

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1. Product identifier:****Product name:** 2K HS ACRYLIC HARDENER SOLL H3 25**Articule number:** C3 1N, C3 5N**1.2. Relevant identified uses of the substance or mixture and uses advised against:** Normal acrylic hardener for use with 2K HS acrylic clearcoat SOLL C3. Only for professional use.**1.3. Manufacturer/Supplier:**

UAB HELVINA

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E-mail: [info@helvina.lt](mailto:info@helvina.lt)[www.helvina.lt](http://www.helvina.lt)**1.4. Further information obtainable from:** Laboratory**Emergency telephone number:**

Poison control and information office: Tel.: +370 5 236 2052 or +370 687 53378

**2. HAZARDS IDENTIFICATION****2.1. Classification of the mixture****Classification according to Directive 67/548/EEC or Directive 1999/45/EC:**

R10

R43

R66

R67

**Classification according to Regulation (EC) No 1272/2008:**

Flam. Liq. 3 H226 Flammable liquid and vapour.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H336 May cause drowsiness or dizziness.

**The threat to human health**

May cause an allergic skin reaction. May cause drowsiness or dizziness.

**Threat to the environment**

The product is not classified as dangerous for the environment.

**Physical/chemical hazards**

Flammable liquid and vapour.

**2.2. Label elements****Hazard symbols and warning signs:**

GHS02



GHS07

**Signal word: Warning****Hazard statements:**

H226 Flammable liquid and vapour.

H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

EUH066 Repeated exposure may cause skin dryness or cracking.

EUH208 Contains 1,6- Hexamethylene diisocyanate. May produce an allergic reaction.

**Precautionary statements:**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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P302 + P352 IF ON SKIN: Wash with soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

















P332 + P313 If skin irritation occurs: Get medical advice / attention.

**Contains:** N-BUTYL ACETATE (CAS: 123-86-4), 1,6- HEXAMETHYLENE DIISOCYANATE HOMOPOLYMER (CAS: 28182-81-2)**2.3 Other hazards**

No other hazards.

No information on the fulfilment of the criteria for PBT or vPvB in accordance with Annex XIII of the REACH Regulation. Appropriate studies have not been conducted.

**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1. Chemical characterization:****Substances:** Not applicable.**3.2. Chemical characterization:****Mixtures:****Dangerous ingredients:**

CAS: 123-86-4 EINECS: 204-658-1 Index no: 607-025-00-1 REACH no: 01-2119485493-29-XXXX	butyl acetate R10; R66; R67  Flam. Liq. 3, H226;  STOT SE 3, H336	45 – 50 %
CAS: 28182-81-2 EINECS: 500-060-2 Index no: - REACH no: 01-2119485796-17-0002	hexamethylene – 1.6 – diisocyanate homopolymer  Xi; R43 Skin Sens. 1, 317	34 - 40 %
CAS: 108-65-6 EINECS: 203-603-9 Index no: 607-195-00-7 REACH no: 01-2119475791-29-XXXX	2-methoxy-1-methylethyl acetate R10  Flam. Liq. 3, H226	7 – 10 %
CAS: 1330-20-7 EINECS: 215-535-7 Index no: 601-022-00-9 REACH no: 01-2119488216-32-XXXX	dimethylbenzene, mixture of isomers  Xn; R20/21;  Xi; R38; R10  Flam. Liq. 3, H226;  Acute Tox. 4, H332; Skin Irrit. 2, H312; Skin Irrit. 2, H315	4 - 6 %
CAS: 100-41-4 EINECS: 202-849-4 Index no: 601-023-00-4 REACH no: substance is subject to the transitional period	ethylbenzene  F; R11;  Xn; R20  Flam. Liq. 2, H225;  Acute Tox. 4, H332	1 - 1,5 %
CAS: 822-06-0 EINECS: 212-485-8 Index no: 615-011-00-1 REACH no: 01-2119457571-37-0001	hexamethylene – 1.6 – diisocyanate  T; R23;  Xi; R36/37/38; R42/43  Acute Tox. 3, H331; Eye Irrit. 2, H315 ;  STOT SE 3, H335; Skin Irrit. 2, H319; Skin Sens. 1, H317; Resp. Sens. 1, H334	< 0,3 %

**Additional information:** For the wording of the listed risk phrases refer to section 16.

## 4. FIRST AID MEASURES

### 4.1. Description of first aid measures:

IN CASE OF SKIN CONTACT: Wash contaminated skin with soapy water, rinse thoroughly with water, in the event of an irritation, erythema, contact your doctor.

IN CASE OF CONTACT WITH EYES: Rinse for several minutes (about 15) with plenty of water, holding eyelids apart. Avoid strong stream, due to the risk of corneal damage, contact your doctor.

INHALATION EXPOSURE: In case of dizziness or nausea, remove casualty to fresh air, if symptoms persist, obtain medical advice.

IN CASE OF INGESTION: Do not induce vomiting, immediately consult a physician. Never give anything by mouth to an unconscious person.

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

CONTACT WITH SKIN: burning, itching, redness, allergic reactions, dryness, cracking of the skin after prolonged, direct exposure.

CONTACT WITH EYES: possible slight irritation.

Respiratory system: irritation of nasal mucosa, throat and further parts of respiratory system, may depress central nervous system and adversely affect the internal organs – liver, kidney. Symptoms include headache, dizziness, drowsiness, weakness, in extreme cases loss of consciousness.

Gastrointestinal tract: chemical irritation of oral cavity, throat and further parts of gastrointestinal tract. After absorption may experience symptoms of food poisoning, abdominal pain, dizziness, nausea and vomiting. Ingestion of large amounts may cause liver and kidney damage.

### 4.3 Indications of any immediate medical attention and special treatment needed:

The decision on how to proceed take the doctor after examination of injured.

## 5. FIRE-FIGHTING MEASURES

### 5.1. Extinguishing media

SUITABLE EXTINGUISHING MEDIA: alcohol-resistant foam or dry powder (A, B, C), carbon dioxide (CO<sub>2</sub> type extinguisher), sand or soil, water spray. Use fire extinguishing methods suitable to the conditions environment.

UNSUITABLE EXTINGUISHING MEDIA: Full water jet.

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

During a fire, under the influence of high temperatures releases toxic decomposition products containing min. carbon monoxide, nitrogen oxides. Vapours are able to form explosive mixtures with air, being heavier than air, accumulate in the hollows or in the lower areas - can cause the phenomenon of flash back.

### 5.3. Advice for fire-fighters

Cool containers situated in zone of fire by spraying water, if possible, remove from the danger zone. In case of fire in a closed room wear protective clothing and self-contained breathing apparatus. Do not allow to get through the extinguishing water to surface water, groundwater and sewage system.

## 6. ACCIDENTAL RELEASE MEASURES

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

For persons not being the members of aid giving staff: inform the appropriate service. Remove from the danger zone people not involved in the liquidation of accident. Remove all possible sources of ignition.

For persons giving aid: Ensure proper ventilation, use protective gloves, protective shoes and protective clothing. In the case of splashing of the product use protective glasses or protective mask. Do not breathe vapours. Use personal respiratory system protection.

### 6.2. Environmental precautions

Prevent from spreading and leakage into sewage system and water reservoir. In case of inability inform the local authorities to provide protection.

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

Prevent from spreading and remove by gathering on absorbent material (sand, sawdust, diatomaceous soil, universal absorbent). Contaminated material put in properly labelled containers for disposal in accordance with applicable regulations.

### 6.4. Reference to other sections

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For exposure controls and personal protection measures, see section 8.  
For subsequent waste disposal, follow the recommendations in section 13.

## 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Use only in well ventilated area. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Avoid spilling. Avoid breathing vapours. Do not allow to exceed the NDS value in the workplace for the product components. Avoid sources of ignition, heat, hot surfaces and open flames. Apply measures against electrostatic charges – appropriate neutralization and protective earthing during e.g. transferring contents of the containers. It is recommended to wear anti-static clothing and footwear during handling the product. Floor of the room where product is stored or used should be made of electrically conductive materials. Make sure if the electric lighting and wiring are working properly and do not constitute a potential source of ignition. Do not use cutting tools that cause sparks. Avoid inhalation of vapours / aerosols. Work in accordance with the principles of health and safety: do not eat and drink, do not smoke in the workplace, wash hands after use, remove contaminated clothing and protective equipment before entering eating areas.

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

Store in a cool (storage temperature 5°C – 30°C), dry, well-ventilated room. Store in properly labelled and tightly closed original container. Avoid direct sunlight and sources of heat, hot surfaces and open flames. If repackaging is necessary, make sure that the new packaging is suitable for the type of product. After opening close tightly containers and set upright to prevent leakage of the product. Do not store near oxidizing agents, strongly alkaline, strongly acidic products and combustible materials.

### 7.3 Specific end use(s)

Normal hardener is designed for use with 2K HS acrylic clearcoat SOLL C3.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

**Ingredients for which standards apply to the exposure:**

Chemical name	NDS	NDSch	NDSP
	Maximum permissible concentration in air [mg/m <sup>3</sup> ]		
ethylbenzene	200	400	-
xylene, mixture of isomers	100	-	-
heksametylene -1,6 - diisocyanate	0,04	0,08	-
butyl acetate	200	950	-
2-methoxy-1-methylethyl acetate	260	520	

**N-BUTYL ACETATE:**

DNEL for workers, prolonged exposure through the skin: 7 mg/kg mc/day

DNEL for workers, prolonged exposure through inhalation: 48 mg/m<sup>3</sup>

DNEL for consumer, prolonged exposure through the skin: 3,4 mg/kg mc/day

DNEL for consumer, prolonged exposure through inhalation: 12 mg/m<sup>3</sup>

DNEL for consumer, prolonged exposure if swallowed: 3,4 mg/kg mc/day

PNEC freshwater: 0,18 mg/l

PNEC sea water: 0,018 mg/l

PNEC periodic release: 0,36 mg/l

PNEC sewage treatment plant: 35,6 mg/l

PNEC freshwater sediment: 0,981 mg/kg

PNEC sea waters sediment: 0,0981 mg/l

PNEC soil: 0,0903 mg/kg

**2-METHOXY-1-METHYLETHYL ACETATE**

DNEL for workers, prolonged exposure through the skin (systemic effects): 153,5 mg/kg mc

DNEL for workers, prolonged exposure through inhalation (systemic effects): 275 mg/m<sup>3</sup>

DNEL for consumer, prolonged exposure through the skin (systemic effects): 54,8 mg/kg mc

DNEL for consumer, prolonged exposure if swallowed (systemic effects): 1,67 mg/kg mc/day

PNEC freshwater: 0,635 mg/l

PNEC freshwater sediment: 3,29 mg/kg

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PNEC sea waters sediment: 0,329 mg/l

PNEC soil: 0,29 mg/kg

PNEC sewage treatment plant: 100 mg/l

**Maximum concentrations of dangerous component (xylene) in biological material:**DSB –1,4 g/dm<sup>3</sup> calculated on average density of urine - 1,024

Determined substance – methyl hippuric acid

Biological material – urine

*Notes:* sample collected once, at the end of daily exposure on any day.**Maximum concentrations of dangerous component (ethylbenzene) in biological material:**

DSB –0,3 g/g creatinine

Determined substance – mandelic acid

Biological material – urine

*Notes:* sample collected once, at the end of daily exposure on any day.**8.2 Exposure controls****Appropriate engineering controls:** using general ventilation of the room is recommended.**Individual protection measures, such as personal protective equipment:****PROTECTION OF EYES AND FACE:** Wear safety goggles or full face shield (according to EN 166).**PROTECTION OF HANDS AND SKIN:** Use protective gloves resistant to chemicals, made of viton, 0,7 mm thick, penetration time > 480 min or nitrile rubber, 0,4 mm thick, penetration time > 30 min in accordance to EN-PN 374:2005.**The material from which the gloves are made:**

Choice of suitable gloves depends not only on the material, but also on the brand and quality that depend on manufacturer. Resistance of the material from which gloves are made can be determined after testing. The exact time of the destruction of the protective gloves must be determined by the manufacturer.

*Other:*

Wear protective clothing working – wash regularly.

**Respiratory system protection:**

Avoid breathing vapours. In case of exceeding the NDS value in the workplace use personal respiratory system protection – mask or half mask with filter and universal or A type vapour absorber (class 1,2 or 3) in accordance with EN 141.

**Thermal hazards:**

Not applicable.

**Control of environmental exposure**

Do not allow to spread in the environment and leakage to sewage system and watercourses.

**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties:****General information:**

Appearance:	Liquid
Color:	Colorless
Odor:	Solvent - ester
Odor threshold:	0,9 - 9 mg/m <sup>3</sup> (xylene)
pH:	Not applicable
Melting point / melting range:	Not applicable
Boiling point / boiling range:	126 – 140 °C
Flash point:	32 °C
Ignition temperature:	Not specified
Evaporation rate:	Not specified
Flammability rate:	Not applicable
Bottom / top explosive limits:	1 vol % (xylene) / 8 vol % (xylene)
Density at 20 °C:	Not specified

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Vapor pressure at 20 °C:	9 hPa (xylene)
Relative vapour density:	Not specified
Solubility in water:	Very weak
Partition coefficient: n-octanol/water:	> 3
Autoignition point:	200 °C
Breakdown point:	Not specified
Viscosity ISO 2431 (4 mm):	Not specified
Explosive properties:	Not applicable -
Oxidizing properties:	Not applicable

**9.2. Other information:**

No additional research results.

## 10. STABILITY AND REACTIVITY

**10.1. Reactivity**

Not known.

**10.2. Chemical stability**

Product remains stable under normal use, storage and transport conditions.

**10.3. Possibility of hazardous reactions**

None.

**10.4. Conditions to avoid**

Avoid high temperature, direct sunlight, hot surfaces and open flames. Protect from moisture – contact with the water increases the pressure in a closed container.

**10.5. Incompatible materials**

Strong acids, strong alkalis, strong oxidizing agents. Combustible materials.

**10.6. Hazardous decomposition products**

As a result of high temperatures toxic gases are generated – carbon oxides, nitrogen oxides.

## 11. TOXICOLOGICAL INFORMATION

**11.1. Information on toxicological effects.****a) acute toxicity:**

N-BUTYL ACETATE

LD50 (rat, male; orally)	10760 mg/kg
LC50 (rat, male, female; inhalation)	23,4mg/l/h (In vivo, aerosol)
LD50 (rabbit; skin)	>14000mg/kg

XYLENE:

Acute oral toxicity LD50 (rat):	4300 mg/kg
Acute skin toxicity LD50:	no data
Acute inhalation toxicity LC50 (rat):	22100 mg/m <sup>3</sup> /4h

1,6- HEXAMETHYLENE DIISOCYANATE

LD50 (rabbit; orally):	593 mg/kg
LC50 (rat; inhalation):	0,124 mg/l, 4 h

1-Methoxy-2-propanol acetate:

LD50 (rat; orally)	>5000mg/kg
LC50 (rat; inhalation)	no data
LD50 (rabbit; skin)	>5000mg/kg

ETHYLBENZENE:

Acute oral toxicity LD50 (rat):	3500 mg/kg
Acute skin toxicity LD50:	no data
Acute inhalation toxicity LC50 (rat):	17800 mg/m <sup>3</sup> /4h
TCL0 (human; inhalation)	442 mg/ m <sup>3</sup> (8 h)

1,6- HEXAMETHYLENE DIISOCYANATE HOMOPOLYMER:

LC50 (rat, male; inhalation):	543 mg/m <sup>3</sup> , 4 h
LC50 (rat, female):	390 mg/m <sup>3</sup> , 4 h

b) irritant effect: does not show.



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- c) corrosive effect: no show.
- d) allergenic effects: May cause an allergic skin reaction
- e) toxicity for repeated exposure: May cause drowsiness or dizziness
- f) cancerogenity: does not show
- g) mutagenity: does not show
- h) harmful effect on reproduction: does not show

**Information on likely routes of exposure:**

CONTACT WITH SKIN: burning, itching, redness, allergic reactions, dryness, cracking of the skin after prolonged, direct exposure.

CONTACT WITH EYES: possible slight irritation

RESPIRATORY SYSTEM: irritation of nasal mucosa, throat and further parts of respiratory system, may depress central nervous system and adversely affect the internal organs – liver, kidney. Symptoms include headache, dizziness, drowsiness, weakness, in extreme cases loss of consciousness.

GASTROINTESTINAL TRACT: chemical irritation of oral cavity, throat and further parts of gastrointestinal tract. After absorption may experience symptoms of food poisoning, abdominal pain, dizziness, nausea and vomiting. Ingestion of large amounts may cause liver and kidney damage.

**Delayed and immediate and chronic effects from short- and long-term exposure:**

No data.

**The effects of the interaction:**

No data.

## 12. ECOLOGICAL INFORMATION

Detailed research on the effects of environmental mixtures have not been conducted. The product is not classified as dangerous for the environment, contains ingredients harmful to the environment. Do not allow product to reach ground water, sewers and watercourses.

**12.1. Toxicity:****N-BUTYL ACETATE:**

LC50 – fish ( <i>Pimephales promelas</i> )	18 mg/l, 96h
EC50 – invertebrates ( <i>Daphnia</i> sp.)	44 mg/l, 48h
NOEC – algae ( <i>Desmodesmus subspicatus</i> )	200 mg/l, 72h
ErC50 – algae ( <i>Desmodesmus subspicatus</i> )	648 mg/l, 72h
IC50 – activated sludge ( <i>Tetrahymena pyriformis</i> )	356 mg/l, 40h

**1,6- HEXAMETHYLENE DIISOCYANATE**

LC0 – fish ( <i>Brachydanio rerio</i> )	82,8 mg/l (96h)
EC0 – invertebrates ( <i>Daphnia</i> )	89,1 mg/l (48h)
EC50 – algae ( <i>Scenedesmus quadricauda</i> )	77,4 mg/l (96h)
EC50 – bacteria (effect on activated sludge)	842 mg/l

**ETHYLBENZENE:**

Acute toxicity to fish ( <i>Pimephales promelas</i> ) LC50:	49 mg/dm <sup>3</sup> /96h
Acute toxicity to aquatic invertebrates ( <i>Daphnia magna</i> ) EC50:	184 mg/dm <sup>3</sup> /24h

**XYLENE:**

Acute toxicity to fish ( <i>Pimephales promelas</i> ) LC50:	16,1 mg/dm <sup>3</sup> /96h
Acute toxicity to aquatic invertebrates ( <i>Daphnia magna</i> ) EC50:	3,82 mg/dm <sup>3</sup> /48h

**12.2. Persistence and degradability:****N-BUTYL ACETATE:**

Slowly hydrolyzed in water. Hydrolysis half-time: 78 days at pH: 8 and 2 years at pH: 7 (in 25°C). Substance is easily biodegradable: 80% within 5 days (83% within 28 days).

**XYLENE:**

Substance is easily biodegradable in water. 50-70% after 5 days (oxygen, communal sewage)

Half-life degradation in groundwater: 20-116 days,

Half-life degradation in soil: 2-7 days

Half-life degradation in an atmosphere: 8-14 days

**2-METHOXY-1-METHYLETHYL ACETATE:**

Substance is easily biodegradable; oxidized in the air as a result of photochemical reactions.

**12.3. Bioaccumulative potential:**

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N-BUTYL ACETATE: log Ko/w: 2,3 (BCF expected: 15,3) – substance is not expected to bio accumulate  
XYLENE: BCF <100

1-METHOXY-2-PROPANOL ACETATE: log Po/w: 0,56

**12.4. Mobility in soil:**

N-BUTYL ACETATE: Ko/c: 1,27 (estimated value)

2-METHOXY-1-METHYLETHYL ACETATE: Ko/c: 1,7 (estimated value)

HYDROCARBONS, C9, AROMATICS: easily volatile; evaporates quickly.

**12.5. Results of PBT and vPvB assessment:**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6. Other adverse effects**

No data.

**13 DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods:**

Disposable containers and waste must be disposed by authorized firm. Disposal procedure should be agreed with area competent department of environmental protection. Rest of product store in original containers. Dispose in accordance with applicable regulations. Empty containers must be disposed in accordance with applicable regulations or deliver to suitable garbage dump.

**14 TRANSPORT INFORMATION**

- 14.1. UN number:** 1263  
**14.2. UN proper shipping name:** PAINTS, PAINT RELATED METARIAL  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** III  
**14.5. Environmental hazards:** No  
**14.6. Special precautions for user:** Always transport in closed containers that are upright, bearing the label and secured  
**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** No information.

**15 REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

\* Regulation (EC) No 1907/2006 of THE EUROPEAN PARLIAMENT AND THE COUNCIL of 18 December 2006 *Concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)*, with subsequent amendments.

\*Commission Regulation (EU) No. 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of THE EUROPEAN PARLIAMENT AND THE COUNCIL *Concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)*.

\* Regulation (EC) No 1272/2008 (CLP) (Article 55, Annex VI, Table 3.2) of THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 *On classification, labelling and packaging of substances and mixtures*, with subsequent amendments.

\* Council Directive No. 75/442/EEC *On waste* and Council Directive No. 91/689/EEC *On hazardous waste*. Commission Decision No 2000/532/EC of 3 May 2000, stating the list of waste.

**15.2 Chemical Safety Assessment:**

No chemical safety assessments for substances in the mixture and the mixture.

**16 OTHER INFORMATION****Text of risk (R) phrases mentioned in section 2-3 of the sheet:**

R10 Flammable.

R11 Very flammable.

R20 Harmful by inhalation.

R20/21 Harmful by inhalation and in contact with skin.



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- R23 Toxic by inhalation.  
R36/37/38 Irritating to eyes, skin and respiratory system.  
R38 Irritating to skin.  
R42/43 May cause sensitization by inhalation and skin contact.  
R43 May cause sensitization by skin contact.  
R66 Repeated exposure may cause skin dryness or cracking.  
R67 Vapours may cause drowsiness and dizziness.

**Text of hazard (H) indications mentioned in section 2-3 of the sheet:**

- H225 Highly flammable liquid and vapour.  
H226 Flammable liquid and vapors.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H331 Toxic if inhaled.  
H332 Harmful if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.

**Description of used abbreviations, acronyms and symbols:**

- T – toxic product  
Xn – harmful product  
Xi – irritant product  
F – highly flammable product  
Flam. Liq. 3 – flammable liquid cat.3  
Flam. Liq. 2 - flammable liquid cat.2  
Acute Tox. 3 – acute toxicity cat.3  
Acute Tox. 4 – acute toxicity cat.4  
Eye Irrit. 2 – eye irritation cat. 2  
STOT SE 3 – toxic to the target organ – single exposure cat.3  
Skin Irrit. 2 – skin irritation cat. 2  
Skin Sens. 1 – skin sensitization  
Resp. Sens. 1 – sensitizing effects on the respiratory system

NDS – Maximum permissible concentration of substances in the workplace

NDSP – Maximum permissible ceiling concentration

NDSch – Maximum permissible instantaneous concentration

**Training:**

Before starting handling the product, workers must undergo obligatorily occupational health and safety training because of presence of chemicals in the workplace. Perform, document and familiarize employees with the results of risk assessment in the workplace due to the presence of chemical agents.

The information of this Material Safety Data Sheet is based on the present state of knowledge and on current UE and national laws, as the users' working conditions are beyond our knowledge and control. The product is not to be used for other purposes than those specified, without first obtaining written handling instruction. It is always the responsibility of the user to take all necessary steps in order to fulfill the demand laid down in the local rules and legislation. The information in this Material Safety Data Sheet is meant as a description of the safety requirements of the product and it is not to be considered as a guarantee of the product's properties.