

# SAFETY DATA SHEET



## INPIPE LINER (UP)

### SECTION 1: Identification of the product and of the company

#### 1.1 Product identifier

Product name : INPIPE  
 Internal code : INV, WIP, BV, FX, BVM  
 Chemical formula : Not applicable.  
 REACH Registration number : Not available.

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

Recommended use : Liner for rehabilitation of sewage pipes, storm water pipes, culverts and similar applications.

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

Supplier : INPIPE SWEDEN AB Tel: +46 940 395 30  
 Ekorrvägen 12 www.inpipe.se  
 SE-91232 Vilhelmina  
 Sweden

e-mail address of person responsible for this SDS : info@inpipe.se (Communication in English only please)

#### 1.4 Emergency telephone number

Emergency telephone number : Sweden: +46 940 395 30 (weekdays 8.00-16.00)

### SECTION 2: Hazards identification

#### 2.1 Classification of the product

Product definition : Glass fiber reinforced polyester

##### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226  
 Acute Tox. 4, H332  
 Skin Irrit. 2, H315  
 Eye Irrit. 2, H319  
 STOT SE 3, H335  
 STOT RE 1, H372i

See Section 16 for the full text of the H statements declared above.

##### Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : R10  
 Xn; R20, R48/20  
 Xi; R36/37/38

Physical/chemical hazards : Flammable.

Human health hazards : Harmful by inhalation. Irritating to eyes, respiratory system and skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Environmental hazards : Based on the available data of this product no hazardous properties are known.

See Section 16 for the full text of the R-phrases declared above.

#### 2.2 Label elements

##### Hazard pictograms



Danger

H226 Flammable liquid and vapour.  
 H332 Harmful if inhaled.

Signal word : H315 Causes skin irritation.

Hazard statements : H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H372i Causes damage to organs through prolonged or repeated exposure if inhaled.

**Precautionary statements**

- Prevention** : Wear protective gloves: >8 hours (breakthrough time): fluor rubber (Viton) (0.70 mm); <1 hours (breakthrough time): Chloroprene, Nitril rubber (0.2 mm). Wear eye or face protection. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Do not breathe vapour. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
- Response** : Get medical attention if you feel unwell. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
- Storage** : The product must be stored in its original box in a highly ventilated area. Can be stored in normal storage facility at maximum 20°C. Box and product must be protected from direct sunlight.
- Disposal** : Uncured product: Transportation for disposal: Not in sewage, not to waste deposit or waste burning facility, but to a central deposit or local waste station. Cured product can be disposed as common industrial waste. EAK code 17 0903

**Hazardous ingredients** : styrene

**2.3 Other hazards**

**Other hazards which do not result in classification** : Not available.

**SECTION 3: Composition/information on ingredients**

Product/ingredient name	Identifiers	%	Classification	
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]
Styrene	REACH #: 01-2119457861-32 EC: 202-851-5 CAS: 100-42-5 Index: 601-026-00-0	12-30	R10  Xn; R20, R48/20, R65 Xi; R36/37/38	Flam. Liq. 3, H226  Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 1, H372i Asp. Tox. 1, H304
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	EC: 278-355-8 CAS: 75980-60-8	<0,3	Repr. Cat. 3; R62 N; R51/53	Repr. 2, H361f Aquatic Chronic 3, H412
Maleic acid, bis (2-ethylhexyl)ester	EC: 205-524-5 CAS: 142-16-5	<0,1	Xn; N R48/22 R51/53  <b>See Section 16 for the full text of the R-phrases declared above.</b>	Aquatic Chronic 2, H411 STOT RE 2, H373 Acute Tox. 4, H302  <b>See Section 16 for the full text of the H statements declared above.</b>

The values above are valid for uncured product only.

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

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

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Irritating to mouth, throat and stomach.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Small fire

**Suitable:**

Use dry chemical powder, CO<sub>2</sub> or alcohol-resistant foam. Cover with vermiculite or other non-combustible material.

**Not suitable**

: Do not use water jet.

#### Large fire

**suitable**

: Alcohol-resistant foam.

**Not suitable**

: Do not use water jet.

### 5.2 Special hazards arising from the product

**Hazards from the product**

: Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

**Hazardous combustion products**

: In case of fire, may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, (dense) black smoke, aldehydes, organic acids.

### 5.3 Advice for firefighters

**Special protective actions for fire-fighters**

: Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Special protective equipment for fire-fighters**

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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

- Small spill** : Stop leak if without risk. Move containers from spill area. Absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spill product.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not breathe vapour or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original box or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- 7.2 Conditions for safe storage, including any incompatibilities** : The product can be stored at 20°C in its original box for 6 months without loss of quality. Do not store above the following temperature: 25°C (77°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original box protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep box tightly closed and sealed until ready for use. Do not store in unlabelled boxes. Use appropriate containment to avoid environmental contamination. Keep away from heat and direct sunlight.

### 7.3 Specific end use(s)

- Recommendations** : Not available.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
Styrene	<b>EH40/2005 WELs (United Kingdom (UK), 8/2007).</b> STEL: 250 ppm 15 minute(s). TWA: 100 ppm 8 hour(s). TWA: 430 mg/m <sup>3</sup> 8 hour(s). STEL: 1080 mg/m <sup>3</sup> 15 minute(s).

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

#### Derived effect levels

Product/ingredient name	Type	Exposure	Value	Population
Styrene	DNEL	Short term Inhalation	289 mg/m <sup>3</sup>	Workers
	DNEL	Short term Inhalation	306 mg/m <sup>3</sup>	Workers
	DNEL	Long term Inhalation	85 mg/m <sup>3</sup>	Workers
	DNEL	Short term Inhalation	174.25 mg/m <sup>3</sup>	Consumers
	DNEL	Short term Inhalation	182.75 mg/m <sup>3</sup>	Consumers
	DNEL	Long term Inhalation	10.2 mg/m <sup>3</sup>	Consumers

#### Predicted effect concentrations

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
Styrene	PNEC	Fresh water	0.028 mg/l	Assessment Factors
	PNEC	Marine	0.0028 mg/l	Assessment Factors
	PNEC	Fresh water sediment	0.614 mg/kg dwt	-
	PNEC	Marine water sediment	0.0614 mg/kg dwt	-
	PNEC	Sewage Treatment Plant	5 mg/l	Assessment Factors
	PNEC	Soil	0.2 mg/kg dwt	-

### 8.2 Exposure controls

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

#### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling the product, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety glasses with side shields.

**Hand protection** : >8 hours (breakthrough time): fluor rubber (Viton) (0.70 mm)  
 <1 hours (breakthrough time): Chloroprene, Nitril rubber (0.2 mm)

**Skin and body** : Wear suitable protective clothing.

**Respiratory protection** : Wear filter mask, filtertype A.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

**Remarks** : When cutting cured liner, use one time use protective clothes, common rubber gloves with inner glove off cotton, protective mask with at least filter type A2P3, use helmet and ear protection.

**Advice on personal protection is applicable for high exposure levels. Select proper personal protection based on a risk assessment of the actual exposure situation.**

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Physical state</b>	: Liquid. [Clear to slightly hazy liquid.]
<b>Colour</b>	: Green/Yellow
<b>Odour</b>	: typical
<b>Odour threshold</b>	: 17 ppb according to WHO
<b>Initial boiling point and boiling range</b>	: 145 °C
<b>Flash point</b>	: 33 °C Closed cup , ISO 1523
<b>Density ( g/cm<sup>3</sup> )</b>	: 1.5-1.6 g/cm <sup>3</sup>
<b>Solubility in water</b>	: Insoluble

### 9.2 Other information

**Remarks** : Not available.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame).
<b>10.5 Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidizing materials
<b>10.6 Hazardous decomposition products</b>	: No specific data.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Styrene  diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide Maleic acid, bis(2-ethylhexyl) ester	LC50 Inhalation Vapour	Rat	12 g/m <sup>3</sup>	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
	LD Oral	Rat	2000 mg/kg	-
	LD Dermal	Rabbit	14100 mg/kg	-

**Conclusion/Summary** : Not available.

#### Acute toxicity estimates

Route	ATE value
Inhalation (gases)	10052.8 ppm
Inhalation (vapours)	24.57 mg/l
Inhalation (dusts and mists)	3.351 mg/l

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Styrene	Respiratory - Irritant	Mammal - species unspecified	-	-	-

#### Conclusion/Summary

**Eyes** : Not available.

**Skin** : Not available.

**Respiratory** : Not available.

#### Sensitisation

#### Conclusion/Summary

**Skin** : Not available.

**Respiratory** : Not available.

#### Mutagenicity

**Conclusion/Summary** : Not available.

#### Carcinogenicity

**Conclusion/Summary** : Not available.

#### Reproductive toxicity

**Conclusion/Summary** : Not available.

#### Teratogenicity

**Conclusion/Summary** : Not available.

#### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Styrene	Category 3	Not determined	Respiratory tract irritation

#### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Styrene	Category 1	Inhalation	ears

#### Aspiration hazard

Product/ingredient name	Result
Styrene	ASPIRATION HAZARD - Category 1

#### Potential acute health effects

**Eye contact** : Causes serious eye irritation

**Inhalation** : Harmful if inhaled. May cause respiratory irritation.

**Skin contact** : Causes skin irritation.

**Ingestion** : Irritating to mouth, throat and stomach.



### Symptoms related to the physical, chemical and toxicological characteristics

<b>Eye contact</b>	: Adverse symptoms may include the following: pain or irritation watering redness
<b>Inhalation</b>	: Adverse symptoms may include the following: Respiratory tract irritation, coughing
<b>Skin contact</b>	: Adverse symptoms may include the following: Irritation redness
<b>Ingestion</b>	: No specific data.
<b>General</b>	: Causes damage to organs through prolonged or repeated exposure if inhaled.
<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards. **Fertility effects** : No known significant effects or critical hazards. **Classification**

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Styrene	A4	2B	-	-	-	-

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure	Effects
Styrene	Acute EC50 4.9 mg/l	Algae	72 hours	-
	Acute EC50 4.7 mg/l	Daphnia	48 hours	-
	Acute LC50 4.02 mg/l	Fish	96 hours	-
	Chronic NOEC 1.01 mg/l	Daphnia	21 days	-
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Acute IC50 10 to 100 mg/L	Algae	72 hours	-
	Acute LC50 10 to 100 mg/L	Daphnia	48 hours	-
	Acute LC50 1 to 10 mg/L	Fish	48 hours	-
Maleic acid, bis(2-ethylhexyl)ester	Acute LC50 10 to 100 mg/L	Fish	96 hours	-
	NOEC 0,1 mg/l	Daphnia	504 hours	-

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Styrene	-	-	Readily
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	-	-	Not readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Styrene	2.95	-	low
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	-	<40	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

**PBT** : Not applicable.

**vPvB** : Not applicable.

**12.6 Other adverse effects** : No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This product and its box must be disposed of in a safe way. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

: Not available.

## SECTION 14: Transport Information

Handle with care

Keep protected from direct sunlight

Transport temperature 15-20°C

The product is not classified as flammable goods (Class 4.1)

## SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the product EU regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

### Other EU regulations

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide	-	-	-	Repr. 2, H361f

15.2 Chemical Safety Assessment : Not applicable.

## SECTION 16: Other information

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 3, H2226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 1, H372i	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method

**Full text of abbreviated H statements** :

- H226 Flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation
- H361f Suspected of damaging fertility.
- H372i Causes damage to organs through prolonged or repeated exposure if inhaled.
- 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.

**Full text of classifications [CLP/GHS]** :

- Acute Tox. 4, H332 ACUTE TOXICITY: INHALATION - Category 4
- Aquatic Chronic 3, H412 AQUATIC TOXICITY (CHRONIC) - Category 3
- Asp. Tox. 1, H304 ASPIRATION HAZARD - Category 1
- Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
- Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3
- Repr. 2, H361f TOXIC TO REPRODUCTION [Fertility] - Category 2
- Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2
- STOT RE2, H373 MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE – Category 2
- STOT SE3, H335 MAY CAUSE RESPIRATORY IRRITATION – Category 3
- STOT RE 1, H372i SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): INHALATION [ears] - Category 1

**Full text of abbreviated R phrases** :

- R10- Flammable.
- R62- Possible risk of impaired fertility.
- R20- Harmful by inhalation.
- R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- R48/22- Harmful: danger of serious damage to health by prolonged exposure if swallowed.
- R65- Harmful: may cause lung damage if swallowed.
- R36/37/38- Irritating to eyes, respiratory system and skin.
- R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

: Repr. Cat. 3 - Toxic to reproduction category 3  
Xn - Harmful  
Xi - Irritant  
N - Dangerous for the environment

**Full text of classifications  
[DSD/DPD]**

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
DNEL = Derived No Effect Level  
NOEC = No Observed Effect Concentration  
EUH statement = CLP-specific Hazard statement  
PNEC = Predicted No Effect Concentration  
RRN = REACH Registration Number

**Sources of key data** : Literature data and/or investigation reports are available through the manufacturer.

**Training advice** : Handling of this product or preparation is restricted to skilled personnel only.

**Notice to reader**

The information contained in the Safety Data Sheet is based on our data available on the date of publication. The information is intended to aid the user in controlling the handling risks; it is not to be construed as a warranty or specification of the product quality. The information may not be or may not altogether be applicable to combinations of the product with other substances or to particular applications.

The user is responsible for ensuring that appropriate precautions are taken and for satisfying themselves that the data are suitable and sufficient for the product's intended purpose. In case of any unclarity we advise consulting the supplier or an expert.

**History**

**Date of printing** **Date of** : 2013-04-03  
**issue** **Version** : 2013-04-03

