A0EU-Q00F-SG7G

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

Protective impregnation

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.
+44 (171) 635 91 91
National Poison Inform. Centre
Medical Toxicology Unit
Avalonley Road
London SE14 5ER

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

- Flam. Liq. 3 H226 Flammable liquid and vapour.
- Eye Irrit. 2 H319 Causes serious eye irritation.
- STOT SE 3 H336 May cause drowsiness or dizziness.
- Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.
- Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

- Labelling according to Regulation (EC) No 1272/2008
- Hazard pictograms

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



GHS02 GHS07 GHS08

Signal word

Danger

Hazard-determining components of labelling:

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics
H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H304 May be fatal if swallowed and enters airways.
H412 Harmful to aquatic life with long lasting effects.

Hazard statements

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.

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P103	Read carefully and follow all instructions.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing vapours.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

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: consisting of the following components.

· Dangerous components:

EC number: 927-241-2 Reg.nr.: 01-2119471843-32	Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics Flam. Liq. 3, H226 Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Chronic 3, H412	25-50%
CAS: 5593-70-4 EINECS: 227-006-8 Reg.nr.: 01-2119967423-33	tetra-n-butoxytitanium Flam. Liq. 3, H226 Eye Dam. 1, H318 Skin Irrit. 2, H315; STOT SE 3, H335-H336	1-5%
CAS: 67-56-1 EINECS: 200-659-6 Index number: 603-001-00-X Reg.nr.: 01-2119433307-44	methanol Flam. Liq. 2, H225 Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 STOT SE 1, H370	<1%
CAS: 3648-18-8 EINECS: 222-883-3 Reg.nr.: 01-2119979527-19-0000	Diocetyl tin dilaurate Repr. 2, H361; STOT RE 1, H372 Aquatic Chronic 3, H412	<1%

· SVHC

3648-18-8 Diocetyl tin dilaurate

· 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: Take affected persons out of danger area and lay down. Immediately remove any clothing soiled by the product.

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- After inhalation: Supply fresh air; consult doctor in case of complaints.
In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately rinse with water.
If skin irritation continues, consult a doctor.
- After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: Rinse out mouth and then drink plenty of water.
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.

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** In case of fire, the following can be released:
Carbon monoxide (CO)
- **5.3 Advice for firefighters**
- Protective equipment: Mount respiratory protective device.
Wear fully protective suit.
- Additional information Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources.
- **6.2 Environmental precautions:** Do not allow product to reach sewage system or any water course.
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:** Dispose contaminated material as waste according to item 13.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
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.

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SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Keep receptacles tightly sealed.
 Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
 Ensure good ventilation/exhaustion at the workplace.

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:

Store away from foodstuffs.

Further information about storage conditions:

Protect from frost.
 Keep container tightly sealed.
 Store in cool, dry conditions in well sealed receptacles.

Storage class:

3

7.3 Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Additional information about design of technical facilities:**

No further data; see item 7.

Ingredients with limit values that require monitoring at the workplace:**67-56-1 methanol**

WEL	Short-term value: 333 mg/m ³ , 250 ppm
	Long-term value: 266 mg/m ³ , 200 ppm
Sk	

DNELs**Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics**

Oral	DNEL (Langzeit-wiederholt)	46 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	77 mg/kg bw/day (ARB)
		46 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	871 mg/m ³ Air (ARB)
		185 mg/m ³ Air (BEV)

5593-70-4 tetra-n-butoxytitanium

Oral	DNEL (Langzeit-wiederholt)	3.75 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	37.5 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	127 mg/m ³ Air (ARB)
		38 mg/m ³ Air (BEV)

67-56-1 methanol

Oral	DNEL (Kurzzeit-akut)	8 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	8 mg/kg bw/day (BEV)
Dermal	DNEL (Kurzzeit-akut)	40 mg/kg bw/day (ARB)
		8 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	40 mg/kg bw/day (ARB)

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Inhalative	DNEL (Kurzzeit-akut)	8 mg/kg bw/day (BEV) 260 mg/m ³ Air (ARB) 50 mg/m ³ Air (BEV)
	DNEL (Langzeit-wiederholt)	260 mg/m ³ Air (ARB) 50 mg/m ³ Air (BEV)

3648-18-8 Dioctyltin dilaurate

Oral	DNEL (Langzeit-wiederholt)	0.0005 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	0.0035 mg/m ³ Air (ARB)
		0.0009 mg/m ³ Air (BEV)

· PNECs

5593-70-4 tetra-n-butoxytitanium

PNEC (wässrig)	65 mg/l (KA)
	0.008 mg/l (MW)
	0.08 mg/l (SW)
	2.25 mg/l (WAS)
PNEC (fest)	0.017 mg/kg Trockengew (BO)
	0.007 mg/kg Trockengew (MWS)
	0.069 mg/kg Trockengew (SWS)

67-56-1 methanol

PNEC (wässrig)	100 mg/l (KA)
	15.4 mg/l (MW)
	154 mg/l (SW)
	1,540 mg/l (WAS)
PNEC (fest)	23.5 mg/kg Trockengew (BO)
	7.7 mg/kg Trockengew (MWS)
	570.4 mg/kg Trockengew (SWS)

3648-18-8 Dioctyltin dilaurate

PNEC (wässrig)	100 mg/l (KA)
	0.0000018 mg/l (MW)
	0.0000018 mg/l (SW)
PNEC (fest)	0.005593 mg/kg Trockengew (BO)
	0.02798 mg/kg Trockengew (MWS)
	0.02798 mg/kg Trockengew (SWS)

· 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.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.

· Respiratory protection:

Short term filter device:
Filter A/P2

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.

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· 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

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 analyses 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

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:

Butyl rubber, BR

· As protection from splashes gloves made of the following materials are suitable:Butoject (KCL, Art_No. 897, 898)
Butyl rubber, BR· Not suitable are gloves made of the following materials:Strong material gloves
Synthetic rubber gloves· Eye protection:

Tightly sealed goggles

· Body protection:

Solvent resistant protective clothing

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

Form:

Fluid

Colour:

Colourless

· Odour:

Specific type

· Odour threshold:

Not determined.

· pH-value:

Not determined.

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· <u>Change in condition</u> Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	110-190 °C
· <u>Flash point:</u>	27 °C
· <u>Flammability (solid, gas):</u>	Not applicable.
· <u>Ignition temperature:</u>	460 °C
· <u>Decomposition temperature:</u>	Not determined.
· <u>Auto-ignition temperature:</u>	Product is not selfigniting.
· <u>Explosive properties:</u>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <u>Explosion limits:</u> Lower:	2.1 Vol %
Upper:	11.5 Vol %
· <u>Vapour pressure:</u>	Not determined.
· <u>Density at 20 °C:</u>	0.89 g/cm ³
· <u>Relative density</u>	Not determined.
· <u>Vapour density</u>	Not determined.
· <u>Evaporation rate</u>	Not determined.
· <u>Solubility in / Miscibility with water:</u>	Not miscible or difficult to mix.
· <u>Partition coefficient: n-octanol/water:</u>	Not determined.
· <u>Viscosity:</u> Dynamic:	Not determined.
Kinematic:	Not determined.
· <u>Solvent content:</u> Organic solvents:	40.4 %
· 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:

ATE (Acute Toxicity Estimates)

Oral	LD50	18,574 mg/kg (rat)
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Dermal	LD50	55,721 mg/kg (rat)
Inhalative	LC50/4 h	634 mg/l (rat)

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics

Oral	LD50	4,951 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4 h	4,951 mg/l (rat)

5593-70-4 tetra-n-butoxytitanium

Oral	LD50	3,122 mg/kg (rat)
Inhalative	LC50/4 h	11 mg/l (rat)

67-56-1 methanol

Oral	LD50	100 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)
		300 mg/kg (rat)
Inhalative	LC50/4 h	128.2 mg/l (rat)

3648-18-8 Dioctyltin dilaurate

Oral	LD50	6,450 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)

· 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 Based on available data, the classification criteria are not met.

· Additional toxicological information:

- 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 May be fatal if swallowed and enters airways.

SECTION 12: Ecological information· **12.1 Toxicity**· Aquatic toxicity:**Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics**

EL50/48h	>22-<46 mg/l (daphnia magna)
EL50/72h	>1,000 mg/l (Pseudokirchneriella subcapitata)
LL50/96h	>10-<30 mg/l (Oncorhynchus mykiss)
NOELR/72h	<1 mg/l (Pseudokirchneriella subcapitata)
NOEC/21d	0.317 mg/l (daphnia magna)
NOELR/28d	0.182 mg/l (Oncorhynchus mykiss)

67-56-1 methanol

IC50	>1,000 mg/l (BES)
EC50/48h	>10,000 mg/l (daphnia magna)
LC50/96h	13,500-17,600 mg/l (Iem)
	19,500-20,700 mg/l (Oncorhynchus mykiss)
	28,200 mg/l (pimephales promelas)

· **12.2 Persistence and****degradability**

No further relevant information available.

· **12.3 Bioaccumulative potential**

No further relevant information available.

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

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN1993
- **14.2 UN proper shipping name**
- **ADR** 1993 FLAMMABLE LIQUID, N.O.S. (Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics, METHANOL)
- **IMDG, IATA** FLAMMABLE LIQUID, N.O.S. (Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics, METHANOL)
- **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** III
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
- **14.6 Special precautions for user** Warning: Flammable liquids.
- **Hazard identification number (Kemler code):** 30
- **EMS Number:** F-E,S-E

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· <u>Stowage Category</u>	A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· <u>Transport/Additional information:</u>	
· <u>ADR</u> · <u>Excepted quantities (EQ)</u>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <u>IMDG</u> · <u>Limited quantities (LQ)</u> · <u>Excepted quantities (EQ)</u>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <u>UN "Model Regulation":</u>	UN 1993 FLAMMABLE LIQUID, N.O.S. (HYDROCARBONS, C9-C10, N-ALKANES, ISOALKANES, CYCLOALKANES, <2% AROMATICS, METHANOL), 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
- National regulations:
- Information about limitation of use: Employment restrictions concerning juveniles must be observed.
- Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

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

3648-18-8 Diocetyl tin dilaurate

· VOC EU 359.7 g/l**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.
H301 Toxic if swallowed.
H304 May be fatal if swallowed and enters airways.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H331 Toxic if inhaled.

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H335 May cause respiratory irritation.
 H336 May cause drowsiness or dizziness.
 H361 Suspected of damaging fertility or the unborn child.
 H370 Causes damage to organs.
 H372 Causes damage to organs through prolonged or repeated exposure.
 H412 Harmful to aquatic life with long lasting effects.

· Department issuing SDS:· Contact:· Abbreviations and acronyms:

Laboratory

Elke Hake

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@mail E.Hake@akemi.de

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

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 3: Acute toxicity – Category 3

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Repr. 2: Reproductive toxicity – Category 2

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

Asp. Tox. 1: Aspiration hazard – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3