Rudolf Hensel GmbH
21039 Börnsen

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

1.1 Product identifier

HENSOTHERM 320 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
Fax +49 (0)40-72 10 62 52
Homepage www.rudolf-hensel.de
E-mail info@rudolf-hensel.de

Address enquiries to

Technical information info@rudolf-hensel.de

Safety Data Sheet 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 38: Irritating to skin.
R 43: May cause sensitisation by skin contact.
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

EA2854

R-phrases

R 10: Flammable.
R 20/21: Harmful by inhalation and in contact with skin.
R 38: Irritating to skin.
R 43: May cause sensitisation by skin contact.
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.

2004/42/CE < 500 g/l II A i SB One-pack performance coatings (max. 500 g/l)

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 - <25	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
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
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 - <2,5	EA2854
	EINECS/ELINCS: 432-430-3, EU-INDEX: 616-200-00-1
	GHS/CLP: Skin Sens. 1 - H317 - Aquatic Chronic 4 - H413
	EEC: Xi, R 43-53

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

Allergic reactions

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.
Alcohol-resistant foam.
Dry powder.

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.
Not combusted hydrocarbons.
Carbon monoxide (CO)

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within 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 within 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 open flames, hot surfaces and sources of ignition.
Do not smoke.
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.
Protect from heat/overheating and from sun.
Keep in a cool place. Store in a dry place.

7.3 Specific end use(s)

See product use, SECTION 1.2

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/m³
12,5 - <25	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/m³, Sk, BMGV
	Short-term exposure (15-minute): 100 ppm, 441 mg/m³
1 - <10	Titanium dioxide
	CAS: 13463-67-7, EINECS/ELINCS: 236-675-5
	Long-term exposure: 4 mg/m³, respirable; total inhalable: TWA=10 mg/m³
1 - <10	Pentaerythritol
	CAS: 115-77-5, EINECS/ELINCS: 204-104-9
	Long-term exposure: 10 mg/m³, inhalable dust, respirable dust: TWA=4 mg/m³
	Short-term exposure (15-minute): 20 mg/m³
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/m³, Sk
	Short-term exposure (15-minute): 125 ppm, 552 mg/m³

Ingredients with occupational exposure limits to be monitored (EU)

Range [%]	Substance / EC LIMIT VALUES
12,5 - <25	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/m³, H
	Short-term (15-minute): 100 ppm, 442 mg/m³
1 - <10	Ethylbenzene
	CAS: 100-41-4, EINECS/ELINCS: 202-849-4, EU-INDEX: 601-023-00-4
	Eight hours: 100 ppm, 442 mg/m³, H
	Short-term (15-minute): 200 ppm, 884 mg/m³

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	Safety glasses.
Hand protection	Butyl rubber, >480 min (EN 374). The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	light protective clothing
Other	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.
Respiratory protection	Breathing apparatus in the event of aerosol or mist formation. Short term: filter apparatus, filter P2.
Thermal hazards	not applicable
Delimitation and monitoring of the environmental exposition	See SECTION 6+7.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	pasty
Color	white
Odor	characteristic
Odour threshold	not determined
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	not determined
Flash point [°C]	26
Flammability [°C]	not determined
Lower explosion limit	not determined
Upper explosion limit	not determined
Oxidizing properties	no
Vapour pressure/gas pressure [kPa]	not determined
Density [g/ml]	1,24 - 1,34
Bulk density [kg/m³]	not applicable
Solubility in water	insoluble
Partition coefficient [n-octanol/water]	not determined
Viscosity	7000 - 13000 mPa.s (20°C)
Relative vapour density determined in air	not applicable
Evaporation speed	not applicable
Melting point [°C]	not determined
Autoignition temperature [°C]	not applicable
Decomposition temperature	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).

10.3 Possibility of hazardous reactions

Reactions with oxidizing agents.

10.4 Conditions to avoid

Strong heating.
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.).
1 - <2,5	EA2854
	LD50, oral, Rat: >2000 mg/kg.
12,5 - <25	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.

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.).
1 - <2,5	EA2854
	LC50, (96h), fish: >1000 mg/l.
12,5 - <25	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.
Uncontaminated packaging may be taken for recycling.

Waste no. (recommended) 150110*
150102
150104

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 IDMG 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

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.
Skin Irrit. 2 - H315 Causes skin irritation.
Skin Sens. 1 - H317 May cause an allergic skin reaction.
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 20/21: Harmful by inhalation and in contact with skin.
R 38: Irritating to skin.
R 11: Highly flammable.
R 20: Harmful by inhalation.
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 43: May cause sensitisation by skin contact.
R 53: May cause long-term adverse effects in the aquatic environment.

16.3 Hazard statements (SECTION 03)

H226 Flammable liquid and vapour.
H312 H332 Harmful in contact with skin or if inhaled.
H315 Causes skin irritation.
H225 Highly flammable liquid and vapour.
H332 Harmful if inhaled.
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.
H317 May cause an allergic skin reaction.
H413 May cause long lasting harmful effects to aquatic life.

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

16.5 Other informations

Observe employment restrictions for people yes

VOC (1999/13/CE) not determined