

# Safety Data Sheet

According to 1907/2006/EC, Article 31

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## STARCOAT PMMA TPO PRIMER

### Section 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

**Trade name:** STARCOAT PMMA TPO PRIMER

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against See Section 16

**Application of the substance / the mixture** Priming

#### 1.3. Details of the supplier of the safety data sheet

##### Supplier

AXTER LTD, West Road, Ransomes Europark, Ipswich IP3 9SX UK

**Tel: +44 (0) 1473 724056, 8.00 am to 5.30 pm, Monday to Friday**

Email: [info@axterltd.co.uk](mailto:info@axterltd.co.uk)

#### 1.4 Emergency telephone

+ 44 1473 724056 (NOT 24HRS - 8am - 5.30pm, Monday to Friday)

In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department.

## 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

Repr. 2

H361d Suspected of damaging the unborn child.

Route of exposure: Inhalation

STOT RE 2

H373 May cause damage to organs through prolonged or repeated exposure



GHS07

Eye Irrit. 2

H319 Causes serious eye irritation

STOT SE 3

H336 May cause drowsiness or dizziness

Skin Irrit. 2

H315 Causes skin irritation

Skin Sens. 1

H317 May cause an allergic skin reaction

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.

#### Hazard pictograms



GHS02



GHS08



GHS07

#### Signal word

Danger

#### Hazard-determining components of labelling

Toluene

3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate

oligomers n-butyl acetate

cyclohexane

**Hazard statements**

H225	Highly flammable liquid and vapour
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
H361d	Suspected of damaging the unborn child. Route to exposure: Inhalation.
H373	May cause damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Inhalation.
H412	Harmful to aquatic life with long lasting effects

**Precautionary statements**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition surfaces. No smoking.
P260	Do not breathe mist / vapours / spray
P280	Wear protective gloves/ eye protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P403+P235	Store in a well-ventilated place. Keep cool.

**2.3 Other hazards****Results of PBT and vPvB assessment**

<b>PBT</b>	Does not meet the PBT-criteria of Annex XIII of REACH (self assessment).
<b>vPvB</b>	Does not meet the vPvB-criteria of Annex XIII of REACH (self assessment).

## Section 3: Composition/information on ingredients

### 3.1 Mixtures

#### Description

Mixture of substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 108-88-3 EINECS: 203-625-9 Reg no. 01-2119471310-51	toluene Flam. Liq. 2, H225; Repr. 2, H361d; STOT RE 2, H373; Asp Tox. 1, H304 Skin Irrit. 2; H315; STOT SE 3, H336	50-100%
CAS: 123-86-4 EINECS: 204-658-1 Reg.no.: 01-2119485493-29	n-butyl acetate Flam. Liq. 3, H226; STOT SE 3, H336	10-25%
CAS: 123-42-2 EINECS: 204-626-7 Reg no. 01-2119473975-21	4-hydroxy-4-methylpentan-2-one Flam. Liq. 3, H226; Eye Irrit. 2, H319; STOT SE 3, H335	≥2.5-<10%
CAS: 1330-20-7 EINECS: 215-535-7 Reg no. 01-2119488216-32	xylene Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	≥2.5-<10%
CAS: 110-82-7 EINECS: 203-806-2	cyclohexane Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; STOT SE 3, H336	≥0.25-<2.5%
CAS: 5388-05-0 Reg no. 01-2119488734-24	3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers Skin Sens. 1, H317	≥1-≤2.5%

#### 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

#### General information

Immediately remove any clothing soiled by the product.  
Take affected persons out of danger and lie them down.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.  
Involve doctor immediately.

#### After inhalation

In case of unconsciousness place patient stably in side position for transportation. Take affected persons into fresh air and keep them quiet.  
Seek medical treatment.

#### After skin contact

Immediately wash with water and soap and rinse thoroughly.  
If skin irritation continues, consult a doctor.

#### After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

#### After swallowing

Do not induce vomiting; call for medical help immediately.

#### 4.2 Most important symptoms and effects, both acute and delayed

Headache  
Dizziness  
Skin sensitization  
Irritant to skin, eyes and respiratory system

### Section 5: Firefighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder, foam.

**For safety reasons unsuitable extinguishing agents:** Water with full jet

#### 5.2 Special hazards arising from the substance or mixture

Can form explosive gas-air mixtures.

Formation of toxic gases is possible during heating or in case of fire.

In case of fire the following can be released:

Carbon monoxide (CO)

Nitrogen oxides (NO<sub>x</sub>)

#### 5.3 Advice for firefighters:

##### Protective equipment

Wear fully protective suit.

Wear self-contained respiratory protective device

##### 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

Ensure adequate ventilation



Keep away from ignition sources.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Wear protective equipment.

Keep unprotected persons away.

#### 6.2 Environmental precautions

Do not allow to enter sewers/ surface or ground water.

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

#### 6.3 Methods and material for containment and cleaning up

Do not flush with water or aqueous cleansing agents

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

#### 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

Cool down container when heated. Cool down containers exposed to heat with water.

Emergency cooling must be provided in the event of an ambient fire.

Keep container tightly closed to prevent heat build-up (pressure increase).

Avoid heat.

Do not put unused product back into the original container.

Ensure good ventilation and evacuation of fumes in the workplace, especially at floor level. Fumes are heavier than air.

Prevent formation of aerosols.

#### Information about fire - and explosion protection

Highly volatile, flammable constituents are released during processing.

Keep ignition sources away - Do not smoke.

Fumes can combine with air to form an explosive mixture.

Only use explosion-proof equipment.

Protect against electrostatic charges. Protect from heat.

### 7.2 Conditions for safe storage, including any incompatibilities:

#### Storage

#### Requirements to be met by storerooms and receptacles

Store only in the original receptacle. Store in a cool location.

#### Information about storage in one common storage facility

Store away from oxidising agents.

Store away from foodstuffs.

#### Further information about storage conditions

Store in cool, dry conditions in well sealed receptacles.

Storage in a collecting room is required.

Store under lock and key, with access restricted to technical experts or their assistants only.

Max. storage temperature 30°C.

Keep container tightly sealed.

Protect from heat and direct sunlight.

### 7.3 Specific end use(s)

Building coating or sealing.

## 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.**

108-88-3 toluene (50-100%)	
WEL	Short-term value: 384 mg/m <sup>3</sup> , 100 ppm Long-term value: 191 mg/m <sup>3</sup> , 50 ppm Sk
23-86-4 n-butyl acetate (10-25%)	
WEL	Short-term value: 966 mg/m <sup>3</sup> , 200 ppm Long-term value: 724 mg/m <sup>3</sup> , 150 ppm
123-42-2 4-hydroxy-4-methylpentan-2-one (≥2.5-<10%)	
WEL	Short-term value: 363 mg/m <sup>3</sup> , 75 ppm Long-term value: 241 mg/m <sup>3</sup> , 50 ppm
1330-20-7 xylene (≥2.5-<10%)	
WEL	Short-term value: 441 mg/m <sup>3</sup> , 100 ppm Long-term value: 220 mg/m <sup>3</sup> , 50 ppm Sk; BMGV
110-82-7 cyclohexane (≥0.25-<2.5%)	
WEL	Short-term value: 1050 mg/m <sup>3</sup> , 300 ppm Long-term value: 350 mg/m <sup>3</sup> , 100 ppm

Ingredients with biological limit values:	
1330-20-7 xylene (≥2.5-<10%)	
BMGV	650mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid

### Additional information

The lists valid during the making were used as a basis.

### 8.2. Exposure controls

#### Protective equipment



#### General protective and hygienic measures

Avoid contact with the eyes and skin.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at end of work.  
Keep away from foodstuffs, beverages and food.  
Do not inhale gases / fumes / aerosols.

**Respiratory protection**

Ensure good ventilation.

Inside a building use respiratory filter device. In case of intensive or longer exposure use A1 air recycling, self-contained respiratory protective device and at higher concentrations A2.

The use of breath protective hoods can be recommended since no carrying time limits are valid.

**Protection of hands**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Select glove material on consideration of the penetration times, rates of diffusion and degradation.

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

Check protective gloves prior to each use for their proper condition.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

**Material of gloves**

The selection of 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 cannot be calculated in advance and has therefore to be checked prior to the application.

Protective gloves according to EN 374.

Suitable material: nitrile.

**Penetration time of glove material**

Our recommendation is mainly for once-only use as a short-term protection against liquid splashes. For other applications, you should contact a glove manufacturer.

The exact break-through time must be found out from the manufacturer of the protective gloves and must be observed.

**For permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable**

Butyl rubber, BR

**For permanent contact, gloves made of the following materials are suitable**

Butyl rubber, BR

**Not suitable are gloves made of the following material**

Leather

**Eye protection**

Tightly sealed goggles, EN-Standard: EN 166

**Body protection**

Protective work clothing



## Section 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information:

##### Appearance

<b>Form:</b>	Fluid
<b>Colour:</b>	Yellowish
<b>Odour:</b>	Like aromatic solvents
<b>Odour threshold:</b>	Not determined
<b>pH-value:</b>	Undetermined

#### Changing condition

<b>Melting / Freezing point:</b>	Undetermined
<b>Initial boiling point and boiling range:</b>	81°C (Cyclohexan)
<b>Flash point:</b>	-18°C (Cyclohexan)
<b>Flammability (solid, gaseous):</b>	N/A
<b>Ignition temperature:</b>	317°C (n-Butylacetat)
<b>Decomposition temperature:</b>	Not determined
<b>Auto-ignition temperature:</b>	Product is not self-igniting.
<b>Explosive properties:</b>	Not determined

#### Explosion limits

<b>Lower:</b>	1.2 Vol % (n-Butylacetat, Toluol) Not determined
<b>Upper:</b>	7.5 Vol % (n-Butylacetat) Not determined

<b>Vapour pressure at 20°C:</b>	29hPa (Toluol)
<b>Density at 20°C:</b>	0.98 g/cm <sup>3</sup> (EN ISO 2811-1)
<b>Relative density:</b>	Not determined
<b>Vapour density:</b>	Not determined
<b>Evaporation rate:</b>	Not determined
<b>Solubility in/ Miscibility with water:</b>	Not miscible or difficult to mix.
<b>Partition coefficient (n-octanol/water):</b>	Not determined

#### Viscosity

<b>Dynamic:</b>	Not determined
<b>Kinematic at 20°C:</b>	10 s (DIN 53211/4)

#### Solvent content

Organic solvents	87.6 %
VOC (EC):	87.62 %

### 9.2 Other information

No further relevant information available.

## Section 10: Stability and reactivity

<b>10.1 Reactivity</b>	See Section 10.2
<b>10.2 Chemical stability</b>	
<b>Thermal decomposition / conditions to be avoided</b>	No decomposition if used according to specification.
<b>10.3 Possibility of hazardous reactions</b>	Exothermic reaction. Reacts with acids alkalis and oxidizing agents.
<b>10.4 Conditions to avoid</b>	Avoid heat, avoid direct sunlight.
<b>10.5 Incompatible materials</b>	Reactions with peroxides and other free-radical generators.
<b>10.6 Hazardous decomposition products</b>	No dangerous decomposition when product used according to specifications.
<b>Additional information</b>	Emergency procedures will vary depending on individual circumstances. The customer should have a contingency plan at the workplace where the product is present.

## Section 11: Toxicological information

<b>11.1 Information on toxicological effects</b>	There were no toxicological findings to the mixture.
<b>Acute toxicity</b>	Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:		
ATE (Acute Toxicity Estimates)		
Dermal Inhalative	LD50 LC50/4h	> 17,883 mg/kg (rabbit) > 45.9 mg/l (rat)
108-88-3 toluene		
Oral Dermal Inhalative	LD50 LD50 LC50/4h	5000 mg/kg (rat) >12,124 mg/kg (hare) 5320 mg/l (mouse)
123-86-4 n-butyl acetate		
Oral Dermal Inhalative	LD50 LD50 LC50/4h	14,000 mg/kg (rat) >5,000 mg/kg (hare) >21 mg/l (rat)
123-42-2 4-hydroxy-4-methylpentan-2-one		
Oral Dermal	LD50 LC50	4,000 mg/kg (rat) 13,630 mg/kg (rat)
1330-20-7 xylene		
Oral Dermal Inhalative	LD50 LD50 LC50 LC50/4h	>2,000 mg/kg (rat) >1,700 mg/kg (rabbit) >2,000 mg/kg (hare) 5mg/l (rat)
110-82-7 cyclohexane		
Oral	LD50	12,700 mg/kg (rat) Toxicology and Applied Pharmacology. Vol. 19, Pg. 699, 1971
53880-05-0 3-Isocyanatomethyl-3, 5, 5-trimethylcyclohexyl isocyanate, oligomers		
Oral Dermal Inhalative	LD50 LD50 LC50/4h	>20,000 mg/kg (rat) (OECD TG 401) >7,000 mg/kg (rat) (OECD TG 402) >5.01 mg/l (rat) (OECD TG 403) Test Substance: Aerosol

**Primary irritant effect:****Skin corrosion/irritation**

Causes skin irritation.

**Serious eye damage/irritation**

Causes serious eye irritation.

**Respiratory or skin sensitization**

May cause an allergic skin reaction.

**Other information****(about experimental toxicology)**

Due to the high vapour pressure a harmful concentration in the air is quickly reached. At high concentrations a narcotic effect can occur.

**Subacute to chronic toxicity**

Not tested.

**Repeated dose toxicity**

No data available.

**CMR effects (carcinogenicity,  
mutagenicity and toxicity  
for reproduction)**

Repr.2

**Germ cell mutagenicity**

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

**Carcinogenicity**

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

**Reproductive toxicity**

Suspected of damaging the unborn child.

Route of exposure: Inhalation.

**STOT-single exposure**

May cause drowsiness or dizziness.

**STOT-repeated exposure**

May cause damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Inhalation.

**Aspiration hazard**

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

**Section 12: Ecological information****12.1 Toxicity**

Aquatic toxicity 123-86-4 n-butyl acetate	
LC50/48h	64 mg/l (Danio rerio)
EC50/24h	71 mg/l (Leuciscus idus melanotus) (DIN 38412)
EC50/72h	73 mg/l (daphnia magna) (DIN 38412)
EC10/18h	Part 11
TCLo/8d	674 mg/l (Scenedesmus quadricauda)
	959 mg/l (Pseudomonas putida) (DIN 38412)
	Part 8
	21 mg/l (Scenedesmus quadricauda)
	Growth Inhibition Test
1330-20-7 xylene	
LC/EC/IC50	1 mg/l (aquatic organisms)
EC50/48h	1-10 mg/l (daphnia magna)
LC50/96h	2 mg/l (fish)
110-82-7 cyclohexane	
LC50/96h	4.53-610 mg/l (fish)
	Gestis 06/12
	Pickering, Q.H., and C. Henderson 1966. Acute Toxicity of Some Important Petrochemicals to Fish. J.Water Pollut. Control Fed. 38(9): 1419-1429
53880-05-0 3-Isocyanatomethyl-3, 5, 5-trimethylcyclohexyl isocyanate, oligomers	
EC50	>10,000 mg/l (activated sludge) (Test Duration: 3h) (OECD TG 209)
EC50/24h	>3.36 mg/l (daphnia magna)
EC50/48h	35 mg/l (daphnia magna) (Certificated 92/69/EWG)
EC50/72h	>3.1 mg/l (alga)

<b>12.2 Persistence and degradability</b>	No further information available.
<b>12.3 Bioaccumulative potential</b>	No further relevant information available.
<b>12.4 Mobility in soil</b>	No further relevant information available.
<b>Ecotoxical effects:</b>	
<b>Remark</b>	Harmful to fish.
<b>Additional ecological information:</b>	
<b>General notes</b>	Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water Danger to drinking water if even small quantities leak into the ground. Harmful to aquatic organisms.
<b>12.5 Results of PBT and vPvB assessment</b>	
<b>PBT</b>	Does not meet the PBT-criteria of Annex XIII of REACH (self assessment).
<b>vPvB</b>	Does not meet the vPvB-criteria of Annex XIII of REACH (self assessment).
<b>12.6 Other adverse effects</b>	No further relevant information available.

## Section 13: Disposal considerations

### 13.1 Waste treatment methods

Hazardous waste according to Waste Catalogue (EWC). If recycling is not possible, waste must be in compliance with local regulations to be removed.

#### Recommendation

Uncured product residues are special waste.

Cured product residues are not hazardous waste.

After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.



Must not be disposed together with household garbage. Do not allow product to reach sewage system.

#### Waste disposal key

The following Waste Codes of the European Waste Catalogue (EWC), are considered a recommendation. The disposal must be coordinated with the local waste disposal company.

Liquid product:

080111 \* paint and varnish containing organic solvents or other dangerous substances

080199 waste nec

Cured product residues:

080112 paint and varnish wastes other than those mentioned in 080111

080410 adhesive waste adhesives and sealants other than those mentioned in 080409



**European waste catalogue** 080111 \* (recommended)

#### Uncleaned packaging

##### Recommendation

This material and its container must be disposed of as hazardous waste. Disposal must be made according to official regulations.

## Section 14: Transport information

<b>14.1</b>	<b>UN-Number</b>	UN1263
	<b>ADR, IMDG, IATA</b>	
<b>14.2</b>	<b>UN proper shipping name</b>	1263 PAINT, special provision 640D
	<b>ADR</b>	PAINT
	<b>IMDG, IATA</b>	
<b>14.3</b>	<b>Transport hazard class(es)</b>	
	<b>ADR</b>	
		
	<b>Class</b>	3 (F1) Flammable liquids
	<b>Label</b>	3
	<b>IMDG, IATA</b>	
		
	<b>Class</b>	3 Flammable
	<b>Label</b>	liquids 3
<b>14.4</b>	<b>Packing group</b>	II
	<b>ADR, IMDG, IATA</b>	
<b>14.5</b>	<b>Environmental hazards:</b>	
	<b>Marine pollutant</b>	No
<b>14.6</b>	<b>Special precautions for user</b>	Warning: Flammable liquids
	<b>Hazard identification number</b>	
	<b>(Kemler code)</b>	33
	<b>EMS No.</b>	F-E, S-E
	<b>Stowage category</b>	B
<b>14.7</b>	<b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
	<b>Transport/Additional information:</b>	
	<b>ADR</b>	
	<b>Limited quantities (LQ)</b>	5L
	<b>Excepted quantities (EQ)</b>	Code: E2
		Maximum net quantity per inner packaging: 30ml
		Maximum net quantity per outer packaging: 500ml
	<b>Transport Category</b>	2
	<b>Tunnel restriction code</b>	D/E
	<b>IMDG</b>	
	<b>Limited quantities (LQ)</b>	5L
	<b>Excepted quantities (EQ)</b>	Code: E2

**UN “Model Regulation”**

Maximum net quantity per inner packaging: 30ml  
 Maximum net quantity per outer packaging: 500ml  
 UN 1263 PAINT, SPECIAL PROVISION 640D, 3, II

**Section 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****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**

5000 t

**Qualifying quantity (tonnes)  
for the application of upper-tier  
requirements**

50000 t

**REGULATION (EC) No 1907/2006****ANNEX XVII Conditions****of restriction**

3, 48, 57

**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.

**National regulations:****Information about limitation of use:**

Employment restrictions under the Maternity Protection Directive (94/33/EC).

Employment restrictions for Maternity Directive (92/85/EEC) for expectant and nursing mothers.

**15.2 Chemical safety assessment**

A Chemical Safety Assessment has not been carried out.

**Section 16: Other information**

These figures relate to the product as delivered.

**Sector of Use:**

Relevant identified uses of the mixture

SU3 Industrial uses : Uses of substances as such or in preparations at industrial sites

SU19 Building and construction work

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

**Uses advised against:**

SU21 Consumer uses: Private households / general public / consumers

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
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H361D	Suspected of damaging an unborn child. Route of exposure: Inhalation
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

### Training hints

Instruction must take place including hazards and precautions before the start of employment and at least annually thereafter.

### Abbreviations and acronyms:

Teaching about hazards and precautions when using product (Technical Rule 555)

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

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)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

vPvB: very Persistent and very Bioaccumulative

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

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

Acute Tox. 4: Acute toxicity – dermal – Category 4

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

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

Skin Sens. 1: Skin sensitization – Category 1

Repr. 2: Reproductive toxicity – Category 2

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

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

Asp. Tox. 1: Aspiration hazard – Category 1

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

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

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

### Sources:

[www.gestis.de](http://www.gestis.de)

[www.echa.eu](http://www.echa.eu)

[logkow.cisti.nrc.ca](http://logkow.cisti.nrc.ca)

**Data compared to the previous version altered.**

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