

# SAFETY DATA SHEET

Furfurylamine

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

### 1.1 Product identifier

**Product name** : Furfurylamine

**EC number** : 210-536-9

**REACH Registration number**

Registration number	Legal entity
05-2116081351-53-0000	-

**CAS number** : 617-89-0

**Product description** : Not available.

**Product type** : Liquid.

**Other means of identification** : 2-Furanmethanamine

**Chemical formula** : C<sub>5</sub>H<sub>7</sub>N-O

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

**Product use** : Intermediate.

**Area of application** : Industrial applications.

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

Penn A Kem LLC  
3324 Chelsea Avenue  
Memphis, TN 38108  
Telephone no.: 877-895-7366

Penn A Kem LLC, c/o Storeship B.V.  
Merwedeweg 4  
3198 LN Europoort RT Nederland  
Telephone no.: +31 181 26 11 10

**e-mail address of person responsible for this SDS** : dschmitt@pennakem.com

**Only representative**

### 1.4 Emergency telephone number

#### Supplier

**Telephone number** : Chemtrec: 800-424-9300 (United States)  
Brandweerinformatiecentrum voor gevaarlijke stoffen (B.I.G.)  
Technische Schoolstraat 43 A, B-2440 Geel  
Telephone no.: +32 14 58 45 45 (Europe)

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## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mono-constituent substance

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

Flam. Liq. 3, H226

Acute Tox. 4, H302

Acute Tox. 4, H312

Skin Corr. 1B, H314

Eye Dam. 1, H318

**Classification according to Directive 67/548/EEC [DSD]**

R10

Xn; R22

C; R34

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

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : Flammable liquid and vapour.  
Harmful if swallowed.  
Harmful in contact with skin.  
Causes severe skin burns and eye damage.

**Precautionary statements**

**Prevention** : Wear protective gloves. Wear eye or face protection: Recommended: face shield.  
Wear protective clothing: Recommended: Corrosion-resistant chemical equipment..  
Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.

**Response** : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or physician. IF IN EYES: Immediately call a POISON CENTER or physician.

**Storage** : Keep cool.

**Disposal** : Not applicable.

**Supplemental label elements** : Corrosive to the respiratory tract.

### 2.3 Other hazards

**Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII** : No.  
P: Not available. B: Not available. T: No.

**Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : Not available.

**SECTION 2: Hazards identification**

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

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

Substance/mixture : Mono-constituent substance

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
furfurylamine	REACH #: 05-2116081351-53 EC: 210-536-9 CAS: 617-89-0	100	R10  Xn; R22 C; R34  <b>See section 16 for the full text of the R-phrases declared above</b>	Flam. Liq. 3, H226  Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318  <b>See Section 16 for the full text of the H statements declared above.</b>	[A]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

[A] Constituent

[B] Impurity

[C] Stabilising additive

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

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- Eye contact** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. 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. 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. 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. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately.

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**SECTION 4: First aid measures**

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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

**4.2 Most important symptoms and effects, both acute and delayed****Potential acute health effects**

**Eye contact** : Causes serious eye damage.  
**Inhalation** : Corrosive to the respiratory tract. Causes burns. Serious effects may be delayed following exposure.  
**Skin contact** : Causes severe burns. Harmful in contact with skin.  
**Ingestion** : Harmful if swallowed. May cause burns to mouth, throat and stomach.

**Over-exposure signs/symptoms**

**Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness  
**Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
**Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur  
**Ingestion** : Adverse symptoms may include the following:  
stomach pains

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

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.  
**Specific treatments** : No specific treatment.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

**Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.  
**Unsuitable extinguishing media** : Do not use water jet.

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

**Hazards from the substance or mixture** : 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. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.  
**Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
Ammonia.

## SECTION 5: Firefighting measures

### 5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- 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. Do not breathe 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. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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 (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

### 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

## SECTION 7: Handling and storage

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. 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 container 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. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container.

**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** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container 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 acids. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

### 7.3 Specific end use(s)

**Recommendations** : Intermediate.

**Industrial sector specific solutions** : See information supplied by the manufacturer.

## 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

No exposure limit value known.

**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

No DELs available.

#### Predicted effect concentrations

No PECs available.

### 8.2 Exposure controls

## SECTION 8: Exposure controls/personal protection

<b>Appropriate engineering controls</b>	: 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. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
<b><u>Individual protection measures</u></b>	
<b>Hygiene measures</b>	: Wash hands, forearms and face thoroughly after handling chemical products, 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.
<b>Eye/face protection</b>	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: face shield
<b><u>Skin protection</u></b>	
<b>Hand protection</b>	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
<b>Body protection</b>	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Corrosion-resistant chemical equipment.
<b>Other skin protection</b>	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Respiratory protection</b>	: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: organic vapour filter (Type A)
<b>Environmental exposure controls</b>	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	: Liquid.
<b>Colour</b>	: Colourless./Yellow.
<b>Odour</b>	: Ammoniacal.
<b>Odour threshold</b>	: Not available.
<b>pH</b>	: 11.6 [Conc. (% w/w): 10%]
<b>Melting point/freezing point</b>	: -69.99°C
<b>Initial boiling point and boiling range</b>	: 145.01 to 146.01°C
<b>Flash point</b>	: Open cup: 36.85°C
<b>Evaporation rate</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Not available.
<b>Burning time</b>	: Not applicable.
<b>Burning rate</b>	: Not applicable.
<b>Upper/lower flammability or explosive limits</b>	: Lower: 1.8%
<b>Vapour pressure</b>	: 0.4 kPa [20°C] 2.5 kPa [50°C]



**SECTION 9: Physical and chemical properties**

<b>Vapour density</b>	: 3.35 [Air = 1]
<b>Relative density</b>	: 1.05
<b>Solubility(ies)</b>	: Easily soluble in the following materials: cold water, hot water and diethyl ether.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: 350°C
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Dynamic: 1.6 mPa·s
<b>Explosive properties</b>	: Not available.
<b>Oxidising properties</b>	: Not available.

**9.2 Other information**

**Physical/chemical properties comments** : VOC content: 100%

No additional information.

**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>	: Keep away from heat. Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
<b>10.5 Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidizing materials and acids. Reactive or incompatible with the following materials: Aluminium. Copper.
<b>10.6 Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

**Conclusion/Summary** : Not available.

**Irritation/Corrosion**

**Conclusion/Summary** : Not available.

**Sensitiser**

**Conclusion/Summary** : Not available.

**Mutagenicity**

**Conclusion/Summary** : Not available.

**Carcinogenicity**

**Conclusion/Summary** : Not available.

**Reproductive toxicity**

**Conclusion/Summary** : Not available.



**SECTION 11: Toxicological information****Teratogenicity**

**Conclusion/Summary** : Not available.

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

Not available.

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

Not available.

**Aspiration hazard**

Not available.

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

- Inhalation** : Corrosive to the respiratory tract. Causes burns. Serious effects may be delayed following exposure.
- Ingestion** : Harmful if swallowed. May cause burns to mouth, throat and stomach.
- Skin contact** : Causes severe burns. Harmful in contact with skin.
- Eye contact** : Causes serious eye damage.

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

- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Ingestion** : Adverse symptoms may include the following:  
stomach pains
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness

**Delayed and immediate effects and also chronic effects from short and long term exposure****Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

Not available.

**Conclusion/Summary** : Not available.

- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : 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.

**SECTION 11: Toxicological information**

**Other information** : Not available.

**SECTION 12: Ecological information****12.1 Toxicity**

**Conclusion/Summary** : Not available.

**12.2 Persistence and degradability**

**Conclusion/Summary** : Not available.

**12.3 Bioaccumulative potential**

Not available.

**12.4 Mobility in soil**

**Soil/water partition coefficient ( $K_{oc}$ )** : Not available.

**Mobility** : Not available.

**12.5 Results of PBT and vPvB assessment**

**PBT** : No.  
P: Not available. B: Not available. T: No.

**vPvB** : Not available.  
vP: Not available. vB: Not available.

**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. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. 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** : Yes.  
Waste material code (Flanders): 015, 034

**European waste catalogue (EWC)**

Waste code	Waste designation
07 01 04*	other organic solvents, washing liquids and mother liquors

**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.

Type of packaging	European waste catalogue (EWC)
	15 01 10* packaging containing residues of or contaminated by dangerous substances

**SECTION 13: Disposal considerations**

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	ADR/RID	ADN/ADNR	IMDG	IATA
<b>14.1 UN number</b>	UN2526	UN2526	UN2526	UN2526
<b>14.2 UN proper shipping name</b>	FURFURYLAMINE	FURFURYLAMINE	FURFURYLAMINE	Furfurylamine
<b>14.3 Transport hazard class(es)</b>	3 (8) 	3 (8) 	3 (8) 	3 (8) 
<b>14.4 Packing group</b>	III	III	III	III
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>14.6 Special precautions for user</b>	Not available.	Not available.	Not available.	Not available.
<b>Additional information</b>	<b>Hazard identification number</b> 38  <b>Limited quantity</b> 5 L  <b>Tunnel code</b> (D/E)	-	<b>Emergency schedules (EmS)</b> F-E, S-C	<b>Passenger and Cargo Aircraft</b> Quantity limitation: 5 L Packaging instructions: 354 <b>Cargo Aircraft Only</b> Quantity limitation: 60 L Packaging instructions: 365 <b>Limited Quantities - Passenger Aircraft</b> Quantity limitation: 1 L Packaging instructions: Y342

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 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

**Europe inventory** : This material is listed or exempted.

**Black List Chemicals** : Not listed

**Priority List Chemicals** : Not listed

**Integrated pollution prevention and control list (IPPC) - Air** : Not listed

**Integrated pollution prevention and control list (IPPC) - Water** : Not listed

##### National regulations

**Hazardous incident ordinance** : Applicable. Category: 6 Flammable.

**Hazard class for water** : 1 Appendix No. 3

**Technical instruction on air quality control** : TA-Luft Class I - Number 5.2.5

##### International regulations

**Chemical Weapons Convention List Schedule I Chemicals** : Not listed

**Chemical Weapons Convention List Schedule II Chemicals** : Not listed

**Chemical Weapons Convention List Schedule III Chemicals** : Not listed

**15.2 Chemical Safety Assessment** : Not available.

**15.3 Registration status** : Applicable.

## SECTION 16: Other information

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** :

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

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**SECTION 16: Other information**[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

Classification	Justification
Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318	On basis of test data Expert judgment Expert judgment Expert judgment Expert judgment

**Full text of abbreviated H statements** : H226 Flammable liquid and vapour.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.

**Full text of classifications [CLP/GHS]** : Acute Tox. 4, H302 ACUTE TOXICITY: ORAL - Category 4  
Acute Tox. 4, H312 ACUTE TOXICITY: SKIN - Category 4  
Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3  
Skin Corr. 1B, H314 SKIN CORROSION/IRRITATION - Category 1B

**Full text of abbreviated R phrases** : R10- Flammable.  
R22- Harmful if swallowed.  
R34- Causes burns.

**Full text of classifications [DSD/DPD]** : C - Corrosive  
Xn - Harmful

**Date of issue/ Date of revision** : \*\*\*

**Date of previous issue** : No previous validation

**Version** : \*\*\*

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.