

Rudolf Hensel GmbH  
21039 Börnsen

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## SECTION 1: Identification of the substance / preparation and of the company

### 1.1 Product identifier

**HENSOTHERM 310 KS -OUTDOOR-**

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

#### 1.2.1 Relevant uses

Intumescent fire retardant coatings

#### 1.2.2 Uses advised against

None known.

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

#### Company

Rudolf Hensel GmbH

Lauenburger Landstr. 11  
21039 Börnsen / GERMANY  
Phone +49 (0)40-72 10 62 10  
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Homepage [www.rudolf-hensel.de](http://www.rudolf-hensel.de)  
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#### Address enquiries to

#### Technical information

[info@rudolf-hensel.de](mailto:info@rudolf-hensel.de)

#### Safety Data Sheet

[sdb@chemiebuero.de](mailto:sdb@chemiebuero.de)

### 1.4 Emergency phone

#### Company

+49 (0)40-72 10 62 10 (7:00 - 17:00) 0172 4115390 (17:00 - 07:00)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

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

see SECTION 16

#### 2.1.2 Classification according to Regulation 67/548/EEC or 1999/45/EC

##### Hazard symbols



Harmful

##### R-phrases

R 10: Flammable.  
R 20/21: Harmful by inhalation and in contact with skin.  
R 52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 2.2 Label elements

#### Labelling according to Regulation 67/548/EEC or 1999/45/EC

##### Hazard symbols



Harmful

##### Contains:

Xylene, mixture of isomers

##### R-phrases

R 10: Flammable.  
R 20/21: Harmful by inhalation and in contact with skin.  
R 52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

##### S-phrases

S 9: Keep container in a well-ventilated place.  
S 24: Avoid contact with skin.  
S 36/37: Wear suitable protective clothing and gloves.  
S 61: Avoid release to the environment. Refer to special instructions, safety data sheets.

##### Special labelling

Contains: EA2854. May produce an allergic reaction.

##### 2004/42/CE

< 500 g/l II A i SB One-pack performance coatings (max. 500 g/l)

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### 2.3 Other hazards

**Environmental hazards**

Does not contain any PBT or vPvB substances.

**Other hazards**

Further hazards were not determined with the current level of knowledge.

## SECTION 3: Composition / Information on ingredients

### 3.1 Product-type:

The product is a mixture.

Range [%]	Substance
12,5 - <20	Xylene, mixture of isomers CAS: 1330-20-7, EINECS/ELINCS: 215-535-7, EU-INDEX: 601-022-00-9 GHS/CLP: Flam. Liq. 3 - H226 - Acute Tox. 4 - H312 H332 - Skin Irrit. 2 - H315 EEC: Xn, R 10-20/21-38
2,5 - <10	Hydrocarbons, C9, aromatics CAS: 64742-95-6, EINECS/ELINCS: 918-668-5, EU-INDEX: 649-356-00-4, ECB-Nr.: 01-2119455851-35-xxxx GHS/CLP: Flam. Liq. 3 - H226 - STOT SE 3 - H335 - Aquatic Chronic 2 - H411 - Asp. Tox 1 - H304 - - - EUH066 - STOT SE 3 - H336 EEC: Xn-N, R 10-37-51/53-65-66-67
1 - <10	Ethylbenzene CAS: 100-41-4, EINECS/ELINCS: 202-849-4, EU-INDEX: 601-023-00-4 GHS/CLP: Flam. Liq. 2 - H225 - Acute Tox. 4 - H332 EEC: F-Xn, R 11-20

**Comment on component parts**

Substances of Very High Concern - SVHC: substances are not contained or are below 0,1%.  
For the wording of the listed risk phrases refer to SECTION 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

**General information**

Remove contaminated soaked clothing immediately and dispose of safely.

**Inhalation**

Remove the victim into fresh air and keep him calm.  
Seek medical advice immediately.

**Skin contact**

In case of contact with skin wash off immediately with soap and water.  
Consult a doctor if skin irritation persists.

**Eye contact**

In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

**Ingestion**

Consult a doctor immediately.  
Do not induce vomiting.  
Rinse out mouth and give plenty of water to drink.

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

Irritant effects

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

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media**

Carbon dioxide.  
Dry powder.  
Alcohol-resistant foam.

**Extinguishing media that must not be used**

Full water jet.

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

Unknown risk of formation of toxic pyrolysis products.  
Carbon monoxide (CO)  
Not combusted hydrocarbons.

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### 5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

## SECTION 6: Accidental release measures

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

High risk of slipping due to leakage/spillage of product.

### 6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).

Do not discharge into the drains/surface waters/groundwater.

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

Take up mechanically.

Take up residues with absorbent material (e.g. sand, sawdust, generalpurpose binder, diatomaceous earth).

Dispose of absorbed material in accordance with the regulations.

### 6.4 Reference to other sections

See SECTION 8+13

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Provide suitable vacuuming at the processing area.

Keep away from all sources of ignition - Refrain from smoking.

Take precautionary measures against static discharges.

-

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

Keep only in original container.

Do not store together with oxidizing agents.

Keep container tightly closed.

Keep in a cool place. Store in a dry place.

Protect from heat/overheating and from sun.

### 7.3 Specific end use(s)

See product use, SECTION 1.2

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**SECTION 8: Exposure controls / personal protection**

**8.1 Control parameters**

**Ingredients with occupational exposure limits to be monitored (GB)**

Range [%]	Substance
2,5 - <10	Hydrocarbons, C9, aromatics
	CAS: 64742-95-6, EINECS/ELINCS: 918-668-5, EU-INDEX: 649-356-00-4, ECB-Nr.: 01-2119455851-35-xxxx
	Long-term exposure: 100 mg/m <sup>3</sup>
12,5 - <20	Xylene, mixture of isomers
	CAS: 1330-20-7, EINECS/ELINCS: 215-535-7, EU-INDEX: 601-022-00-9
	Long-term exposure: 50 ppm, 220 mg/m <sup>3</sup> , Sk, BMGV Short-term exposure (15-minute): 100 ppm, 441 mg/m <sup>3</sup>
1 - <2,5	Aluminiumsilikat
	CAS: 1332-58-7
	Long-term exposure: 2 mg/m <sup>3</sup> , respirable dust
1 - <10	Titanium dioxide
	CAS: 13463-67-7, EINECS/ELINCS: 236-675-5
	Long-term exposure: 4 mg/m <sup>3</sup> , respirable; total inhalable: TWA=10 mg/m <sup>3</sup>
1 - <10	Pentaerythritol
	CAS: 115-77-5, EINECS/ELINCS: 204-104-9
	Long-term exposure: 10 mg/m <sup>3</sup> , inhalable dust, respirable dust: TWA=4 mg/m <sup>3</sup> Short-term exposure (15-minute): 20 mg/m <sup>3</sup>
1 - <10	Ethylbenzene
	CAS: 100-41-4, EINECS/ELINCS: 202-849-4, EU-INDEX: 601-023-00-4
	Long-term exposure: 100 ppm, 441 mg/m <sup>3</sup> , Sk Short-term exposure (15-minute): 125 ppm, 552 mg/m <sup>3</sup>

**Ingredients with occupational exposure limits to be monitored (EU)**

Range [%]	Substance / EC LIMIT VALUES
12,5 - <20	Xylene, mixture of isomers
	CAS: 1330-20-7, EINECS/ELINCS: 215-535-7, EU-INDEX: 601-022-00-9
	Eight hours: 50 ppm, 221 mg/m <sup>3</sup> , H Short-term (15-minute): 100 ppm, 442 mg/m <sup>3</sup>
1 - <10	Ethylbenzene
	CAS: 100-41-4, EINECS/ELINCS: 202-849-4, EU-INDEX: 601-023-00-4
	Eight hours: 100 ppm, 442 mg/m <sup>3</sup> , H Short-term (15-minute): 200 ppm, 884 mg/m <sup>3</sup>

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## 8.2 Exposure controls

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation.
<b>Eye protection</b>	Safety glasses.
<b>Hand protection</b>	Butyl rubber, >480 min (EN 374). The details concerned are recommendations. Please contact the glove supplier for further information.
<b>Skin protection</b>	light protective clothing
<b>Other</b>	Avoid contact with eyes and skin. Do not breathe vapour/spray. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of these equipments to chemicals should be ascertained with the respective supplier. Wash hands before breaks and after work. Use barrier skin cream. Do not eat, drink, smoke or take drugs at work.
<b>Respiratory protection</b>	Breathing apparatus in the event of aerosol or mist formation. Short term: filter apparatus, filter P2.
<b>Thermal hazards</b>	not applicable
<b>Delimitation and monitoring of the environmental exposition</b>	See SECTION 6+7.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Form</b>	pasty
<b>Color</b>	white
<b>Odor</b>	characteristic
<b>Odour threshold</b>	not determined
<b>pH-value</b>	not determined
<b>pH-value [1%]</b>	not determined
<b>Boiling point [°C]</b>	not determined
<b>Flash point [°C]</b>	26
<b>Flammability [°C]</b>	not determined
<b>Lower explosion limit</b>	not determined
<b>Upper explosion limit</b>	not determined
<b>Oxidizing properties</b>	no
<b>Vapour pressure/gas pressure [kPa]</b>	not determined
<b>Density [g/ml]</b>	~ 1,32
<b>Bulk density [kg/m<sup>3</sup>]</b>	not applicable
<b>Solubility in water</b>	insoluble
<b>Partition coefficient [n-octanol/water]</b>	not determined
<b>Viscosity</b>	8000 - 12000 mPa.s (20°C)
<b>Relative vapour density determined in air</b>	not applicable
<b>Evaporation speed</b>	not applicable
<b>Melting point [°C]</b>	not determined
<b>Autoignition temperature [°C]</b>	not applicable
<b>Decomposition temperature</b>	not determined

### 9.2 Other information

none

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangerous reactions known if used as directed.

### 10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

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### 10.3 Possibility of hazardous reactions

Reactions with oxidizing agents.

### 10.4 Conditions to avoid

See SECTION 7.2.

### 10.5 Incompatible materials

Strong oxidizing agent.

### 10.6 Hazardous decomposition products

No hazardous decomposition products known.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Range [%]	Substance
1 - <10	Ethylbenzene, CAS: 100-41-4
	LD50, oral, Rat: 3500 mg/kg (IUCLID).
	LC50, inhalative, Rat: 17,2 mg/l/4h (IUCLID).
	LD50, dermal, Rabbit: 15354 mg/kg (IUCLID).
2,5 - <10	Hydrocarbons, C9, aromatics, CAS: 64742-95-6
	LD50, dermal, Rabbit: >2000 mg/kg (Lit.).
	LD50, oral, Rat: >2000 mg/kg (Lit.).
12,5 - <20	Xylene, mixture of isomers, CAS: 1330-20-7
	LD50, dermal, Rabbit: 4350 mg/kg (IUCLID).
	LC50, inhalative, Rat: 28 mg/l/4h (IUCLID).
	LD50, oral, Rat: 2840 mg/kg (Lit.).

**Serious eye damage/irritation** not determined

**Skin corrosion/irritation** not determined

**Respiratory or skin sensitisation** not determined

**Specific target organ toxicity — single exposure** not determined

**Specific target organ toxicity — repeated exposure** not determined

**Mutagenicity** not determined

**Reproduction toxicity** not determined

**Carcinogenicity** not determined

#### General remarks

Toxicological data of complete product are not available.  
 The product was classified on the basis of the calculation procedure of the preparation directive.  
 The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Range [%]	Substance
1 - <10	Ethylbenzene, CAS: 100-41-4
	EC50, Bacteria: 9,68 mg/l/30 min. (Microtox Test).
	IC50, (72h), Algae: 4,6 mg/l (IUCLID).
	EC50, (48h), Daphnia magna: 2,9 mg/l (ECOTOX Database).
	LC50, (96h), Oncorhynchus mykiss: 4,2 mg/l (OECD 203).
2,5 - <10	Hydrocarbons, C9, aromatics, CAS: 64742-95-6
	EL50, (48h), Daphnia magna: 3,2 mg/l (Lit.).
	LL50, (96h), Oncorhynchus mykiss: 9,2 mg/l (Lit.).
	EL50, (72h), Pseudokirchneriella subcapitata: 2,6 - 2,9 mg/l (Lit.).
12,5 - <20	Xylene, mixture of isomers, CAS: 1330-20-7
	EC50, (24h), Daphnia magna: 75,5 mg/l (ECOTOX Database).
	LC50, (96h), Oncorhynchus mykiss: 8,2 mg/l (ECOTOX Database).

### 12.2 Persistence and degradability

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	not determined

### 12.3 Bioaccumulative potential

not determined

### 12.4 Mobility in soil

not determined

### 12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

### 12.6 Other adverse effects

The product was classified on the basis of the calculation procedure of the preparation directive.

Ecological data of complete product are not available.

The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

#### Product

Coordinate disposal with the authorities if necessary.

#### Waste no. (recommended)

080111\*

#### Contaminated packaging

Packaging that cannot be cleaned should be disposed of as for product.  
Untaminated packaging may be taken for recycling.

#### Waste no. (recommended)

150110\*  
150102  
150104

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## SECTION 14: Transport information

### 14.1 UN number

See SECTION14.2 in accordance with UN shipping name

### 14.2 UN proper shipping name

**Transport by land according to ADR/RID** UN 1263 Paint (No dangerous goods, according ADR 2.2.3.1.5 to max. 450 l) III

- ADR 1.1.3.6 (8.6) Transport category (tunnel restriction code) 3 (D/E)

**Inland navigation (ADN)** UN 1263 Paint (No dangerous goods, according ADR 2.2.3.1.5 to max. 450 l) III

**Marine transport in accordance with IMDG** UN 1263 Paint (No dangerous goods, according IMDG 2.3.2.5 to max. 30 l (see 5.4.1.5.10) - "transport in compliance with 2.3.2.5 of the IMDG Code") 3 III

- EMS F-E, S-E

- Label



- IMDG LQ 5 l

**Air transport in accordance with IATA** UN 1263 Paint 3 III

- Label



### 14.3 Transport hazard class(es)

See SECTION14.2 in accordance with UN shipping name

### 14.4 Packing group

See SECTION14.2 in accordance with UN shipping name

### 14.5 Environmental hazards

See SECTION14.2 in accordance with UN shipping name

### 14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

### 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

not applicable

## SECTION 15: Regulatory information

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

**EEC-REGULATIONS** 1967/548 (1999/45); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (Reach); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC

**TRANSPORT-REGULATIONS** DOT-Classification, ADR (2011); IMDG-Code (2011, 35. Amdt.); IATA-DGR (2012).

**NATIONAL REGULATIONS (GB):** EH40/2005 Workplace exposure limits with amendments October 2007.  
CHIP 3/ CHIP 4

### 15.2 Chemical safety assessment

not applicable



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## SECTION 16: Other informations

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

Hazard pictograms



Signal word

WARNING

Flam. Liq. 3 - H226 Flammable liquid and vapour.  
Acute Tox. 4 - H312 H332 Harmful in contact with skin or if inhaled.  
Aquatic Chronic 3 - H412 Harmful to aquatic life with long lasting effects.

Classification procedure

Classification according to conversion table Annex VII 1272/2008/EC

### 16.2 R-phrases (SECTION 03)

R 10: Flammable.  
R 37: Irritating to respiratory system.  
R 51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R 65: Harmful - may cause lung damage if swallowed.  
R 66: Repeated exposure may cause skin dryness or cracking.  
R 67: Vapours may cause drowsiness and dizziness.  
R 20/21: Harmful by inhalation and in contact with skin.  
R 38: Irritating to skin.  
R 11: Highly flammable.  
R 20: Harmful by inhalation.

### 16.3 Hazard statements (SECTION 03)

H226 Flammable liquid and vapour.  
H335 May cause respiratory irritation.  
H411 Toxic to aquatic life with long lasting effects.  
H304 May be fatal if swallowed and enters airways.  
EUH066 Repeated exposure may cause skin dryness or cracking.  
H336 May cause drowsiness or dizziness.  
H312 H332 Harmful in contact with skin or if inhaled.  
H315 Causes skin irritation.  
H225 Highly flammable liquid and vapour.  
H332 Harmful if inhaled.

### 16.4 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route  
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses  
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure  
CAS = Chemical Abstracts Service  
CLP = Classification, Labelling and Packaging  
DMEL = Derived Minimum Effect Level  
DNEL = Derived No Effect Level  
EC50 = Median effective concentration  
ECB = European Chemicals Bureau  
EEC = European Economic Community  
EINECS = European Inventory of Existing Commercial Chemical Substances  
ELINCS = European List of Notified Chemical Substances  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk  
IC50 = Inhibition concentration, 50%  
IMDG = International Maritime Code for Dangerous Goods  
IUCLID = International Uniform Chemical Information Database  
LC50 = Lethal concentration, 50%  
LD50 = Median lethal dose  
MARPOL = International Convention for the Prevention of Marine Pollution from Ships  
PBT = Persistent, Bioaccumulative and Toxic substance  
PNEC = Predicted No-Effect Concentration  
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals  
TLV@/TWA = Threshold limit value – time-weighted average  
TLV@STEL = Threshold limit value – short-time exposure limit  
VOC = Volatile Organic Compounds  
vPvB = very Persistent and very Bioaccumulative

Modified position

none



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**16.5 Other informations**

Observe employment restrictions for people yes

VOC (1999/13/CE) not determined

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