

INPIPE LINER (UP)

SECTION 1: Name of the substance and the company

1.1 Product designation

Product name	INPIPE
Internal code	INV, WIP, Flex
Chemical formula	Not applicable
Reach reg. no.	Not available

1.2 Relevant identified uses of the product and uses advised against recommended use

Lines for renovation of sewage pipes, surface water pipes, ducts, culverts and similar applications.
Glass fibre reinforced polyester liner.

1.3 Details of the supplier of the safety data sheet

Supplier:	INPIPE SWEDEN AB Ekorrvägen 12 SE-91232 Vilhelmina	Tel: +46 940 395 30 www.inpipe.se info@inpipe.se
Manager of this safety data sheet:	Nicklas Björnvind Tel: +46 940 395 30	nicklas.bjornvind@inpipe.se

1.4 Emergency telephone number

Emergency:	Call 112
Less serious:	Call +46 (0) 8 331231, Swedish Poisons Information Centre

SECTION 2: Hazards identification

2.1 Classification of the product

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

Flam. Liq 3	H226
Skin Irrit. 2 H315	
Eye Irrit. 2 H319	
Repr. 2	H361d (Unborn children)
STOT SE 3 H335	
STOT SE 1 H372	
Aquatic Chronic 3	H412

The product is classified as hazardous according to the regulation (EC) 1272/2008 with amendments.
See section 12 for the above mentioned hazard statements in full text.

2.2 Labelling information



Hazard symbols:

Signal words:

Danger

Hazard statements:

H226 - Flammable liquid and vapour.

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H319 - Causes serious eye irritation.
 H315 - Causes skin irritation.
 H361d - Is suspected to harm the unborn child.
 H335 - May cause respiratory irritation.
 H372 - Causes eye injuries due to prolonged or repeated exposure.
 H412 - Harmful long-term effects for aquatic organisms.

Additional Label elements: Contains diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide. Can cause an allergic reaction.

Precautionary statements: P201 - Obtain specific instructions before use.
 P210- Should not be exposed to heat, hot surfaces, sparks, open flames or other sources of ignition. No smoking.
 Avoid breathing in dust/smoke/gases/mist/vapour/spray.
 P264 - Wash hands thoroughly before use.
 P280 - Use protective gloves: 4-8 hours (penetrating time): fluorine rubber (Viton) (0.70 mm); < 1 hour (penetrating time): Nitrile rubber (0.4 mm). Use protective clothes. Use eye or face protection.
 P308 + P313 - For exposure or suspicion of exposure: Seek medical care.

Hazardous ingredients Styrene
 Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide

2.3 Other Hazards
 Other hazards that do not result in classification and Gas/Steam is heavier than air and can flow along the floor to an ignition source get ignited.

SECTION 3: Composition/information on ingredients

Substance/preparation: Glass fibre impregnated with unmeasured polyester (UP) and thickness agent.

Product/ingredient name	Identifiers	%	Classification Regulation (EC) n. 1272/2008 [CLP]
Styrene	REACH #: 01-2119457861-32 EC: 202-851-5 CAS: 100-42-5 Index: 601-026-00-0	≥8 - ≤17,5	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361d (unborn children) STOT SE 3, H335 STOT RE 1, H372 (hearing piece) (inhalation) Asp. Tox. 1, H304 Aquatic Chronic 3;H412
diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	REACH #: 01-2119972295-29 EC: 278-355-8 CAS: 75980-60-8 Index: 015-203-00-X	≤0.11	Skin Sens. 1B H317 Repr. 2, H361f (Fertility, causes testicular atrophy) Aquatic Chronic 2;H411

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			See section 12 for the above mentioned hazard statements in full text.
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The above given values apply to the unhardened product.
As far as the supplier knows, there are no other ingredients in this product, which in suitable concentrations, can be classified as hazardous to health or environment, and for which a hygiene limit value, PBT or vPvB, has been established, and which should therefore be described in this section.

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. Contact the doctor.

Inhalation

Take the person out in fresh air and make sure that he or she rests in a position that is comfortable for breathing. If it is suspected that smoke is still present, the rescue personnel should wear an appropriate half mask or self-contained breathing apparatus. If the person does not breathe, breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous for the person providing aid to give mouth-to-mouth resuscitation. Contact the doctor. If necessary, call the poisons information centre or a doctor. In case of lack of consciousness, place the person in recovery position and call the doctor. Maintain open airways. Loosen tight clothing such as collar, tie or belt

Skin contact

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Contact the doctor. Contaminated clothing should be washed before reuse. Clean shoes thoroughly before reuse.

Ingestion

Rinse mouth with water. Remove dentures, if any. Take the person out in fresh air and make sure that he or she rests in a position that is comfortable for breathing. Stop if the affected person feels sick as vomiting can be dangerous. Do not induce vomiting unless ordered to do so by medical staff. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Contact the doctor. Never give an unconscious person something to eat or drink. In case of lack of consciousness, place the person in recovery position and call the doctor. Maintain open airways. Loosen tight clothing such as collar, tie, belt or waistband.

Protection of first-aiders

Action that entails a personal risk or for which there is no appropriate training available, should not be taken. If it is suspected that smoke is still present, the rescue personnel should wear an appropriate half mask or self-contained breathing apparatus. It may be dangerous for the person to provide help through mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Potentially acute health effects

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

Signs/symptoms of over exposure

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Eye contact:	Adverse symptoms may include the following: Pain or irritation Watering Redness
Inhalation:	Adverse symptoms may include the following: Respiratory tract irritation Coughing Reduced foetal weight Increased foetal mortality Deformities on the skeleton
Skin contact:	Adverse symptoms may include the following: Irritation Redness Reduced foetal weight Increased foetal mortality Deformities on the skeleton
Ingestion:	Adverse symptoms may include the following: Reduced foetal weight Increased foetal mortality Deformities on the skeleton Nausea or vomiting

4.3 Indication of any immediate medical attention and special treatment needed

Note to the doctor: immediately	Treated symptomatically. Contact the Swedish Poisons Information Centre if large quantities have been swallowed or inhaled.
Special treatments:	No specific treatment

SECTION 5: Fire fighting measures

5.1 Extinguishing media

Suitable:	Use powder, CO ₂ , dispersed jet of water (mist) or foam.
Not suitable:	Do not use water jet

5.2 Special hazards arising from the substance or preparation

Hazards from the substance or the preparation:	Combustible liquid and vapour. In the event of fire or if heated, there is a rise in pressure and the container may burst with the risk of a subsequent explosion. Steam/gas is heavier than air and spreads along the ground. Steam may get accumulated in low or closed spaces or spread along the road to an ignition source and cause reignition. Run-off to sewer may cause fire or explosion hazard. This substance is hazardous for aquatic organisms and has long term effects. Fire water contaminated with this product must be contained and prevented from entering waterways and sewers. Gas/steam is heavier than air and can run along the floor to an ignition source and get ignited.
Hazardous combustion products:	Decomposition products may include the following substances: carbon dioxide carbon dioxide (tight) black smoke

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aldehydes
organic acids

5.3 Advice for fire-fighters

Special protective actions for fire-fighters: immediately isolate the area by refusing entry to people who are close to the accident in the event of a fire. Measures that entail a personal risk or which training is missing, should not be adopted. Move the containers from the fire-struck area if they may constitute a risk. Use sprayed jet of water to keep the containers, exposed to fire, cold.

Special protective equipment for fighting equipment
Fire fighting staff: Fire-fighters should use suitable protective equipment and compressed air equipment with over pressure (SCBA) and a full face mask. Fire (e.g. helmet, protective boots and gloves) which meet the European Standard EN 469, and provide basic protection in chemical accidents.

Additional Information: None

Remarks: Combustible when exposed to heat or flame.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-rescue personnel: No action, involving a personal risk or for which training is missing, should be taken. Evacuate surrounding areas. Prevent entry of unnecessary and unprotected personnel. Do not touch or walk through spilt material. Close all ignition sources. No flares, smoking or flames in the hazard area. Avoid breathing vapour or mist. Always ensure that there is adequate ventilation.

Ensure you have suitable protective equipment: breathing protection when the ventilation is insufficient. Use suitable personal protective equipment.

For rescue personnel: information in Section 8 If specialised clothing is required to deal with the spillage, take note of any on suitable and unsuitable materials. Also see the information in "For non-rescue personnel".

6.2 Environmental precautions: Avoid dispersal of spilt material and run-off and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water contaminating material. Large releases can harm the environment.

6.3 Methods and materials for containment and cleaning up

Small spill: Stop the leak if risk can be avoided. Move containers from the spill area. Use spark suppressing tools and explosion-proof equipment. Absorb the spill with an inert dry material (e.g. dry sand or soil) and place in an appropriate waste disposal container.

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Large spill: Stop the leak if risk can be avoided. Move containers from the spill area. Approach the release from upwind. Prevent run-off to sewers, water courses, basements or confined areas. Flush the spill down to a purification plant for sewage or do as following. Contain non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and collect in a suitable container for disposal according to local regulations. (see Section 13). Use spark suppressing tools and explosion-proof equipment. Use a licensed waste management company for waste management. Contaminated absorbent material may pose the same hazard as the spilt product. NB: See Section 1 for emergency contact information and Section 13 for Waste treatment information.

6.4 Reference to other sections: See section 1 for emergency contact information.
Information on appropriate personal protective equipment is given in section 8.
Additional information on waste management is given in section 13.

SECTION 7: Handling and storage

The product can be stored at 20°C in its original box for 6 months without the affecting the quality.

7.1 Precautions for safe handling

Protective measures : Use appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be forbidden in areas where the substance is handled, stored and processed. The users should wash their hands and face before they eat, drink or smoke. Remove contaminated clothing and protective equipment before entering eating areas. Avoid exposure - ask for special instructions before use. Avoid exposure during handling. Do not use the product until all safety precautions have been read and understood. Avoid contact with eyes, skin and clothing. Do not breathe vapour or mist. Do not ingest. Avoid releases to the environment. Only use in places with satisfactory ventilation. Ensure you have appropriate breathing protection when the ventilation is insufficient. 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 flames or other ignition sources. Use explosion-proof electrical equipment (e.g. ventilation, lighting and material handling). Use only non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transmission by grounding and connecting containers and equipment prior to transferring the substance. Empty containers have product residues and may be dangerous. Do not reuse the container.

Advice on general occupational hygiene:

Eating, drinking and smoking should be forbidden in areas where this substance is handled, stored and processed. The users should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.
Additional information on hygiene measures is also given in section 8.

7.2 Conditions for safe storage, including any incompatibilities:

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Stored as per the local guidelines. Stored in a separate and approved area. Store in a dry, cold and well-ventilated place, far away from and contaminated material (see section 10). Store locked up. Eliminate all ignition sources. Separated from oxidised substances. Keep the box tightly closed and sealed until ready for use. Open containers should be resealed well and stored vertically to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Ventilation along the floor is required. Stored in original containers, protected from direct sunlight. Keep away from heat and direct sunlight.

7.3 Specific end use

Recommendations: Lines for renovation of sewage pipes, surface water pipes, ducts, culverts and similar applications. Glass fibre reinforced polyester liner.

Industry-specific solutions: Not available

SECTION 8: Exposure controls/personal protection

Information in this section comprises general advice and directions. All available purpose-specific information given in the exposure scenario is given in the list over identified uses in section 1.

8.1 Control parameters

Limit values on hygiene

Ingredient name	Exposure limit values AFS 2018:1 (Sweden, 2/2018) Absorbed through the skin.
Styrene	NGV: 10 ppm 8 hours. NGV: 43 mg/m ³ 8 hours. KTV: 20 ppm 15 minutes. KTV: 86 mg/m ³ 15 hours.

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 standards for monitoring, as for instance: The European standard and 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit valves and measurement strategy) European standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European standard EN 482 (Workplace atmospheres – General requirements on procedures for measurement of chemical agents) Reference to national guidance documents for methods for determining hazardous substances is also required.

DNEL/DMEL

Ingredient name	Type	Exposure	Value	Population	Effects
Styrene	DNEL	Short-term inhalation	289 mg/m ³	Workers	Systemic

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diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	DNEL	Short-term Inhalation	306 mg/m ³	Workers	Premises
	DNEL	Long-term Inhalation	85 mg/m ³	Workers	Systemic
	DNEL	Short-term Inhalation	174.25 mg/m ³	Consumers	Systemic
	DNEL	Short-term Inhalation	182.75 mg/m ³	Consumers	Premises
	DNEL	Long-term Inhalation	10.2 mg/m ³	Consumers	Systemic
	DNEL	Long-term Dermal	406 mg/kg bw/dag	Workers	Systemic
	DNEL	Long-term Dermal	343 mg/kg bw/dag	Consumers	Systemic
	DNEL	Long-term Oral	2.1 mg/kg bw/dag	Consumers	Systemic
	DNEL	Long-term Oral	3.5 mg/kg	Workers	Systemic
	DNEL	Long-term Dermal	1 mg/kg bw/Day	Workers	Systemic
DNEL	Long-term inhalation	3.5 mg/m ³	Workers	Systemic	

PNEC

Ingredient name	Type	Specified medium	Value	Specified method
styrene	PNEC	Fresh water	0.028 mg/l	Assessment factors
	PNEC	Sea water	0.014 mg/l	Assessment factors
	PNEC	Fresh water sediment	0.614 mg/kg dwt	Equilibrium distribution
	PNEC	Sea water sediment	0.307 mg/kg dwt	Equilibrium distribution
	PNEC	Sewage treatment plant	5 mg/l	Assessment factors
	PNEC	Soil	0.2 mg/kg dwt	Equilibrium distribution
	PNEC	Sporadic releases	0.04 mg/l	Assessment factors
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	PNEC	Fresh water sediment	0.29 mg/kg Dwt	-
	PNEC	Sea water sediment	0.029 mg/kg Dwt	-
	PNEC	Fresh water	0.004 mg/l	-
	PNEC	Sea water	0 mg/l	-
	PNEC	Sporadic releases	0.035 mg/l	-

8.2 Exposure controls

Appropriate technical control measures:

Use only in places with satisfactory ventilation. Use closed processes locally exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Technical control equipment is also necessary to keep gas, vapour or dust concentration below the lowest explosion limit. Use explosion-safe ventilation equipment.

Individual protective measures

Hygiene measures: Wash hands, forearms and face thoroughly after handling

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the product, before eating, smoking and using the lavatory, and at the end of the work shift. Appropriate techniques should be used to remove potentially contaminated clothes. Contaminated clothing should be washed before reuse. Ensure that eyewash stations and safety showers are close to the workplace.

- Eye/face protection: Protective glasses with side protection
- Hand protection: Chemically resistant, impenetrable protective gloves that comply with an approved standard, should always be used when chemical products are handled, if there is a risk assessment which shows that this is necessary.
4-8 hours (penetration time): fluorine rubber (Viton) (0.70 mm).
<1 hour (penetration time): Nitrile rubber (0.4 mm).
- Skin and body: Chemically protective clothing
- Respiratory protection: Wear filter mask, type A
- Limitation of Environmental exposure: Emissions from ventilation or work place equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, it is necessary to use wet scrubber for vapour, filter or technical modification of process equipment to reduce the emissions to acceptable levels.
- Note: Replace damaged gloves.
When cutting cured liner, use disposable clothing, common rubber gloves with inner glove of cotton, protective mask with least filter type A2P3, protection for eyes, helmet and hearing protection.

Advice on personal protective equipment is applicable for high exposure levels. Select proper personal protective equipment 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

Inpipe lines are delivered packed as a flat hose in a pack suited to liner dimensions. The product is protected on the inner and outer side with a foil that prevents polyester leakage. The liner is sealed at both ends. If there are holes in the foil, you will get a prominent odour of polyester.

- Physical form: Liquid. [Clear to slightly hazy liquid]
Colour: Yellow/Green
Odour: Characteristic
Odour threshold: 0.15 to 25 ppm
PH-value: 7 (Concentration 0.02%)
Initial boiling point and boiling range: 145°C
Melting/freezing point: <25 °C
Softening range: Not available.
Flash point: 33°C Pensky-Martens.
Flammability (solid, gas): Combustible when exposed to heat or flame.

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Evaporation rate:	12.4 (compared with butyl acetate)
Above/under	Below: 1.1%
Combustibility limit or explosion limit:	Above: 6.1%
Vapour pressure:	0.67 kPa
Vapour density:	3.6 (Air = 1)
Relative density :	1.11 (Water = 1)
Density (g/m ³):	1.11 g/cm ³ (23°C)
Bulk density:	1110 kg/m ³ (Temperature: 23 °C)
Solubility:	Insoluble in following substances: cold water and hot water.
Solubility in water:	<0.02 g/100 ml
Solubility at room temperature:	0.02 g/l
Partition coefficient: n octanol/water:	>2
Autoignition temperature:	490 °C
Decomposition temperature:	Not available.
Viscosity:	Dynamic (room temperature): 650 to 750 mPa·s (650 to 750 cP) Kinematic (room temperature): >5.85 cm ² /s (>585 cSt) Kinematic (40°C): >0.205 cm ² /s (>20.5 cSt)
Explosive properties:	None.
Oxidizing properties:	None.

9.2 Additional information

Remarks: Not available

SECTION 10: Stability and reactivity

10.1 Reactivity: There is no test data for the reactivity of this product and its ingredients.

10.2 Chemical stability: The product is stable
Stable under recommended handling and storage conditions
(See Section 7).

10.3 Risk of hazardous reactions: Under normal conditions of storage and use, no hazardous reactions will occur.

10.4 Conditions that Should be avoided: Avoid all perceivable ignition sources (spark or flame). Do not expose to pressure, cutting, welding, brazing, drilling, grinding or exposing the container to heat or sources of ignition. Do not let vapour accumulate in low lying closed areas.
Should not be exposed to heat/sparks/open flame/hot areas. - No smoking.

10.5 Uncontaminated material: Reactive and and contaminated with following substances: Oxidised substances.
Strong acids.

10.6 Hazardous decomposition products: No specific data

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute poisoning

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Product/ingredient name	Result	Types	Dose	Exposure
styrene	LC50 Inhalation Steam	Rat	11800 mg/m ³	4 hours
	LD50 Oral	Rat	5000 mg/kg	-
diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide	LD50 Dermal	Rat – Male, Female	>2000 mg/kg (LD0=2000 mg/kg)	-
	LD50 Oral	Rat – Male, Female	>5000mg/kg (LD0=5000 mg/kg)	-

Conclusion/Summary: Not available

Estimate of acute toxicity

Route of exposure	ATE value
Oral	11169.9 mg/kg
Inhalation (vapour)	26.36 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Types	Points	Exposure	Observation
Styrene	Inhalation - Irritating	Mammal - unspecified type	-	-	-
	Skin - Irritating	Rabbit	-	-	-
	Eyes - Irritating	Rabbit	-	-	-
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Skin - Skin redness/ Scab	Rabbit	0.6	24 hours 0.5 g (50 % (weight/weight) Water)	24 to 72 hours
	Skin - Oedema	Rabbit	0.3	24 hours 0.5 g (50 % (weight/weight) Water)	24 to 72 hours
	Eyes – Eye leucoma – Damage to the iris	Rabbit	0	24 hours 0.5 g (50 % (weight/weight) Water)	24 to 72 hours
	Eyes - Redness conjunctiva in the eye	Rabbit	0	24 hours 0.5 g (50 % (weight/weight) Water)	24 to 72 hours
	Eyes - Edoema in conjunctiva in the eye	Rabbit	0.3	56 mg (0.1 ml)	24 to 72 hours
		Rabbit	0	56 mg (0.1 ml)	24 to 72 hours
				56 mg (0.1 ml)	
				56 mg (0.1 ml)	

Conclusion/Summary

Eyes: Not available
 Skin: Not available
 Inhalation: Not available

Allergy inducing

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Product/ingredient name	Route of exposure	Types	Result
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Skin	Mouse	Allergy inducing

Allergy inducing Conclusion/Summary

Skin: Not available
Inhalation: Not available

Mutagenicity

Product/ingredient name	Test	Attempts	Result
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	OECD 471 Bacterial Reverse Mutation Test	Attempts: In vitro Test specimen: Bacteria Activation of metabolism: Without & with	Negative
	OECD 476 In vitro Mammalian Cell Gene Mutation Test	Attempts: In vitro Test specimen: Mammal - Animal Cell: Somatic Activation of metabolism: Without & with	Negative

Conclusion/Summary: Not available

Carcinogenicity:

Conclusion/Summary: Not available

Reproduction toxicity

Conclusion/Summary: Not available

Foetal injuries

Conclusion/Summary: Not available

Specific toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organ
Styrene	Category 3	Not applicable.	Respiratory tract irritation

Specific toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organ
Styrene	Category 1	Inhalation	Organ of hearing

Aspiration hazard

Product/ingredient name	Result
Styrene	DANGER DURING ASPIRATION - Category 1

Potentially acute health effects

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Eye contact: Causes serious eye irritation.
 Inhalation: May cause respiratory tract irritation.
 Skin contact: Skin Irritation.
 Ingestion: No known serious effects or critical hazards.

Symptoms related to physical, chemical and toxicological characteristics

Eye contact: Harmful symptoms may include the following:
 Pain or irritation
 Watering
 Redness

Inhalation: Harmful symptoms may include the following:
 irritation in the respiratory organ
 cough
 reduced foetal weight
 increased foetal mortality
 deformities on the skeleton

Skin contact: Harmful symptoms may include the following:
 irritation
 redness
 reduced foetal weight
 increased foetal mortality
 deformities on the skeleton

Ingestion : Harmful symptoms may include the following:
 reduced foetal weight
 increased foetal mortality
 deformities on the skeleton

Potentially acute health effects

Product/ingredient name	Result	Types	Dose	Exposure
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Sub acute NOAEL Oral	Rat - Male, Female	50 mg/kg day	-
	Sub acute LOAEL Oral	Rat - Male, Female	250 mg/kg day	-
	Sub chronic NOAEL Oral	Rat - Male, Female	100 mg/kg day	-
	Sub chronic LOAEL Oral	Rat - Male, Female	300 mg/kg day	-

Conclusion/Summary: Not available.

General: Causes eye injuries through prolonged or repeated exposure if inhaled.

Carcinogenic characteristics: No known serious effects or critical hazards

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Mutagenicity: No known serious effects or critical hazards

Foetal injuries: Is suspected to harm the unborn child.

Effects on the embryo/foetus or offspring: No known serious effects or critical hazards

Effects on the fertility: No known serious effects or critical hazards

Classification

Product/ingredient name	OSHA	IARC	NTP
Styrene	-	2B	Supposed to be carcinogenic to humans, on good grounds.

SECTION 12: Ecological Information

12.1 Toxicity

Product/ingredient name	Result	Types	Exposure	Effects
Styrene	Acute EC50 4.9 mg/l	Algae	72 hours	-
	Acute EC50 4700 µg/l Fresh water	Daphnia – Daphnia Magna	48 hours	Deadliness
	Acute LC50 4020 µg/l Fresh water	Fish - Pimephales promelas	96 hours	Deadliness
	Chronic EC10 0.28 mg/l Fresh water	Algae	96 hours	-
	Chronic NOEC 1.01 mg/l Fresh water	Daphnia	21 days	-
Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	Acute EC50 > 2.01 mg/l Fresh water	Algae	72 hours	(growth speed)
	Acute EC50 4700 µg/l Fresh water	Daphnia	48 hours	Mobility

Conclusion/Summary: Not available

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Vaccine
Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	OECD 301F Ready Biodegradability - Manometric Respirometry Test	0 to 10 % - 28 days	-	-

Conclusion/Summary: Not available

Product/ingredient name	Halving time in water	Photolysis	Biodegradability
Styrene	-	-	Easily degradable
Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	-	-	Not easily degradable

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12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Product	>2	-	low
Styrene	2.96	13.49	low
diphenyl(2,4,6-trimethylbenzoyl) phosphineoxide	3.87	18-22	low

12.4 Mobility in soil

Partition coefficient
soil/water (K): 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 serious effects or critical hazards

SECTION 13: Waste management

13.1 Waste treatment methods

Product : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Use a licensed waste management company for disposal of surplus products and non-recyclable products. The remains should not be released untreated to the sewer system without being fully compliant with the requirements of all authorities.

Hazardous waste : Classification of the product may entail requirements for handling as hazardous waste.

Packaging: The generation of waste should be avoided or minimised wherever possible. Packaging waste should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special
safety measures:





The product and its box must be disposed in a safe way. Safety should be observed when handling empty containers that have not been cleaned or washed. Empty containers or inner containers may have some product remains. The vapour from product residues may make the container very combustible or explosive on the inside. Used containers should neither be cut, welded or crushed if they have not been cleaned thoroughly from the inside. Avoid dispersal of split Material, run-off, contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

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	ADR/RID	ADN	IMDG	IATA
14.1 UN-nummer	UN1866	UN1866	UN1866	UN1866
14.2 Officiell transportbenämning	HARTSLÖSNING	RESIN SOLUTION	RESIN SOLUTION	Resin solution
14.3 Faroklass för transport	3 	3 	3 	3 
14.4 Förpackningsgrupp	III	III	III	III
14.5 Miljöfaror	Nej.	Ja.	Nej.	Nej.

Additional information

ADR/RID: Hazard ID number: 30
Limited quantity 5L
Exceptions for viscous substances This viscous class 3 fluid, is not covered by the rules for packages up to 450 l according to 2.2.3.1.5.1.
Tunnel category (D/E)

ADN: The product has not been classified as environmentally dangerous substance for transport in tank ships.
Exceptions for viscous substances This viscous class 3 fluid, is not covered by the rules for packages up to 450 l according to 2.2.3.1.5.1.

IMDG: **Preparation plans F-E, _S-E_**
Special provisions 223 955
Exceptions for viscous substances This viscous class 3 fluid, is not covered by the rules for packages up to 450 l according to 2.2.3.1.5.1.

IATA: **Quantity limitation** Passenger and cargo plane: 60 L. Packaging instructions: 355.
Only cargo plane: 220 L. Packaging instructions: 366. Limited quantities - Passenger plane: 10 L. Packaging instructions: Y344.
Special provisions A3

14.6 Special

Protective measures: **Transport within the user's area:** always transport the product in vertical, sealed and secure containers. Ensure that people who transport the product know what is to be done in the event of an accident or spillage.

14.7 Bulk transport according to appendix II to Marpol 73/78 and the IBC code: Not available

SECTION 15: Regulatory information

INPIPE LINER (UP)

15.1 Guidelines/regulation on the product with respect to safety, health and environment EU regulation (EC) number 1907/2006 (REACH)

Appendix XIV – List of substances subject to authorisation: None of the components is listed.

Substances that cause major hazards: None of the components is listed.

Appendix XVII – Limitations of manufacturing, release on the market and use of some hazardous substances, mixing and products: Not applicable

Other EU guidelines

Product/ingredient name	Carcinogenicity	Mutagenicity	Effects on the embryo/foetus or offspring	Effects on the fertility
Styrene	-	-	Repr. 2, H361d (Unborn child)	-
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	-	-	-	Repr. 2, H361f (fertility, causes testicular (atrophy))

Substances dangerous for the ozone layer

Not listed

Advance approvals (649/2012/EU)

Not listed

National guidelines

Combustible liquid class: 2b (SRVFS 2005:10)

International guidelines:

Convention on chemical weapon – chemical list I, II and III chemicals

Not listed

The Montreal protocol (Appendix A, B, C, E)

Not listed

The Stockholm Convention on long-living organic associations)

Not listed

The Rotterdam Convention on procedures and advance approvals after submission of information (PIC)

Not listed

INPIPE LINER (UP)

UNECE Aarhus Protocol on POPs and heavy metals

Not listed

15.2 Chemical safety assessment: No chemical assessment has been carried out.

Notes: NB: See section 8 of personal protective equipment and section 13 for waste management.

SECTION 16: Other information

Procedure that is used to derive the classification in accordance with the regulation (EC) no. 1272/2008 (CLP/GHS)

Classification	Reasons
Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361d (unborn children) STOT SE 3;H335 STOT SE 1;H372 Aquatic Chronic 3;H412	Based on test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

Hazard statements in full text:

- H226 Flammable liquid and vapour
- H304 May be fatal if swallowed and enters the respiratory system
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H332 Harmful if inhaled
- H335 May cause respiratory tract irritation
- H361D Suspected to harm the unborn child.
- H361F Suspected to harm fertility
- H372 (inhalation) Causes eye injuries due to long or repeat exposure on inhalation
- H372 Causes eye injuries due to long or repeat exposure.
- H411 Toxic to aquatic organisms with long lasting effects
- H412 harmful long lasting effects to aquatic organisms

Classifications in full text

(CLP/GHS):

- Acute tox. 4 H332 ACUTE TOXICITY: INHALATION – Category 4
- Aquatic Chronic 2, H411 DANGER OF DELAYED (CHRONIC) EFFECTS ON THE AQUATIC ENVIRONMENT - Category 2
- Aquatic Chronic 3, H412 DANGER OF DELAYED (CHRONIC) EFFECTS ON THE AQUATIC ENVIRONMENT - Category 3
- Asp. Tox. 1 , H304 DANGER DURING ASPIRATION - Category 1
- Eye Irrit. 2, H319 SERIOUS EYE INJURY OR EYE IRRITATION – Category 2
- Flam. Liq. 3, H226 COMBUSTIBLE LIQUIDS - Category 3
- Repr. 2 , H361d REPRODUCTION TOXICITY (Unborn children) - Category 2
- Repr. 2 , H361f REPRODUCTION TOXICITY [Fertility] - Category 2
- Skin Irrit. 2, H315 CORROSIVE or IRRITATING TO SKIN - Category 2
- Skin Sens. 1B, H317, SKIN SENSITIVISATION - Category 1B
- STOT RE 1, H372 (inhalation) SPECIFIC ORGAN TOXICITY – REPEATED EXPOSURE: INHALATION
- STOT RE 1 H372 SPECIFIC ORGAN TOXICITY - REPEATED EXPOSURE Category 1

INPIPE LINER (UP)

STOT RE 3 H335 SPECIFIC ORGAN TOXICITY - SINGLE EXPOSURE
[Respiratory tract irritation] - Category 3

Short forms and acronyms:

ATE = Acute Toxicity Estimate
CLP = The European Parliament's and Council's regulation (EC) 1272/2009 (CLP) on Classification, labelling and packaging of substances and preparations
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH-hazard statements = additional hazard statements according to CLP
PBT = Persistent, bioaccumulative and toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = very Persistent and very Bioaccumulative

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.

Notice to the reader:

The information contained in this 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 altogether or partially 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 product is suitable for the purpose it is intended. Contact the supplier or an expert for any unclarity.

Information that has been stored, cancelled or revised:

Section: 3

History

Date of issue:	03/03/2020
Version:	1
Date of issue:	08/02/2018
Version:	0