

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

Printing date 25.04.2014

V - 2

Revision: 25.04.2014

1 Identification of the substance/mixture and of the company/undertaking**· 1.1 Product identifier****· Trade name: PAINT 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 homemaker (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, +49 (0)551 383180

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.



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.

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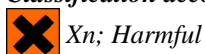
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GHS07

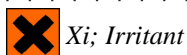
| | | |
|-------------------|-----------|--|
| Acute Tox. 4 | H332 | Harmful if inhaled. |
| Skin Irrit. 2 | H315 | Causes skin irritation. |
| Eye Irrit. 2 | H319 | Causes serious eye irritation. |
| Skin Sens. 1 | H317 | May cause an allergic skin reaction. |
| STOT SE 3 | H335-H336 | May cause respiratory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

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



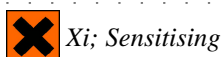
Xn; Harmful

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



Xi; Irritant

R37/38: Irritating to respiratory system and skin.



Xi; Sensitising

R43: May cause sensitisation by skin contact.

R10-52/53: Flammable. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Sensitization possible through skin contact.

· **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· **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.

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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

P271 Use only outdoors or in a well-ventilated area.

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

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P260 Do not breathe mist/vapours/spray.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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.

3 Composition/information on ingredients**3.2 Chemical characterization: Mixtures**

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

| | | |
|---|---|---------|
| CAS: 67892-85-7 | aliphatic polyisocyanate ☒ Xn R20; ☒ Xi R37; ☒ Xi R43 ⚠ 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 ☒ Xn R20/21; ☒ Xi R38 R10 ⚠ 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. ☒ Xn R65; ☒ Xi R37; ☒ N R51/53 R10-66-67 ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H335-H336 | 10-25% |
| CAS: 100-41-4 EINECS: 202-849-4 Reg.nr.: 01-2119489370-35 | ethylbenzene ☒ Xn R20; ☒ F R11 ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H332 | 2.5-10% |

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| | | (Contd. of page 3) |
|--|--|--------------------|
| CAS: 64742-95-6 EC number: 918-668-5 Reg.nr.: 01-2119455851-35 | Hydrocarbons, C9, aromatics ☒ Xn R65; ☒ Xi R37; ☒ N R51/53 R10-66-67 ☒ Flam. Liq. 3, H226; ☒ Asp. Tox. 1, H304; ☒ Aquatic Chronic 2, H411; ☒ STOT SE 3, H335-H336 | 2.5-10% |
| CAS: 108-65-6 EINECS: 203-603-9 Reg.nr.: 01-2119475791-29 | 2-methoxy-1-methylethyl acetate R10 ☒ Flam. Liq. 3, H226 | 2.5-10% |
| CAS: 822-06-0 EINECS: 212-485-8 Reg.nr.: 01-2119457571-37 | hexamethylene-di-isocyanate ☒ T R23; ☒ Xn R42/43; ☒ Xi R36/37/38 ☒ 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 | 0.1-1.0% |

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

4 First aid measures

· 4.1 Description of first aid measures

· 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 victim to fresh air and keep at rest in a position 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): Remove/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.

5 Firefighting measures

· 5.1 Extinguishing media

· Suitable extinguishing agents:

CO₂, 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.

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*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.***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.***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.*

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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.

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.

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/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV |
|---------------------|--|

| | |
|------------|--|
| IOELV (EU) | Short-term value: 442 mg/m ³ , 100 ppm Long-term value: 221 mg/m ³ , 50 ppm Skin |
|------------|--|

100-41-4 ethylbenzene

| | |
|---------------------|---|
| WEL (Great Britain) | Short-term value: 552 mg/m ³ , 125 ppm Long-term value: 441 mg/m ³ , 100 ppm Sk |
|---------------------|---|

| | |
|------------|---|
| IOELV (EU) | Short-term value: 884 mg/m ³ , 200 ppm Long-term value: 442 mg/m ³ , 100 ppm Skin |
|------------|---|

108-65-6 2-methoxy-1-methylethyl acetate

| | |
|---------------------|--|
| WEL (Great Britain) | Short-term value: 548 mg/m ³ , 100 ppm Long-term value: 274 mg/m ³ , 50 ppm Sk |
|---------------------|--|

| | |
|------------|--|
| IOELV (EU) | Short-term value: 550 mg/m ³ , 100 ppm Long-term value: 275 mg/m ³ , 50 ppm Skin |
|------------|--|

822-06-0 hexamethylene-di-isocyanate

| | |
|---------------------|---|
| WEL (Great Britain) | Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO |
|---------------------|---|

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· 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 | Acute/short-term exposure - local effects | 174 mg/m ³ (general population) 289 mg/m ³ (worker) |
| | Acute/short-term exposure - systemic effects | 174 mg/m ³ (general population) 289 mg/m ³ (worker) |
| | Long-term exposure - systemic effects | 14.8 mg/m ³ (general population) 77 mg/m ³ (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/m ³ (general population) 150 mg/m ³ (worker) |

100-41-4 ethylbenzene

| | | |
|------------|---|--|
| Oral | Long-term exposure - systemic effects | 1.6 mg/kg bw/day (general population) |
| Dermal | Long-term exposure - systemic effects | 180 mg/kg bw/day (worker) |
| Inhalative | Acute/short-term exposure - local effects | 293 mg/m ³ (worker) |
| | Long-term exposure - systemic effects | 15 mg/m ³ (general population) 77 mg/m ³ (worker) |

64742-95-6 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/m ³ (general population) 150 mg/m ³ (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/m ³ (general population) 275 mg/m ³ (worker) |

· PNECs

1330-20-7 xylene, mixture of isomers

| | |
|---------------|------------------------------------|
| PNEC STP | 6.58 mg/l (-) |
| 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) |

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100-41-4 ethylbenzene

| | |
|---------------|---|
| PNEC STP | 9.6 mg/l (-) |
| PNEC aqua | 0.1 mg/l (freshwater) 0.01 mg/l (marine water) 0.1 mg/l (intermittent releases) |
| PNEC oral | 0.02 mg/kg (-) |
| PNEC sediment | 13.7 mg/kg (freshwater) 2.68 mg/kg (marine water) |
| PNEC soil | 2.68 mg/kg (soil dw) |

108-65-6 2-methoxy-1-methylethyl acetate

| | |
|---------------|--|
| PNEC STP | 100 mg/l (-) |
| 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 soil | 0.29 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

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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 renewed use of the glove.

Preventive skin protection by use of skin-protecting agents is recommended.

· **Material of gloves**

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.

· **Penetration time of glove material**

The exact break through 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

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/Melting range: | Undetermined. |
| Boiling point/Boiling range: | 137 °C |

· **Flash point:** >21 °C

· **Ignition temperature:** >400 °C

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** 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.

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- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Kinematic at 40 °C:** < 20.5 mm²/s (ISO 3104)
- **9.2 Other information** No further relevant information available.

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.

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

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 | > 4000 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) |

64742-95-6 Hydrocarbons, C9, aromatics

| | | |
|--------|-------|----------------------------------|
| Oral | LD 50 | > 3500 mg/kg (rat) (OECD 401) |
| Dermal | LD 50 | > 3160 mg/kg (rabbit) (OECD 402) |

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| | | |
|---|----------|---|
| Inhalative | LC50 /4h | > 6193 mg/m ³ (rat) (OECD Guideline 403, vapour) |
| 108-65-6 2-methoxy-1-methylethyl acetate | | |
| Oral | LD 50 | > 5000 mg/kg (rat) |
| Dermal | LD 50 | > 2000 mg/kg (rat) > 5000 mg/kg (rabbit) |
| Inhalative | LC50 /4h | 35.7 mg/l (rat) |
| | LC50 /6h | >23.8 mg/l (rat) (Dust/Mist) |
| 822-06-0 hexamethylene-di-isocyanate | | |
| Oral | LD50 | 746 mg/kg (rat) (OECD 401) |
| Dermal | LD 50 | > 7000 mg/kg (rabbit) (OECD 402) |
| | LD50 | 593 mg/kg (rat) |
| Inhalative | LC50 /4h | 0.124 mg/l (rat) (OECD 403, Vapour) |
| | | 124 mg/m ³ (rat) (OECD 403, Vapour) |

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.

- **Subacute to chronic toxicity:**

| | | |
|---|-------|--|
| 822-06-0 hexamethylene-di-isocyanate | | |
| Inhalative | LOAEL | 0.175 mg/m ³ (rat) (OECD453, 2a, 6h/day) |
| | | 0.025 mg/l (rat) (OECD 453, Vapour, 2a, 6h/day) |
| | NOAEL | 0.035 mg/m ³ (rat) (OECD 453, 2a, 6h/day) |
| | | 0.005 mg/l (rat) (OECD 453, Vapour, 2a, 6h/day) |

- **Additional toxicological information:**

Repeated exposure may cause skin dryness or cracking.

Vapours may cause drowsiness and dizziness.

Danger through skin adsorption.

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Irritant

- **Sensitisation** May cause sensitisation by skin contact.
- **CMR effects (carcinogenicity, 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) |

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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) |

64742-95-6 Hydrocarbons, C9, aromatics

| | |
|---------------------|--|
| EC50/48h | 7.4 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) |
| NOELR (aqua chron.) | 2.144 mg/l (daphnia magna) (21d, calculated by a computer model) |

108-65-6 2-methoxy-1-methylethyl acetate

| | |
|-----------|---|
| EC10/0,5h | >1000 mg/l (activated slugde) (OECD 209) |
| 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 | 134 mg/l (oncorhynchus mykiss) (OECD- 203) |
| | > 100 mg/l (Oryzias latipes) (OECD 203) |
| NOEC | ≥ 100 mg/l (daphnia magna) (21d, OECD 202) |
| | 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.) |
| EC50/3h | 842 mg/l (activated slugde) (EG-RL 88/302/EEC) |
| EC50/72h | >77.4 mg/l (scenedesmus subspicatus) (67/548/EWG, Apendix V, C.3.) |
| LC0/96h | ≥82.8 mg/l (danio rerio) (67/548/EWG, Apendix V, C.1.) |

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· 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)

64742-95-6 Hydrocarbons, C9, aromatics

Biodegradation | > 70 % (-) (OECD Guideline 301 F, 28d)

108-65-6 2-methoxy-1-methylethyl acetate

BSB | 83 % (activated sludge) (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

BCF | 6 - 23.4 (-)

log Pow | > 3 (-)

64742-95-6 Solvent naphtha (petroleum), light arom.

BCF | 10 - 2500 (lit.) (calculated)

log Kow | > 3 (-)

100-41-4 ethylbenzene

log Pow | 3.1 (-)

108-65-6 2-methoxy-1-methylethyl acetate

log Pow | 0.43 (-)

822-06-0 hexamethylene-di-isocyanate

BCF | 57.6 (-) (calculated)

· Behaviour in environmental systems:

· 12.4 Mobility in soil

64742-95-6 Solvent naphtha (petroleum), light arom.

Koc | 60.7 - 229.2 (lit.) (calculated value)

log Koc | 1.783 - 2.36 (lit.) (calculated value)

· 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.

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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.

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

· **14.5 Environmental hazards:**· **Marine pollutant:**

No

· **14.6 Special precautions for user**· **EMS Number:**

Warning: Flammable liquids.

F-E,S-E

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

Not applicable.

· **Transport/Additional information:**· **ADR**· **Limited quantities (LQ)**

5L

· **Tunnel restriction code**

D/E

15 Regulatory information· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**· **National regulations:**· **Information about limitation of use:**

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

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- **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.

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.
 - 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.
-
- R10 Flammable.
 - R11 Highly flammable.
 - R20 Harmful by inhalation.
 - R20/21 Harmful by inhalation and in contact with skin.
 - R23 Toxic by inhalation.
 - R36/37/38 Irritating to eyes, respiratory system and skin.
 - R37 Irritating to respiratory system.
 - R38 Irritating to skin.
 - R42/43 May cause sensitisation by inhalation and skin contact.
 - R43 May cause sensitisation by skin contact.
 - R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 - R65 Harmful: may cause lung damage if swallowed.
 - R66 Repeated exposure may cause skin dryness or cracking.
 - R67 Vapours may cause drowsiness and dizziness.

· Department issuing MSDS: 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 Organization
 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 Harmonized 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

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*LD50: Lethal dose, 50 percent**Flam. Liq. 2: Flammable liquids, Hazard Category 2**Flam. Liq. 3: Flammable liquids, Hazard Category 3**Acute Tox. 1: Acute toxicity, Hazard Category 1**Acute Tox. 4: Acute toxicity, Hazard Category 4**Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2**Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2**Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1**Skin Sens. 1: Sensitisation - Skin, Hazard Category 1**STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3**STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2**Asp. Tox. 1: Aspiration hazard, Hazard Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2**Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3***· * Data compared to the previous version altered.**

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