

Rudolf Hensel GmbH
21039 Börnsen

Date printed 27.10.2014, Revision 27.10.2014

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

1.1 Product identifier

HENSOGRUND 2K PU HÄRTER

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

1.2.1 Relevant uses

Primer

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 telephone number

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]

Flam. Liq. 3: H226 Flammable liquid and vapour.
Skin Irrit. 2: H315 Causes skin irritation.
Skin Sens. 1: H317 May cause an allergic skin reaction.
Acute Tox. 4: H332 Harmful if inhaled.
STOT SE 3: H335 May cause respiratory irritation.

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

Flammable - R 10: Flammable.
Xn, Harmful - R 20/21: Harmful by inhalation and in contact with skin.
Xi, Irritant - R 37: Irritating to respiratory system.
Sensitizing. - R 43: May cause sensitisation by skin contact.

2.2 Label elements

Labelling according to Regulation (EC) 1272/2008

Hazard pictograms



Signal word

WARNING

Contains:

Hexamethylene diisocyanate, oligomers
Hexamethylene-diisocyanate

Hazard statements

H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

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.
P260 Do not breathe vapours/spray.
P271 Use only outdoors or in a well-ventilated area.

2004/42/CE

< 500 g/l II A j SB Two-pack reactive performance coatings (max. 500 g/l)

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2.3 Other hazards

Human health dangers	Frequent persistent contact with the skin can cause skin irritation. If swallowed or in the event of vomiting, risk of product entering the lungs.
Environmental hazards	Does not contain any PBT or vPvB substances.
Other hazards	none

SECTION 3: Composition / Information on ingredients

Product-type:

The product is a mixture.

Range [%]	Substance
50 - 60	Hexamethylene diisocyanate, oligomers CAS: 28182-81-2, EINECS/ELINCS: Polymer, ECB-Nr.: 01-2119485796-17-XXXX GHS/CLP: Acute Tox. 4: H332 - STOT SE 3: H335 - Skin Sens. 1: H317 EEC: Xn, R 20-37-43
10 - 12,5	2-Methoxy-1-methylethyl acetate CAS: 108-65-6, EINECS/ELINCS: 203-603-9, EU-INDEX: 607-195-00-7, ECB-Nr.: 01-2119475791-29-XXXX GHS/CLP: Flam. Liq. 3: H226 EEC: R 10
10 - 12,5	Xylene, mixture of isomers CAS: 1330-20-7, EINECS/ELINCS: 215-535-7, EU-INDEX: 601-022-00-9, ECB-Nr.: 01-2119486136-34-XXXX GHS/CLP: Flam. Liq. 3: H226 - Acute Tox. 4: H312 H332 - Skin Irrit. 2: H315 EEC: Xn, R 10-20/21-38
1 - 2,5	Ethylbenzene CAS: 100-41-4, EINECS/ELINCS: 202-849-4, EU-INDEX: 601-023-00-4, ECB-Nr.: 01-2119489370-35-XXXX GHS/CLP: Flam. Liq. 2: H225 - Acute Tox. 4: H332 - STOT RE 2: H373 - Asp. Tox. 1: H304 EEC: F-Xn, R 11-20-48/20-65
<0,5	Hexamethylene-diisocyanate CAS: 822-06-0, EINECS/ELINCS: 212-485-8, EU-INDEX: 615-011-00-1, ECB-Nr.: 01-2119457571-37-XXXX GHS/CLP: Acute Tox. 4: H302 - Acute Tox. 1: H330 - Skin Irrit. 2: H315 - Eye Irrit. 2: H319 - Resp. Sens. 1: H334 - STOT SE 3: H335 - Skin Sens. 1: H317 EEC: T, R 23-36/37/38-42/43

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0,1%.
For full text of H-statements and R-phrases: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information	Change soaked clothing.
Inhalation	Remove the victim into fresh air and keep him calm. In the event of symptoms seek for medical treatment.
Skin contact	In case of contact with skin wash off immediately with soap and water. Consult a doctor if skin irritation persists.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Seek medical advice 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

Headache
 Vertigo
 Dizziness

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Water spray jet.
Carbon dioxide.
Foam.
Dry powder.

Extinguishing media that must not
be used Full water jet.

5.2 Special hazards arising from the substance or mixture

In the event of fire the following can be released:
Carbon monoxide (CO)
Not combusted hydrocarbons.

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.
Cool containers at risk with water spray jet.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from all sources of ignition.
Ensure adequate ventilation.
Use breathing apparatus if exposed to vapours/dust/aerosol.
Use personal protective equipment (protective gloves, safety glasses, protective clothing).

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 with absorbent material (e.g. sand).
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 good room ventilation even at ground level (vapours are heavier than air).
Provide suitable vacuuming at the processing area.
Use solvent-resistant equipment.
Vapours can form an explosive mixture with air.
Take precautionary measures against static discharges.
Keep away from all sources of ignition - Refrain from smoking.
Apparates and equipments must be conform in accordance to standard of storage and handling of flammable products.
Do not eat, drink, smoke or take drugs at work.
Use barrier skin cream.
After worktime and before work breaks the affected skin areas must be thoroughly cleaned.

7.2 Conditions for safe storage, including any incompatibilities

Provide solvent-resistant and impermeable floor.
Keep only in original container.
Do not store together with oxidizing agents.
Keep container tightly closed.
Keep container in a well-ventilated place.
Protect from heat/overheating.
Recommended storage temperature: 15 - 25 °C



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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
50 - 60	Hexamethylene diisocyanate, oligomers
	CAS: 28182-81-2, EINECS/ELINCS: Polymer, ECB-Nr.: 01-2119485796-17-XXXX
	Long-term exposure: 0,02 mg/m ³ , as NCO, Sen
	Short-term exposure (15-minute): 0,07 mg/m ³
10 - 12,5	Xylene, mixture of isomers
	CAS: 1330-20-7, EINECS/ELINCS: 215-535-7, EU-INDEX: 601-022-00-9, ECB-Nr.: 01-2119486136-34-XXXX
	Long-term exposure: 50 ppm, 220 mg/m ³ , Sk, BMGV
	Short-term exposure (15-minute): 100 ppm, 441 mg/m ³
10 - 12,5	2-Methoxy-1-methylethyl acetate
	CAS: 108-65-6, EINECS/ELINCS: 203-603-9, EU-INDEX: 607-195-00-7, ECB-Nr.: 01-2119475791-29-XXXX
	Long-term exposure: 50 ppm, 274 mg/m ³ , Sk
	Short-term exposure (15-minute): 100 ppm, 548 mg/m ³
1 - 2,5	Ethylbenzene
	CAS: 100-41-4, EINECS/ELINCS: 202-849-4, EU-INDEX: 601-023-00-4, ECB-Nr.: 01-2119489370-35-XXXX
	Long-term exposure: 100 ppm, 441 mg/m ³ , Sk
	Short-term exposure (15-minute): 125 ppm, 552 mg/m ³
<0,5	Hexamethylene-diisocyanate
	CAS: 822-06-0, EINECS/ELINCS: 212-485-8, EU-INDEX: 615-011-00-1, ECB-Nr.: 01-2119457571-37-XXXX
	Long-term exposure: 0,02 mg/m ³ , as NCO, Sen
	Short-term exposure (15-minute): 0,07 mg/m ³

Ingredients with occupational exposure limits to be monitored (EU)

Range [%]	Substance / EC LIMIT VALUES
10 - 12,5	Xylene, mixture of isomers
	CAS: 1330-20-7, EINECS/ELINCS: 215-535-7, EU-INDEX: 601-022-00-9, ECB-Nr.: 01-2119486136-34-XXXX
	Eight hours: 50 ppm, 221 mg/m ³ , H
	Short-term (15-minute): 100 ppm, 442 mg/m ³
10 - 12,5	2-Methoxy-1-methylethyl acetate
	CAS: 108-65-6, EINECS/ELINCS: 203-603-9, EU-INDEX: 607-195-00-7, ECB-Nr.: 01-2119475791-29-XXXX
	Eight hours: 50 ppm, 275 mg/m ³ , H
	Short-term (15-minute): 100 ppm, 550 mg/m ³
1 - 2,5	Ethylbenzene
	CAS: 100-41-4, EINECS/ELINCS: 202-849-4, EU-INDEX: 601-023-00-4, ECB-Nr.: 01-2119489370-35-XXXX
	Eight hours: 100 ppm, 442 mg/m ³ , H
	Short-term (15-minute): 200 ppm, 884 mg/m ³

DNEL

Range [%]	Substance
10 - 12,5	2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
	Industrial, dermal, Long-term - systemic effects: 153,5 mg/kg.
	Industrial, inhalative, Long-term - systemic effects: 275 mg/m ³ .
	general population, oral, Long-term - systemic effects: 1,67 mg/kg.
	general population, dermal, Long-term - systemic effects: 54,8 mg/kg.
	general population, inhalative, Long-term - systemic effects: 33 mg/m ³ .
1 - 2,5	Ethylbenzene, CAS: 100-41-4
	Industrial, dermal, Long-term - systemic effects: 180 mg/kg bw/d.
	Industrial, inhalative, Acute - local effects: 289 mg/m ³ .

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	Industrial, inhalative, Acute - systemic effects: 289 mg/m ³ .
	Industrial, inhalative, Long-term - local effects: 77 mg/m ³ .
	Industrial, inhalative, Long-term - systemic effects: 77 mg/m ³ .
	general population, inhalative, Acute - systemic effects: 174 mg/m ³ .
	general population, inhalative, Long-term - systemic effects: 14,8 mg/m ³ .
	general population, dermal, Long-term - systemic effects: 108 mg/kg bw/d.
	general population, oral, Long-term - systemic effects: 1,6 mg/kg bw/d.
	general population, inhalative, Acute - local effects: 174 mg/m ³ .
50 - 60	Hexamethylene diisocyanate, oligomers, CAS: 28182-81-2
	Industrial, inhalative, Acute - local effects: 1 mg/m ³ .
	Industrial, inhalative, Long-term - local effects: 0,5 mg/m ³ .
10 - 12,5	Xylene, mixture of isomers, CAS: 1330-20-7
	Industrial, inhalative, Long-term - systemic effects: 77 mg/m ³ .
	Industrial, dermal, Long-term - systemic effects: 180 mg/kg bw/d.
	general population, oral, Long-term - systemic effects: 1,6 mg/kg bw/d.
	general population, dermal, Long-term - systemic effects: 108 mg/kg bw/d.
	general population, inhalative, Long-term - systemic effects: 14,8 mg/m ³ .

PNEC

Range [%]	Substance
10 - 12,5	2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
	freshwater, 0,635 mg/l.
	seawater, 0,0635 mg/l.
	sediment (freshwater), 3,29 mg/kg.
	sediment (seaater), 0,329 mg/kg.
	soil, 0,29 mg/kg.
	sewage treatment plants (STP), 100 mg/l.
1 - 2,5	Ethylbenzene, CAS: 100-41-4
	seawater, 0,01 mg/l (Ass.factor 10).
	freshwater, 0,1 mg/l (Ass.factor 10).
	sewage treatment plants (STP), 9,6 mg/l (Ass.factor 10).
	sediment (freshwater), 13,7 mg/kg dw.
	soil, 2,68 mg/kg dw.
	oral (food), 0,02 g/kg food.
	sediment (seaater), 1,37 mg/kg dw.
<0,5	Hexamethylene-diisocyanate, CAS: 822-06-0
	sewage treatment plants (STP), 8,42 mg/l.
	soil, 0.0026 mg/kg dw.
	seawater, 0.00774 mg/l.
	sediment (freshwater), 0.01334 mg/kg dw.
	sediment (seaater), 0.001334 mg/kg dw.
	freshwater, 0.0774 mg/l.
50 - 60	Hexamethylene diisocyanate, oligomers, CAS: 28182-81-2
	freshwater, 0,199 mg/l.
	seawater, 0,0199 mg/l.
	sediment (freshwater), 44551 mg/kg.
	sediment (seaater), 4455 mg/kg.
	soil, 8884 mg/kg.
	sewage treatment plants (STP), 100 mg/l.
10 - 12,5	Xylene, mixture of isomers, CAS: 1330-20-7
	seawater, 0,327 mg/l.
	sewage treatment plants (STP), 6,58 mg/l.
	sediment, 12,46 mg/kg.
	freshwater, 0,327 mg/l.

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8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	Safety glasses.
Hand protection	Viton, >480 min (EN 374). The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	Solvent-resistant 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 of the hazardous substances handled. The resistance of these equipments to chemicals should be ascertained with the respective supplier.
Respiratory protection	Breathing apparatus in the event of high concentrations. Short term: filter apparatus, combination filter A-P2.
Thermal hazards	not determined
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	liquid
Color	yellowish
Odor	characteristic
Odour threshold	not determined
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	not determined
Flash point [°C]	24 (DIN 53213)
Flammability [°C]	315
Lower explosion limit	0,9 Vol.-%
Upper explosion limit	10,8 Vol.-%
Oxidizing properties	no
Vapour pressure/gas pressure [kPa]	10,00
Density [g/ml]	1,07 (20 °C / 68,0 °F)
Bulk density [kg/m³]	not applicable
Solubility in water	insoluble
Partition coefficient [n-octanol/water]	not determined
Viscosity	56 s / 4 mm (20°C) (DIN 53211)
Relative vapour density determined in air	not determined
Evaporation speed	not determined
Melting point [°C]	not determined
Autoignition temperature [°C]	not applicable
Decomposition temperature [°C]	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

The product is stable under standard conditions.



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10.3 Possibility of hazardous reactions

Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.
Reactions with strong oxidizing agents, strong acids and alkalies.

10.4 Conditions to avoid

Strong heating.
See SECTION 7

10.5 Incompatible materials

See SECTION 10.3.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product
ATE-mix, inhalative, Rat: 17,16 mg/l 4h.
ATE-mix, dermal, Rabbit: > 2000 mg/kg.

Range [%]	Substance
10 - 12,5	2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
	LD50, dermal, Rat: > 2000 mg/kg.
	LD50, oral, Rat: > 5000 mg/kg.
	LC0, inhalative, Rat: > 4345 ppm (6 h).
1 - 2,5	Ethylbenzene, CAS: 100-41-4
	LD50, oral, Rat: 3500 mg/kg.
	LD50, dermal, Rabbit: 17800 mg/kg.
	LC50, inhalative, Rat: 17,2 mg/l (4 h).
<0,5	Hexamethylene-diisocyanate, CAS: 822-06-0
	LD50, dermal, Rat: > 7000 mg/kg bw.
	LD50, oral, Rat: 959 mg/kg bw.
	LC50, inhalative, Rat: 0,124 mg/l 4h.
	NOAEL, inhalative, Rat: < 0,055 mg/l.
50 - 60	Hexamethylene diisocyanate, oligomers, CAS: 28182-81-2
	inhalative, Conversion value of acute toxicity: 1,5 mg/l/4h.
	LD50, oral, Rat (female): >= 5000 mg/l (OECD 423).
	LD50, dermal, Rat: > 2000 mg/l (OECD 402).
	LD50, dermal, Rabbit: > 2000 mg/l.
	LC50, inhalative, Rat (female): 0,390 mg/l/4h (OECD 403).
	NOAEL, inhalative, Rat: 3,3 mg/m ³ /90d (OECD 413).
10 - 12,5	Xylene, mixture of isomers, CAS: 1330-20-7
	LD50, oral, Rat: 8700 mg/kg.
	LD50, dermal, Rabbit: 2000 mg/kg.
	LC50, inhalative, Rat: 6350 mg/l (4 h).

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	

The product was classified on the basis of the calculation procedure of the preparation directive.
 Toxicological data of complete product are not available.
 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
10 - 12,5	2-Methoxy-1-methylethyl acetate, CAS: 108-65-6
	LC50, (96h), <i>Oncorhynchus mykiss</i> : 134 mg/l (OECD 203).
	EC50, (48h), <i>Daphnia magna</i> : > 500 mg/l.
	EC50, (72h), <i>Selenastrum capricornutum</i> : > 1000 mg/l (OECD 201).
	NOEC, <i>Oryzias latipes</i> : 47,5 mg/l (14 d) (OECD 204).
	NOEC, (21d), <i>Daphnia magna</i> : ≥ 100 mg/l (OECD 202).
	EC10, Bacteria: > 1000 mg/l (0,5 h) (ISO 8192).
1 - 2,5	Ethylbenzene, CAS: 100-41-4
	LC50, (96h), <i>Oncorhynchus mykiss</i> : 4,2 mg/l.
	LC50, (96h), <i>Carassius auratus</i> : 94,44 mg/l.
	LC50, (96h), <i>Pimephales promelas</i> : 12,1 mg/l.
	EC50, (48h), <i>Daphnia magna</i> : 1,8 - 2,9 mg/l.
	IC50, (72h), <i>Selenastrum capricornutum</i> : 4,6 mg/l.
<0,5	Hexamethylene-diisocyanate, CAS: 822-06-0
	EC50, (72h), <i>Desmodesmus subspicatus</i> : > 77,4 mg/l (IUCLID).
	LC0, (96h), <i>Brachidanio rerio</i> : > 82,8 mg/l (IUCLID).
50 - 60	Hexamethylene diisocyanate, oligomers, CAS: 28182-81-2
	LC50, (96h), <i>Danio rerio</i> : > 100 mg/l.
	EC50, (48h), <i>Daphnia magna</i> : > 100 mg/l.
	EC50, (3h), Bacteria: > 10000 mg/l.
	ErC50, (72h), <i>Scenedesmus subspicatus</i> : 199 mg/l.
10 - 12,5	Xylene, mixture of isomers, CAS: 1330-20-7
	LC50, (96h), <i>Oncorhynchus mykiss</i> : 14 mg/l.
	LC50, (48h), <i>Leuciscus idus</i> : 86 mg/l.
	EC50, Bacteria: 1 - 10 mg/l.
	EC50, (24h), <i>Daphnia magna</i> : 165 mg/l.
	IC50, (72h), Algae: 1 - 10 mg/l.

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

Accumulation in organisms is not expected.

12.4 Mobility in soil

No information available.

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

No classification 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.

Do not discharge product unmonitored into the environment.

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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

Dispose of as hazardous waste.
Disposal in an incineration plant in accordance with the regulations of the local authorities.

Waste no. (recommended)

080111*

Contaminated packaging

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

Waste no. (recommended)

150110*

SECTION 14: Transport information

14.1 UN number

See SECTION 14.2 in accordance with UN shipping name

14.2 UN proper shipping name

Transport by land according to ADR/RID UN 1263 Paint related material 3 III

- Classification Code

F1

- Label



- ADR LQ

5 I

- ADR 1.1.3.6 (8.6)

Transport category (tunnel restriction code) 3 (D/E)

Inland navigation (ADN)

UN 1263 Paint related material 3 III

- Classification Code

F1

- Label



Marine transport in accordance with IMDG UN 1263 Paint related material 3 III

- EMS

F-E, S-E

- Label



- IMDG LQ

5 I

Air transport in accordance with IATA UN 1263 Paint related material 3 III

- Label



14.3 Transport hazard class(es)

See SECTION 14.2 in accordance with UN shipping name

14.4 Packing group

See SECTION 14.2 in accordance with UN shipping name

14.5 Environmental hazards

See SECTION 14.2 in accordance with UN shipping name

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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 determined

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 (2013); IMDG-Code (2013, 36. Amdt.); IATA-DGR (2013).

NATIONAL REGULATIONS (GB): EH40/2005 Workplace exposure limits (Second edition, published December 2011).
CHIP 3/ CHIP 4

- **Observe employment restrictions for people** Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.

- **VOC (1999/13/CE)** < 500 g/l

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 R-phrases (SECTION 3)

R 10: Flammable.
R 20/21: Harmful by inhalation and in contact with skin.
R 38: Irritating to skin.
R 20: Harmful by inhalation.
R 37: Irritating to respiratory system.
R 43: May cause sensitisation by skin contact.
R 11: Highly flammable.
R 48/20: Harmful - danger of serious damage to health by prolonged exposure through inhalation.
R 65: Harmful - may cause lung damage if swallowed.
R 23: Toxic by inhalation.
R 36/37/38: Irritating to eyes, respiratory system and skin.
R 42/43: May cause sensitisation by inhalation and skin contact.

16.2 Hazard statements (SECTION 3)

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H373 May cause damage to hearing organs through prolonged or repeated exposure.
H225 Highly flammable liquid and vapour.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H312+H332 Harmful in contact with skin or if inhaled.
H226 Flammable liquid and vapour.

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Date printed 27.10.2014, Revision 27.10.2014

Version 02. Supersedes version: 01

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16.3 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

16.4 Other information

Classification procedure

Flam. Liq. 3: H226 Flammable liquid and vapour. (On basis of test data)
Skin Irrit. 2: H315 Causes skin irritation. (Calculation method)
Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
Acute Tox. 4: H332 Harmful if inhaled. (Calculation method)
STOT SE 3: H335 May cause respiratory irritation. (Calculation method)

Modified position

SECTION 2 been added: P271 Use only outdoors or in a well-ventilated area.
SECTION 2 been added: P260 Do not breathe vapours/spray.
SECTION 2 been added: P280 Wear protective gloves/protective clothing/eye protection/face protection.
SECTION 2 been added: P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
SECTION 5 been added: In the event of fire the following can be released:
SECTION 6 been added: Use personal protective equipment (protective gloves, safety glasses, protective clothing).
SECTION 7 been added: After worktime and before work breaks the affected skin areas must be thoroughly cleaned.
SECTION 12 been added: Accumulation in organisms is not expected.



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