Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 10.05.2017 V - 3 Revision: 10.05.2017

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

· **1.1 Product identifier**

· **Trade name: PU-SYSTEM G8-SUPER**

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Uses advised against:
Not suitable for use in homeworker (DIY) applications.

· **Application of the substance / the mixture** Polyurethane lacquer

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**
Vosschemie GmbH
Esinger Steinweg 50
D-25436 Uetersen
Phone: +49 (0)4122 717 0; Fax: +49 (0)4122 717158; info@vosschemie.de

· **Further information obtainable from:**
Abteilung Labor / +49 (0)4122 717 0
s.schaller@vosschemie.de

· **1.4 Emergency telephone number:**
Giftinformationszentrum (GIZ)-Nord, Goettingen, Deutschland
Phone: +49 (0)551 19240

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

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

GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

(Contd. on page 2)

(Contd. of page 1)

GHS08 health hazard

STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.

GHS07

Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H335-H336	May cause respiratory irritation. May cause drowsiness or dizziness.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
· **Hazard pictograms**

GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
aliphatic polyisocyanate
xylene, mixture of isomers
Solvent naphtha (petroleum), light arom.
ethylbenzene
· **Hazard statements**

H226	Flammable liquid and vapour.
H332	Harmful if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H335-H336	May cause respiratory irritation. May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H304	May be fatal if swallowed and enters airways.
H412	Harmful to aquatic life with long lasting effects.

· **Precautionary statements**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

(Contd. on page 3)

(Contd. of page 2)

P331 Do NOT induce vomiting.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**
Contains isocyanates. May produce an allergic reaction.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 67892-85-7	aliphatic polyisocyanate Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	25-50%
CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119488216-32	xylene, mixture of isomers Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	25-50%
CAS: 64742-95-6 EINECS: 265-199-0 Reg.nr.: 01-2119455851-35	Solvent naphtha (petroleum), light arom. Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H335-H336	10-<20%
CAS: 100-41-4 EINECS: 202-849-4	ethylbenzene Flam. Liq. 2, H225; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H332	3.0-<10%
EC number: 918-668-5 Reg.nr.: 01-2119455851-35	Hydrocarbons, C9, aromatics Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H335-H336	3.0-<10%
CAS: 108-65-6 EINECS: 203-603-9 Reg.nr.: 01-2119475791-29	2-methoxy-1-methylethyl acetate Flam. Liq. 3, H226	3.0-<10%
CAS: 822-06-0 EINECS: 212-485-8 Reg.nr.: 01-2119457571-37	hexamethylene-di-isocyanate Acute Tox. 1, H330; Resp. Sens. 1, H334; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	0.1-<0.3%

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

(Contd. on page 4)

(Contd. of page 3)

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Personal protection for the First Aider.
Take affected persons out of danger area and lay down.
In case of irregular breathing or respiratory arrest provide artificial respiration.
Immediately remove any clothing soiled by the product.
· **After inhalation:**
Remove person to fresh air and keep comfortable for breathing.
In case of unconsciousness place patient stably in side position for transportation.
Seek medical treatment in case of complaints.
· **After skin contact:**
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Immediately wash with water and soap and rinse thoroughly.
If skin irritation occurs: Get medical advice/attention.
Use skin protection cream for skin protection.
· **After eye contact:**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a doctor immediately.
· **After swallowing:** Do not induce vomiting; call for medical help immediately.
· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
CO_2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Violent reaction with water at higher temperatures.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Hydrogen cyanide (HCN)
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
Do not inhale explosion gases or combustion gases.
· **Additional information**
Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

(Contd. on page 5)

(Contd. of page 4)

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Avoid contact with the eyes and skin.
Ensure adequate ventilation
Do not inhale gases / fumes / aerosols.
Use respiratory protective device against the effects of fumes/dust/aerosol.
Keep away from ignition sources.
· **6.2 Environmental precautions:**
Avoid release to the environment.
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Pls. refer to section 10
Do not seal receptacle gas tight.
Danger of bursting.
Dispose contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Avoid contact with the eyes and skin.
Do not inhale gases / fumes / aerosols.
Use respiratory protective device against the effects of fumes/dust/aerosol.
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Vapours of the product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration.
Fumes can combine with air to form an explosive mixture.
Protect against electrostatic charges.
Use explosion-proof apparatus / fittings and spark-proof tools.
Ground/bond container and receiving equipment.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.
Adhere to the provisions of the Law on Water Protection.
· **Information about storage in one common storage facility:**
Pls. refer to section 10
Keep away from foodstuffs, beverages and feed.
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Store receptacle in a well ventilated area.

(Contd. on page 6)

(Contd. of page 5)

Protect from heat and direct sunlight.
Anti-explosion protection required

· **Recommended storage temperature:** *+15 °C - +25 °C*

· **7.3 Specific end use(s)** *No further relevant information available.*

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SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** *No further data; see item 7.*

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
1330-20-7 xylene, mixture of isomers	
WEL (Great Britain)	Short-term value: 441 mg/m³, 100 ppm Long-term value: 220 mg/m³, 50 ppm Sk; BMGV
IOELV (EU)	Short-term value: 442 mg/m³, 100 ppm Long-term value: 221 mg/m³, 50 ppm Skin
100-41-4 ethylbenzene	
WEL (Great Britain)	Short-term value: 552 mg/m³, 125 ppm Long-term value: 441 mg/m³, 100 ppm Sk
IOELV (EU)	Short-term value: 884 mg/m³, 200 ppm Long-term value: 442 mg/m³, 100 ppm Skin
108-65-6 2-methoxy-1-methylethyl acetate	
WEL (Great Britain)	Short-term value: 548 mg/m³, 100 ppm Long-term value: 274 mg/m³, 50 ppm Sk
IOELV (EU)	Short-term value: 550 mg/m³, 100 ppm Long-term value: 275 mg/m³, 50 ppm Skin
822-06-0 hexamethylene-di-isocyanate	
WEL (Great Britain)	Short-term value: 0.07 mg/m³ Long-term value: 0.02 mg/m³ Sen; as -NCO

· **DNELs**		
1330-20-7 xylene, mixture of isomers		
Oral	Long-term exposure - systemic effects	1.6 mg/kg bw/day (general population)
Dermal	Long-term exposure - systemic effects	108 mg/kg bw/day (general population)
		180 mg/kg bw/day (worker)
Inhalative	Long-term exposure - systemic effects	14.8 mg/m³ (general population)
		77 mg/m³ (worker)
	Acute/short-term exposure - systemic effects	174 mg/m³ (general population)
		289 mg/m³ (worker)
	Acute/short-term exposure - local effects	174 mg/m³ (general population)

(Contd. on page 7)

(Contd. of page 6)

		289 mg/m³ (worker)
64742-95-6 Solvent naphtha (petroleum), light arom.		
Oral	Long-term exposure - systemic effects	11 mg/kg bw/day (general population)
Dermal	Long-term exposure - systemic effects	11 mg/kg bw/day (general population)
		25 mg/kg bw/day (worker)
Inhalative	Long-term exposure - systemic effects	32 mg/m³ (general population)
		150 mg/m³ (worker)
Hydrocarbons, C9, aromatics		
Oral	Long-term exposure - systemic effects	11 mg/kg bw/day (general population)
Dermal	Long-term exposure - systemic effects	11 mg/kg bw/day (general population)
		25 mg/kg bw/day (worker)
Inhalative	Long-term exposure - systemic effects	32 mg/m³ (general population)
		150 mg/m³ (worker)
108-65-6 2-methoxy-1-methylethyl acetate		
Oral	Long-term exposure - systemic effects	1.67 mg/kg bw/day (general population)
Dermal	Long-term exposure - systemic effects	54.8 mg/kg bw/day (general population)
		153.5 mg/kg bw/day (worker)
Inhalative	Long-term exposure - systemic effects	33 mg/m³ (general population)
		275 mg/m³ (worker)
822-06-0 hexamethylene-di-isocyanate		
Inhalative	Long-term exposure - systemic effects	0.035 mg/m³ (worker)
	Acute/short-term exposure - systemic effects	0.07 mg/m³ (worker)
	Acute/short-term exposure - local effects	0.07 mg/m³ (worker)
	Long-term exposure - local effects	0.035 mg/m³ (worker)

· **PNECs**	
1330-20-7 xylene, mixture of isomers	
PNEC aqua	0.327 mg/l (freshwater)
	0.327 mg/l (marine water)
	0.327 mg/l (intermittent releases)
PNEC sediment	12.46 mg/kg (freshwater)
	12.46 mg/kg (marine water)
PNEC STP	6.58 mg/l
108-65-6 2-methoxy-1-methylethyl acetate	
PNEC aqua	0.635 mg/l (freshwater)
	0.0635 mg/l (marine water)
	6.35 mg/l (intermittent releases)
PNEC sediment	3.29 mg/kg (freshwater)
	0.329 mg/kg (marine water)
PNEC STP	100 mg/l
PNEC soil	0.29 mg/kg (soil dw)
822-06-0 hexamethylene-di-isocyanate	
PNEC aqua	0.0774 mg/l (freshwater)

(Contd. on page 8)

(Contd. of page 7)

	0.00774 mg/l (marine water)
	0.774 mg/l (intermittent releases)
PNEC sediment	0.01334 mg/kg (freshwater)
	0.001344 mg/kg (marine water)
PNEC STP	8.42 mg/l
PNEC soil	0.0026 mg/kg (soil dw)

· **Ingredients with biological limit values:**	
1330-20-7 xylene, mixture of isomers	
BMGV (Great Britain)	650 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Do not eat, drink, smoke or sniff while working.
Store protective clothing separately.
Immediately remove all soiled and contaminated clothing
Wash contaminated clothing before reuse.
Contaminated work clothing should not be allowed out of the workplace.
Wash hands before breaks and at the end of work.
Use skin protection cream for skin protection.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
Adhere to the workplace limit values and / or other threshold values.
Use respiratory protective device against the effects of fumes/dust/aerosol.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Filter A/P2
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Check the permeability prior to each anewed use of the glove.
Preventive skin protection by use of skin-protecting agents is recommended.
· **Material of gloves**
DIN EN 374
Synthetic rubber gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

(Contd. on page 9)

(Contd. of page 8)

· **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

· **Body protection:** Protective work clothing

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	Yellowish
· **Odour:**	Like aromates
· **pH-value:**	Not determined
· **Change in condition**	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	137 °C
· **Flash point:**	>21 °C
· **Ignition temperature:**	>400 °C
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· **Explosion limits:**	
Lower:	1 Vol %
Upper:	10.8 Vol %
· **Vapour pressure:**	Not determined
· **Density at 20 °C:**	~1 g/cm³
· **Vapour density**	Not determined
· **Solubility in / Miscibility with water:**	Not miscible or difficult to mix.
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined
Kinematic at 40 °C:	< 20.5 mm²/s (ISO 3104)
· **9.2 Other information**	No further relevant information available.

(Contd. on page 10)

(Contd. of page 9)

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No decomposition if used according to specifications.
· **10.2 Chemical stability** No decomposition if used and stored according to specifications.
· **10.3 Possibility of hazardous reactions**
Fumes can combine with air to form an explosive mixture.
Reacts with numerous chemical compounds, especially those with mobile hydrogen atoms.
Reacts with alcohols, amines, aqueous acids and alkalis.
Reacts with water.
Do not seal receptacle gas tight.
Danger of bursting.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Formation of toxic gases is possible during heating or in case of fire.

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SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity**
Harmful if inhaled.

· **LD/LC50 values relevant for classification:**		
Dermal	ATE	4210.25 mg/kg (mix) (Calculation method)
Inhalative	ATE	<20 mg/l (mix) (Calculation method)

67892-85-7 aliphatic polyisocyanate		
Dermal	LD 50	> 2000 mg/kg (rat) (OECD 402)
Inhalative	LC 50 / 4h	1.5 mg/l (rat) (Mist/Dust, Professional assessment)
1330-20-7 xylene, mixture of isomers		
Oral	LD 50	> 2000 mg/kg (rat)
Dermal	LD 50	> 1700 mg/kg (rabbit)
Inhalative	LC 50 / 4h	21.7 mg/l (rat) (Vapour)
	LC50 /4h	5000 ppm (rat) (Gas)
64742-95-6 Solvent naphtha (petroleum), light arom.		
Oral	LD 50	> 6800 mg/kg (rat)
Dermal	LD 50	> 3400 mg/kg (rabbit)
Inhalative	LC 50 / 4h	> 10.2 mg/l (rat)
100-41-4 ethylbenzene		
Oral	LD50	3500 mg/kg (rat)
Dermal	LD 50	> 5000 mg/kg (rabbit)
Inhalative	LC50 /4h	17.2 mg/l (rat)
Hydrocarbons, C9, aromatics		
Oral	LD 50	3492 mg/kg (rat) (OECD 401)
Dermal	LD 50	> 3160 mg/kg (rabbit) (OECD 402)
Inhalative	LC50 /4h	> 6193 mg/m³ (rat) (OECD Guideline 403, vapour)

(Contd. on page 11)

(Contd. of page 10)

108-65-6 2-methoxy-1-methylethyl acetate		
Oral	LD 50	> 5000 mg/kg (rat)
Dermal	LD 50	> 5000 mg/kg (rabbit)
Inhalative	LC50 /4h	35.7 mg/l (rat)

822-06-0 hexamethylene-di-isocyanate		
Oral	LD50	746 mg/kg (rat) (OECD 401)
Dermal	LD50	593 mg/kg (rat)
	LD 50	> 7000 mg/kg (rabbit) (OECD 402)
Inhalative	LC50 /4h	0.124 mg/l (rat) (OECD 403, Vapour)
	LC50 /4h	124 mg/m³ (rat) (OECD 403, Vapour)

· **Primary irritant effect:**
· **Skin corrosion/irritation**
Causes skin irritation.
· **Serious eye damage/irritation**
Causes serious eye irritation.

· **Subacute to chronic toxicity:**

822-06-0 hexamethylene-di-isocyanate		
Inhalative	LOAEL	0.175 mg/m³ (rat) (OECD453, 2a, 6h/day)
	NOAEL	0.035 mg/m³ (rat) (OECD 453, 2a, 6h/day)
	NOAEL	0.005 mg/l (rat) (OECD 453, Vapour, 2a, 6h/day)
	LOAEL	0.025 mg/l (rat) (OECD 453, Vapour, 2a, 6h/day)

· **Additional toxicological information:** Repeated exposure may cause skin dryness or cracking.
· **Sensitisation**
Sensitisation possible through skin contact.
May cause an allergic skin reaction.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Carcinogenicity** No further relevant information available.

· **Reproductive toxicity/Fertility**

822-06-0 hexamethylene-di-isocyanate		
Inhalative	NOAEL (fertility)	0.005 mg/l (rat, parents) (OECD 422, 6h/day, 28-50d)
		0.3 mg/l (rat, F1) (OECD 422, 6h/day, 28-50d)
		0.3 mg/l (rat) (OECD 422, 6h/day, fertility)

· **Reproductive toxicity/Teratogenicity**

822-06-0 hexamethylene-di-isocyanate		
Inhalative	NOAEL (developmental toxicity)	0.3 mg/l (rat) (OECD 414, 6h/day)
	NOAEL (teratogenicity)	0.3 mg/l (rat) (OECD 414, 6h/day)
	LOAEL (maternally)	0.005 mg/l (rat) (OECD 414, 6h/day)

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure**
May cause respiratory irritation. May cause drowsiness or dizziness.
· **STOT-repeated exposure**
May cause damage to organs through prolonged or repeated exposure.

(Contd. on page 12)

(Contd. of page 11)

· **Aspiration hazard**
May be fatal if swallowed and enters airways.

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SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
67892-85-7 aliphatic polyisocyanate	
EC50/3h	1600 mg/l (activated slugde) (OECD 209)
1330-20-7 xylene, mixture of isomers	
EC50	> 175 mg/l (activated slugde)
EC50/48h	3.82 mg/l (daphnia magna)
EC50/72h	4.7 mg/l (Pseudokirchneriella subcapitata)
LC50/96h	7.6 mg/l (oncorhynchus mykiss)
NOEC	> 1.3 mg/l (oncorhynchus mykiss) (56 d)
64742-95-6 Solvent naphtha (petroleum), light arom.	
EC50/48h	6.14 mg/l (daphnia magna)
EL50/72h	56 mg/l (Pseudokirchneriella subcapitata) (OECD 201)
LC50/96h	9.22 mg/l (oncorhynchus mykiss)
LL50/96h	10 mg/l (oncorhynchus mykiss) (OECD 203)
NOELR (aqua chron.)	2.6 mg/l (daphnia magna) (OECD 211, 21d)
	2.6 mg/l (pimephales promelas) (OECD 204, 14d)
100-41-4 ethylbenzene	
EC50/48h	2.4 mg/l (daphnia magna)
	> 5.2 mg/l (americamysis bahia)
EC50/72h	4.6 mg/l (Pseudokirchneriella subcapitata)
LC50/96h	4.2 mg/l (oncorhynchus mykiss)
Hydrocarbons, C9, aromatics	
EC50/48h	4.5 mg/l (daphnia magna)
EL50/48h	3.2 mg/l (daphnia) (OECD Guideline 202, mobility)
EL50/72h	2.9 mg/l (Pseudokirchneriella subcapitata) (OECD Guideline 201)
LL50/96h	9.2 mg/l (oncorhynchus aguabonita) (OECD Guideline 203)
	8.2 mg/l (pimephales promelas)
NOEC	0.5 mg/l (Pseudokirchneriella subcapitata) (72h)
	0.5 mg/l (daphnia magna) (48h)
	2.6 mg/l (pimephales promelas) (14d)
NOELR (aqua chron.)	2.144 mg/l (daphnia magna) (21d, calculated by a computer model)
108-65-6 2-methoxy-1-methylethyl acetate	
EC50/48h	>500 mg/l (daphnia magna) (67/548/EWG Apendix V, C.2.)
EC50/72h	> 1000 mg/l (Pseudokirchneriella subcapitata) (OECD- 201)
LC50/96h	130 mg/l (oncorhynchus mykiss) (OECD- 203)
NOEC	≥ 100 mg/l (daphnia magna) (21d, OECD 211)

(Contd. on page 13)

(Contd. of page 12)

	47.5 mg/l (Oryzias latipes) (14d, OECD 204)
822-06-0 hexamethylene-di-isocyanate	
EC0/48h	≥89.1 mg/l (daphnia magna) (67/548/EWG, Apendix V, C.2.)
EC50/72h	>77.4 mg/l (scenedesmus subspicatus) (67/548/EWG, Apendix V, C.3.)
EC50/3h	842 mg/l (activated slugde) (EG-RL 88/302/EEC)
LC0/96h	≥82.8 mg/l (danio rerio) (67/548/EWG,Apendix V, C.1.)

· **12.2 Persistence and degradability**

67892-85-7 aliphatic polyisocyanate	
Biodegradation	1 % (OECD 301 D, 28d)
1330-20-7 xylene, mixture of isomers	
Biodegradation	87.8 % (28d)
64742-95-6 Solvent naphtha (petroleum), light arom.	
Biodegradation	74.3 % (ISO/DIS 14593, 28d)
100-41-4 ethylbenzene	
Biodegradation	> 70 % (28 d)
Hydrocarbons, C9, aromatics	
Biodegradation	> 70 % (OECD Guideline 301 F, 28d)
108-65-6 2-methoxy-1-methylethyl acetate	
BSB	> 90 % (activated slugde) (28d, OECD 301 F)
Biodegradation	100 % (OECD 302 B, 8d)
822-06-0 hexamethylene-di-isocyanate	
Biodegradation	42 % (OECD 301, 28d)

· **12.3 Bioaccumulative potential**

1330-20-7 xylene, mixture of isomers	
log Pow	> 3
BCF	6 - 23.4
64742-95-6 Solvent naphtha (petroleum), light arom.	
log Kow	> 3
BCF	10 - 2500 (lit.) (calculated)
100-41-4 ethylbenzene	
log Pow	3.1
108-65-6 2-methoxy-1-methylethyl acetate	
log Pow	1.2 (OECD Guideline 117 [20 °C; pH 6,8])
822-06-0 hexamethylene-di-isocyanate	
log Kow	3.2
BCF	57.6 (calculated)

· **Behaviour in environmental systems:**

· **12.4 Mobility in soil**

64742-95-6 Solvent naphtha (petroleum), light arom.	
log Koc	1.783 - 2.36 (lit.) (calculated value)
Koc	60.7 - 229.2 (lit.) (calculated value)

(Contd. on page 14)

(Contd. of page 13)

108-65-6 2-methoxy-1-methylethyl acetate	
Koc	1.7
822-06-0 hexamethylene-di-isocyanate	
log Koc	0.679

· **Additional ecological information:**
· **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· **Waste disposal key:**
The waste codes given above are to be considered recommendations; because of regional and industrial sector specific features, application of different waste codes is possible.

· European waste catalogue	
08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.

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SECTION 14: Transport information

· **14.1 UN-Number**	
· **ADR, IMDG, IATA**	UN1993
· **14.2 UN proper shipping name**	
· **ADR**	1993 FLAMMABLE LIQUID, N.O.S. (XYLENES, Solvent naphtha (petroleum), light arom.)
· **IMDG, IATA**	FLAMMABLE LIQUID, N.O.S. (XYLENES, Solvent naphtha (petroleum), light arom.)
· **14.3 Transport hazard class(es)**	
· **ADR, IMDG, IATA**	

· **Class**	3 Flammable liquids.
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	III

(Contd. on page 15)

(Contd. of page 14)

· **14.5 Environmental hazards:**	
· **Marine pollutant:**	No
· **14.6 Special precautions for user**	Warning: Flammable liquids.
· **EMS Number:**	F-E,S-E
· **Stowage Category**	A
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **Tunnel restriction code**	D/E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

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SECTION 15: Regulatory information

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

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category** P5c FLAMMABLE LIQUIDS
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 20

· **National regulations:**

· **Information about limitation of use:**
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
· **Other regulations, limitations and prohibitive regulations**
Adhere to the Ordinances on the Prohibition of Certain Chemicals.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.

(Contd. on page 16)

(Contd. of page 15)

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H330 Fatal 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.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

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

Flam. Liq.3, H226	Bridging principle "Substantially similar mixtures"
Asp. Tox.1,H304	On basis of test data
Skin. Irrit.2,H315	Calculation method
Skin. Sens.1,H317	Calculation method
Eye Irrit.2,H319	Calculation method
Acute Tox. 4,H332	Calculation method
STOT SE 3,H335	Calculation method
STOT SE 3,H336	Calculation method
STOT RE 2,H373	Calculation method
Aquatic Chronic 3,H412	Calculation method

· **Department issuing SDS:** Abteilung Labor
· **Contact:** Frau S. Schaller
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 1: Acute toxicity – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
· *** Data compared to the previous version altered.**