We create chemistry

Safety data sheet

BASF Safety data sheet according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended from time to time.
Date / Revised: 24.06.2024 Version: 20.0
Date / Previous version: 03.04.2024 Previous version: 19.1
Product: **929-91 2.5L HS-hardener fast G2**
(ID no. 50411452/SDS_GEN_GB/EN)
Date of print 25.06.2024

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

1.1. Product identifier

929-91 2.5L HS-hardener fast G2

UFI: 4C30-0FSN-M005-GHDM

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

Relevant identified uses: hardener

1.3. Details of the supplier of the safety data sheet

Company:
BASF Coatings GmbH
Postfach 6123
48136 Muenster
Deutschland

Contact address:
BASF plc
4th and 5th Floors, 2 Stockport Exchange
Railway Road, Stockport, SK1 3GG
UNITED KINGDOM

Telephone: +44 161 475 3000
E-mail address: product-safety-uk-and-ireland@basf.com

1.4. Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

For the classification of the mixture the following methods have been applied: extrapolation on the concentration levels of the hazardous substances, on basis of test results and after evaluation of experts. The methodologies used are mentioned at the respective test results.

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Acute Tox. 4 (Inhalation - vapour)	H332 Harmful if inhaled.
Eye Dam./Irrit. 2	H319 Causes serious eye irritation.
Asp. Tox. 1	H304 May be fatal if swallowed and enters airways.
Skin Sens. 1	H317 May cause an allergic skin reaction.
STOT SE 3	H336 May cause drowsiness or dizziness.
STOT SE 3	H335 May cause respiratory irritation.
STOT RE 2	H373 May cause damage to organs through prolonged or repeated exposure.
Skin Corr./Irrit. 2	H315 Causes skin irritation.
Flam. Liq. 3	H226 Flammable liquid and vapour.
Carc. 2	H351 Suspected of causing cancer.

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elements

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Pictogram:

Signal Word:
Danger

Hazard Statement:

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements (Prevention):

P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing and eye protection or face protection.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or physician if you feel unwell.

Precautionary Statements (Storage):

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.

Labeling of special preparations (GHS):
EUH204: Contains isocyanates. May produce an allergic reaction.

Hazard determining component(s) for labelling: benzoic acid, dibutyltin dilaurate, 4-methylpentan-2-one, xylene, 4-isocyanatosulphonyltoluene, Hexamethylen-1,6-diisocyanat Homopolymer

2.3. Other hazards

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

organic solvent

Hazardous ingredients (GHS)

Hexamethylen-1,6-diisocyanat Homopolymer

Content (W/W): >= 30 % - < 50 % CAS Number: 28182-81-2 EC-Number: 500-060-2 REACH registration number: 01-2119485796-17	Acute Tox. 4 (Inhalation - dust) Acute Tox. 4 (Inhalation - vapour) Skin Sens. 1 STOT SE 3 (irr. to respiratory syst.) H332, H317, H335

n-butyl acetate

Content (W/W): >= 20 % - < 25 % CAS Number: 123-86-4 EC-Number: 204-658-1 REACH registration number: 01-2119485493-29 INDEX-Number: 607-025-00-1	Flam. Liq. 3 STOT SE 3 (drowsiness and dizziness) H226, H336 EUH066

4-methylpentan-2-one

Content (W/W): >= 10 % - < 12.5 % CAS Number: 108-10-1 EC-Number: 203-550-1 REACH registration number: 01-2119473980-30 INDEX-Number: 606-004-00-4	Flam. Liq. 2 Acute Tox. 4 (Inhalation - vapour) Eye Irrit. 2 Carc. 2 STOT SE 3 (drowsiness and dizziness) STOT SE 3 (irr. to respiratory syst.) H225, H319, H332, H336, H335, H351 EUH066

isobutyl acetate

Content (W/W): >= 10 % - < 12.5 % CAS Number: 110-19-0 EC-Number: 203-745-1 INDEX-Number: 607-026-00-7	Flam. Liq. 2 STOT SE 3 (drowsiness and dizziness) H225, H336 EUH066

xylene

Content (W/W): >= 7 % - < 10 % CAS Number: 1330-20-7 EC-Number: 215-535-7 REACH registration number: 01-2119488216-32 INDEX-Number: 601-022-00-9	Asp. Tox. 1 Flam. Liq. 3 Acute Tox. 4 (Inhalation - vapour) Acute Tox. 4 (dermal) Skin Irrit. 2 Eye Irrit. 2 STOT SE 3 (irr. to respiratory syst.) Aquatic Chronic 3 STOT RE (Central nervous system, Liver, Kidney) 2 H226, H319, H315, H304, H335, H373, H312 + H332, H412

2-methoxy-1-methylethyl acetate

Content (W/W): >= 2.5 % - < 3 % CAS Number: 108-65-6 EC-Number: 203-603-9 REACH registration number: 01-2119475791-29 INDEX-Number: 607-195-00-7	Flam. Liq. 3 STOT SE 3 (drowsiness and dizziness) H226, H336

ethylbenzene

Content (W/W): >= 1 % - < 2 % CAS Number: 100-41-4 EC-Number: 202-849-4 REACH registration number: 01-2119489370-35 INDEX-Number: 601-023-00-4	Asp. Tox. 1 Flam. Liq. 2 Acute Tox. 4 (Inhalation - vapour) STOT RE (Auditory organ) 2 Aquatic Chronic 3 H225, H332, H304, H373, H412

benzoic acid

Content (W/W): >= 1 % - < 2 % CAS Number: 65-85-0 EC-Number: 200-618-2 REACH registration number: 01-2119455536-33 INDEX-Number: 607-705-00-8	Skin Corr./Irrit. 2 Eye Dam./Irrit. 1 STOT RE (Lung) 1 (by inhalation) H318, H315, H372

4-isocyanatosulphonyltoluene

Content (W/W): >= 0.2 % - < 0.3 % CAS Number: 4083-64-1 EC-Number: 223-810-8 REACH registration number: 01-2119980050-47 INDEX-Number: 615-012-00-7	Skin Irrit. 2 Eye Irrit. 2 STOT SE 3 (irr. to respiratory syst.) Resp. Sens. 1 H319, H315, H334, H335 EUH014 EUH204 <u>Specific concentration limit:</u> Skin Corr./Irrit. 2: >= 5 % STOT SE 3, irr. to respiratory syst.: >= 5 % Eye Dam./Irrit. 2: >= 5 %

dibutyltin dilaurate

Content (W/W): >= 0.1 % - < 0.2 %	Eye Irrit. 2
CAS Number: 77-58-7	Skin Sens. 1
EC-Number: 201-039-8	Muta. 2
INDEX-Number: 050-030-00-3	Repr. 1B (fertility)
	Repr. 1B (unborn child)
	STOT SE (Thymus gland) 1
	STOT RE (Immune system) 1
	Aquatic Acute 1
	Aquatic Chronic 1
	M-factor acute: 1
	M-factor chronic: 1
	H319, H317, H341, H360FD, H370, H372, H400, H410

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Remove affected person from danger area. Keep warm, calm and covered up. Immediately remove contaminated clothing. Never give anything by mouth to an unconscious person. In case of intoxication, call a poison control center or physician for treatment advice, taking the packaging or the label of the product. Symptoms of poisoning may occur even after several hours, continue medical observation for at least 48 hours after the accident.

If inhaled:
Immediate medical attention required. Remove the affected individual into fresh air and keep the person calm. If breathing is irregular or stopped, administer artificial respiration.

On skin contact:
If symptoms persist, seek medical advice. Remove contaminated clothing. Wash skin with soap and water, rinse abundantly. Do NOT use solvents or thinners.

On contact with eyes:
Remove contact lenses, if present. Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist. Immediate medical attention required.

On ingestion:
Summon medical aid without delay. Do not induce vomiting due to aspiration hazard. Rinse mouth immediately with water. Keep at rest.

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

Symptoms: Eye irritation, aspiration pneumonia, allergic symptoms, dazed state, irritation of respiratory tract, skin irritation, dizziness, Information, i.e. additional information on symptoms and

effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

Hazards: If swallowed, in the event of vomiting, risk of product entering the lungs. When inhaled (e.g. during vomiting) risk of pulmonary oedema and/or pneumonia.

4.3. Indication of any immediate medical attention and special treatment needed
Antidote: No known specific antidote.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media
Suitable extinguishing media:
carbon dioxide, alcohol-resistant foam, dry powder, water spray

Unsuitable extinguishing media for safety reasons:
water jet

5.2. Special hazards arising from the substance or mixture
Advice: Fire will produce dense black smoke. Inhalation of dangerous decomposition products may cause serious damage to health.

5.3. Advice for fire-fighters
Special protective equipment:
Appropriate breathing apparatus may be required.

Further information:
Cool closed containers in the vicinity of the source of fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures
Avoid breathing vapours. For non-emergency personnel: Use personal protective clothing. Ensure adequate ventilation. Keep away from sources of ignition. For emergency responders: Advice on product handling can be found in sections 7 and 8 of this safety data sheet. Information regarding personal protective measures, see section 8.

6.2. Environmental precautions
Do not allow to enter drains or waterways. If the product enters drains or sewers, the local water company should be contacted immediately; in the case of contamination of streams, rivers or lakes, the Environment Agency. Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up
Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth. Place in a suitable container. The contaminated area should be cleaned up immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): ethanol or isopropyl alcohol (50 parts); water (45 parts); concentrated ammonia solution (5

parts). A non-flammable alternative is: sodium carbonate (5 parts); water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in non-sealed container. Once this stage is reached, close container and dispose according to the waste regulations (see section 13). Ensure adequate ventilation.

6.4. Reference to other sections
Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling
Provide good ventilation of working area (local exhaust ventilation if necessary). Do not return residues to the storage containers. Smoking, eating and drinking are forbidden in application area. For personal protection see section 8. Comply with the health and safety at work laws. When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits. Avoid inhalation of vapour and spray mist. The workplace should be equipped with an emergency shower and eye-rinsing facility. Avoid contact with the skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:
Avoid all sources of ignition: heat, sparks, open flame. Product may charge electrostatically: always use earthing leads when transferring from one container to another and earth containers. It is recommended that operators should wear antistatic clothing and footwear. Solvent vapours are heavier than air and spread along floors. Vapour forms explosive mixtures with air. The relevant fire protection measures should be noted. Use explosion-proof equipment.

7.2. Conditions for safe storage, including any incompatibilities
Keep away from oxidising agents, from strongly alkaline and strongly acid materials.

Suitable materials for containers: Carbon steel (Iron), tinned carbon steel (Tinplate)
Further information on storage conditions: Keep container dry. Keep away from heat. Keep in a cool, well-ventilated place. Avoid direct sunlight. Close containers carefully once opened and store them upright in order to prevent any leakage. No smoking. No admission for unauthorised personnel. Always keep in containers of same material as the original one. Observe label precautions. Store protected against freezing.

Storage stability:
Storage temperature: 5.00 - 35.00 °C

7.3. Specific end use(s)
Please refer to the technical leaflet for further information.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

77-58-7: dibutyltin dilaurate
TWA value 0.1 mg/m3 (WEL/EH 40 (UK))
Measured as: tin (Sn)
Skin Designation (WEL/EH 40 (UK))
Measured as: tin (Sn)
The substance can be absorbed through the skin.
STEL value 0.2 mg/m3 (WEL/EH 40 (UK))
Measured as: tin (Sn)
Ceiling limit value/factor: 15 min

100-41-4: ethylbenzene
Skin Designation (WEL/EH 40 (UK))
The substance can be absorbed through the skin.
TWA value 441 mg/m3 ; 100 ppm (WEL/EH 40 (UK))
Skin Designation (OEL (EU))
The substance can be absorbed through the skin.
STEL value 884 mg/m3 ; 200 ppm (OEL (EU))
indicative
TWA value 442 mg/m3 ; 100 ppm (OEL (EU))
indicative
STEL value 552 mg/m3 ; 125 ppm (WEL/EH 40 (UK))
Ceiling limit value/factor: 15 min

108-10-1: 4-methylpentan-2-one
TWA value 208 mg/m3 ; 50 ppm (WEL/EH 40 (UK))
Skin Designation (WEL/EH 40 (UK))
The substance can be absorbed through the skin.
TWA value 83 mg/m3 ; 20 ppm (OEL (EU))
indicative
STEL value 208 mg/m3 ; 50 ppm (OEL (EU))
indicative
STEL value 416 mg/m3 ; 100 ppm (WEL/EH 40 (UK))
Ceiling limit value/factor: 15 min

108-65-6: 2-methoxy-1-methylethyl acetate
TWA value 274 mg/m3 ; 50 ppm (WEL/EH 40 (UK))
Skin Designation (WEL/EH 40 (UK))
The substance can be absorbed through the skin.
STEL value 550 mg/m3 ; 100 ppm (OEL (EU))
indicative
Skin Designation (OEL (EU))
The substance can be absorbed through the skin.
TWA value 275 mg/m3 ; 50 ppm (OEL (EU))
indicative
STEL value 548 mg/m3 ; 100 ppm (WEL/EH 40 (UK))
Ceiling limit value/factor: 15 min
STEL value 548 mg/m3 ; 100 ppm (WEL/EH 40 (UK))
Ceiling limit value/factor: 15 min

110-19-0: isobutyl acetate
TWA value 724 mg/m3 ; 150 ppm (WEL/EH 40 (UK))
TWA value 241 mg/m3 ; 50 ppm (OEL (EU))
indicative
STEL value 723 mg/m3 ; 150 ppm (OEL (EU))
indicative
STEL value 903 mg/m3 ; 187 ppm (WEL/EH 40 (UK))
Ceiling limit value/factor: 15 min

123-86-4: n-butyl acetate
TWA value 724 mg/m3 ; 150 ppm (WEL/EH 40 (UK))
STEL value 723 mg/m3 ; 150 ppm (OEL (EU))
indicative
TWA value 241 mg/m3 ; 50 ppm (OEL (EU))
indicative
STEL value 966 mg/m3 ; 200 ppm (WEL/EH 40 (UK))
Ceiling limit value/factor: 15 min

1330-20-7: xylene
TWA value 220 mg/m3 ; 50 ppm (WEL/EH 40 (UK))
Skin Designation (WEL/EH 40 (UK))
The substance can be absorbed through the skin.
STEL value 442 mg/m3 ; 100 ppm (OEL (EU))
indicative
Skin Designation (OEL (EU))
The substance can be absorbed through the skin.
TWA value 221 mg/m3 ; 50 ppm (OEL (EU))
indicative
STEL value 441 mg/m3 ; 100 ppm (WEL/EH 40 (UK))
Ceiling limit value/factor: 15 min

4083-64-1: 4-isocyanatosulphonyltoluene
TWA value 0.02 mg/m3 (WEL/EH 40 (UK))
Measured as: NCO
STEL value 0.07 mg/m3 (WEL/EH 40 (UK))
Measured as: NCO
Ceiling limit value/factor: 15 min

Components with biological limit values

108-10-1: 4-methylpentan-2-one
UKEH40BMGV
Determinant: ketones
Biological Specimen: Urine
Sampling time: End of shift
Concentration: 20 µmol/L

1330-20-7: xylene
UKEH40BMGV
Determinant: methylhippuric (toluric) acid
Biological Specimen: Creatinine in urine
Sampling time: End of shift
Concentration: 650 mmol/mol

Components with PNEC

65-85-0: benzoic acid
No PNEC value available.

77-58-7: dibutyltin dilaurate
marine water: 0.000046 mg/l
freshwater: 0.000463 mg/l
oral (secondary poisoning): 0.2 mg/kg
intermittent release: 0.00463 mg/l
STP: 100 mg/l

100-41-4: ethylbenzene
freshwater: 0.1 mg/l
marine water: 0.01 mg/l
intermittent release: 0.1 mg/l
sediment (freshwater): 13.7 mg/kg
soil: 2.68 mg/kg
STP: 9.6 mg/l
oral (secondary poisoning): 0.02 mg/kg

108-10-1: 4-methylpentan-2-one
soil: 1.3 mg/kg
sediment (freshwater): 8.27 mg/kg
sediment (marine water): 0.83 mg/kg
freshwater: 0.6 mg/l
marine water: 0.06 mg/l
intermittent release: 1.5 mg/l
STP: 27.5 mg/l

108-65-6: 2-methoxy-1-methylethyl acetate
freshwater: 0.635 mg/l
marine water: 0.0635 mg/l
intermittent release: 6.35 mg/l
sediment (freshwater): 3.29 mg/kg
sediment (marine water): 0.329 mg/kg
soil: 0.29 mg/kg
STP: 100 mg/l

110-19-0: isobutyl acetate
intermittent release: 0.34 mg/l
freshwater: 0.17 mg/l
soil: 0.0755 mg/kg
sediment (marine water): 0.0877 mg/kg
sediment (freshwater): 0.877 mg/kg
marine water: 0.017 mg/l
STP: 200 mg/l

123-86-4: n-butyl acetate
freshwater: 0.18 mg/l
marine water: 0.018 mg/l

intermittent release: 0.36 mg/l
STP: 35.6 mg/l
sediment (freshwater): 0.981 mg/kg
sediment (marine water): 0.0981 mg/kg
soil: 0.0903 mg/kg

1330-20-7: xylene

freshwater: 0.327 mg/l
marine water: 0.327 mg/l
intermittent release: 0.327 mg/l
STP: 6.58 mg/l
sediment (freshwater): 12.46 mg/kg
sediment (marine water): 12.46 mg/kg
soil: 2.31 mg/kg
oral (secondary poisoning):
No PNEC oral derived, as accumulation in organisms is not to be expected.

Components with DNEL

65-85-0: benzoic acid

worker: Long-term exposure- systemic effects, dermal: 62.5 mg/kg bw/day
worker: Long-term exposure- systemic effects, Inhalation: 3 mg/m3
consumer: Long-term exposure- systemic effects, dermal: 31.25 mg/kg bw/day
consumer: Long-term exposure- systemic effects, Inhalation: 1.5 mg/m3
consumer: Long-term exposure- systemic effects, oral: 16.6 mg/kg bw/day
worker: Long-term exposure - local effects, Inhalation: 0.1 mg/m3
consumer: Long-term exposure - local effects, Inhalation: 0.06 mg/m3

77-58-7: dibutyltin dilaurate

worker: Long-term exposure- systemic effects, by inhalation: 0.01 mg/m3
Repeated dose toxicity
worker: Short-term exposure - systemic effects, by inhalation: 0.07 mg/m3
Developmental toxicity
consumer: Long-term exposure- systemic effects, by inhalation: 0.003 mg/m3
Repeated dose toxicity
consumer: Long-term exposure- systemic effects, oral: 0.002 mg/kg
Repeated dose toxicity
worker: Long-term exposure- systemic effects, dermal: 0.2 mg/kg
Repeated dose toxicity
consumer: Short-term exposure - systemic effects, oral: 0.01 mg/kg
Developmental toxicity
consumer: Short-term exposure - systemic effects, by inhalation: 0.02 mg/m3
Developmental toxicity
consumer: Long-term exposure- systemic effects, dermal: 0.08 mg/kg
Repeated dose toxicity
worker: Short-term exposure - systemic effects, dermal: 1 mg/kg
Developmental toxicity
consumer: Short-term exposure - systemic effects, dermal: 0.5 mg/kg
Developmental toxicity

100-41-4: ethylbenzene

worker: Short-term exposure - local effects, Inhalation: 293 mg/m3
worker: Long-term exposure- systemic effects, Inhalation: 77 mg/m3, 17.73 ppm
worker: Long-term exposure- systemic effects, dermal: 180 mg/kg
consumer: Long-term exposure- systemic effects, Inhalation: 15 mg/m3
consumer: Long-term exposure- systemic effects, oral: 1.6 mg/kg

108-10-1: 4-methylpentan-2-one
worker: Short-term exposure - systemic effects, by inhalation: 208 mg/m3
consumer: Long-term exposure- systemic effects, by inhalation: 14.7 mg/m3
worker: Long-term exposure- systemic effects, by inhalation: 83 mg/m3
Repeated dose toxicity
worker: Short-term exposure - local effects, by inhalation: 208 mg/m3
consumer: Long-term exposure- systemic effects, dermal: 4.2 mg/kg
worker: Long-term exposure - local effects, by inhalation: 83 mg/m3
consumer: Long-term exposure- systemic effects, oral: 4.2 mg/kg
Repeated dose toxicity
worker: Long-term exposure- systemic effects, dermal: 11.8 mg/kg

108-65-6: 2-methoxy-1-methylethyl acetate
worker: Long-term exposure- systemic effects, Inhalation: 275 mg/m3
worker: Long-term exposure- systemic effects, dermal: 796 mg/kg
consumer: Long-term exposure- systemic effects, oral: 36 mg/kg
consumer: Long-term exposure - systemic and local effects, Inhalation: 33 mg/m3
consumer: Long-term exposure- systemic effects, dermal: 320 mg/kg
worker: Short-term exposure - local effects, Inhalation: 550 mg/m3
consumer: Short-term exposure - systemic effects, oral: 500 mg/kg

110-19-0: isobutyl acetate
consumer: Short-term exposure - systemic effects, by inhalation: 859.7 mg/m3
Skin irritation/corrosion
worker: Long-term exposure - local effects, by inhalation: 480 mg/m3
Skin irritation/corrosion
worker: Long-term exposure- systemic effects, by inhalation: 480 mg/m3
Skin irritation/corrosion
worker: Short-term exposure - local effects, by inhalation: 960 mg/m3
Skin irritation/corrosion
consumer: Long-term exposure - local effects, by inhalation: 102.34 mg/m3
Skin irritation/corrosion
consumer: Short-term exposure - local effects, by inhalation: 859.7 mg/m3
Skin irritation/corrosion
worker: Short-term exposure - systemic effects, by inhalation: 960 mg/m3
Skin irritation/corrosion
consumer: Long-term exposure- systemic effects, by inhalation: 102.34 mg/m3
Skin irritation/corrosion

123-86-4: n-butyl acetate
worker: Short-term exposure - local effects, Inhalation: 600 mg/m3
worker: Long-term exposure - local effects, Inhalation: 300 mg/m3
consumer: Short-term exposure - local effects, Inhalation: 300 mg/m3

consumer: Long-term exposure - local effects, Inhalation: 35.7 mg/m3
worker: Long-term exposure- systemic effects, dermal: 11 mg/kg
worker: Short-term exposure - systemic effects, dermal: 11 mg/kg
consumer: Long-term exposure- systemic effects, dermal: 6 mg/kg
consumer: Short-term exposure - systemic effects, dermal: 6 mg/kg
consumer: Long-term exposure- systemic effects, oral: 2 mg/kg
consumer: Short-term exposure - systemic effects, oral: 2 mg/kg

1330-20-7: xylene

worker: Long-term exposure- systemic effects, Inhalation: 77 mg/m3
worker: Short-term exposure - systemic effects, Inhalation: 289 mg/m3
worker: Long-term exposure- systemic effects, dermal: 180 mg/kg
consumer: Long-term exposure- systemic effects, Inhalation: 14.8 mg/m3
consumer: Short-term exposure - systemic effects, Inhalation: 174 mg/m3
consumer: Long-term exposure- systemic effects, dermal: 108 mg/kg
consumer: Long-term exposure- systemic effects, oral: 1.6 mg/kg

8.2. Exposure controls

Appropriate engineering controls
Ensure adequate ventilation. This can be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations at the workplace below the occupational exposure limits, appropriate certified respirators must be worn.

Personal protective equipment

Respiratory protection:
Suitable respiratory protection: e.g. full face mask with AB2P3 class combination filter

Hand protection:
Further information on penetration time is available from the manufacturer of the glove.
Data are based on information from the glove manufacturer, the raw material manufacturer or according to specifics of the product components.
The protection glove should be tested for its specific suitability (e.g. mechanical strength, product compatibility, anti-static properties).
Follow manufacturer's advice on use, storage, maintenance and replacement of gloves.
The gloves should be replaced immediately in case of damage or signs of wear. It is recommended to use preventative skin protection (skin cream).
Wear protective gloves. Any chemical protection glove certified according to EN ISO 374-1 is suitable: e.g.
nitrile gloves - material thickness: 0,35 mm

Eye protection:
Eye protection not required.

Body protection:
chemical-resistant disposable coveralls, Personnel should wear antistatic, flame-retardant clothing made of natural fibres and/or heat-resistant synthetic fibres.

General safety and hygiene measures

Do not breathe vapour/spray. Eye wash fountains and safety showers must be easily accessible. Avoid contact with the skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Remove contaminated clothing immediately and dispose of safely. Hands and/or face should be washed before breaks and at the end of the shift. Keep separated from food stuffs and feed stocks.

Environmental exposure controls
For information regarding environmental exposure controls, see Section 6.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form:	liquid	
Colour:	colourless	
Odour:	of acetate	
pH value:		
	substance/mixture is non-polar/aprotic	
Melting point:		
	not determined	
onset of boiling:	135 °C	(calculated)
Flash point:	> 23 °C	(ISO 3679)
Flammability:	Flammable liquid and vapour.	
Lower explosion limit:	36 g/m3	
Ignition temperature:	> 200.00 °C	
Vapour pressure:	6.00 hPa	(calculated)
	(20 °C)	
	(50 °C)	
	not determined	
Density:	0.970 g/cm3	
	(20 °C)	
Relative vapour density (air):		
	Heavier than air.	
Solubility in water:	immiscible	
Partitioning coefficient n-octanol/water (log Kow):		
	not applicable for mixtures	
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, kinematic:		
	(40 °C)	
	No data available.	
	6.0 mm2/s	
	(23 °C)	
Explosion hazard:	not explosive	
Fire promoting properties:	not fire-propagating	

9.2. Other information

Burning rate:	The material doesn't meet the criteria specified in paragraph 33.2.4.4 of UN manual of tests and criteria.	(UN Test N.1 (ready combustible solids))
Self heating ability:	It is not a material capable of spontaneous heating	
Miscibility with water:	immiscible	
Flow time:	< 30 s (23 °C)	(DIN EN ISO 2431; 3 mm)

SECTION 10: Stability and Reactivity

10.1. Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

10.2. Chemical stability
The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions
Vapours may form ignitable mixture with air.

10.4. Conditions to avoid
Avoid heat. Avoid direct sunlight. Avoid all sources of ignition: heat, sparks, open flame. Avoid freezing.

10.5. Incompatible materials

Substances to avoid:
Keep away from highly acidic or alkaline substances as well as oxidants in order to prevent exothermal reactions.

10.6. Hazardous decomposition products

When exposed to high temperatures hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide, monomeric isocyanates may be produced., No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:
Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of

consciousness. Repeated and prolonged exposure to solvents at levels significantly above OELs may lead to the development of long-lasting central nervous system disorders such as chronic toxic encephalopathy, signs of toxicity include changes in behaviour and memory. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

The mixture has been assessed following regulation (EC) No 1272/2008. See sections 2 and 3 for details.

Of moderate toxicity after short-term inhalation.

Information on: 4-methylpentan-2-one
Experimental/calculated data:
LC50 rat (by inhalation): 11.6 mg/l 4 h (similar to OECD guideline 403)
The vapour was tested.

ATE (by inhalation): 11 mg/l
vapour

Information on: Hexamethylen-1,6-diisocyanat Homopolymer
Experimental/calculated data:
LC50 rat (by inhalation): 1.500 mg/l 4.0 h (OECD Guideline 403)
An aerosol was tested.

Irritation

Assessment of irritating effects:
The liquid splashed in the eyes may cause irritation and reversible damage. Eye contact causes irritation. Skin contact causes irritation.

Respiratory/Skin sensitization

Assessment of sensitization:
Sensitization after skin contact possible.

Germ cell mutagenicity

Assessment of mutagenicity:
Based on available data, the classification criteria are not met.

Carcinogenicity

Assessment of carcinogenicity:
Indication of possible carcinogenic effect in animal tests.

Reproductive toxicity

Assessment of reproduction toxicity:
Based on available data, the classification criteria are not met.

Developmental toxicity

Assessment of teratogenicity:
Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Assessment of STOT single:
Causes temporary irritation of the respiratory tract. Possible narcotic effects (drowsiness or dizziness).

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
Repeated exposure may affect certain organs.

Aspiration hazard

May also damage the lung at swallowing (aspiration hazard).

Other relevant toxicity information

Based on the properties of the isocyanate components and considering toxicological data on similar product, this product may cause acute irritation and/or sensitization of the respiratory system leading to an asthmatic condition, wheeziness and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the occupational exposure limit. Repeated inhalation may lead to a permanent respiratory disability.

SECTION 12: Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:
There are no test results available for this product. Do not allow to enter drains or waterways. The mixture has been assessed following regulation (EC) No 1272/2008 and is not classified as dangerous for the environment, but contains substance(s) dangerous for the environment. See section 3 for details.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H2O):
Biological degradability of hazardous substances mentioned in section 3:

Information on: dibutyltin dilaurate
Elimination information:
23 % BOD of the ThOD (39 d) (OECD 301F; ISO 9408; 92/69/EWG, C.4-D) (anaerobic, activated sludge, domestic)

Information on: ethylbenzene
Elimination information:
70 - 80 % TIC of the ThIC (28 d) (ISO 14593) (aerobic, activated sludge) Readily biodegradable (according to OECD criteria).

Information on: xylene
Elimination information:
87.8 % BOD of the ThOD (28 d) (OECD Guideline 301 F) (aerobic, activated sludge, domestic, non-adapted)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

12.3. Bioaccumulative potential

Bioaccumulation potential:
No data available.

12.4. Mobility in soil

Assessment transport between environmental compartments:
Adsorption in soil: No data available.

12.5. Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

12.6. Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Do not discharge into drains/surface waters/groundwater.
Observe national and local legal requirements.
Dispose of isocyanate waste in dry containers and never mix together with other wastes (reaction, dangerous pressure build up).

Dispose of the substance/product as special waste in accordance with Directive 2008/98/EC.

Waste key:
08 01 11¤ waste paint and varnish containing organic solvents or other hazardous substances

Contaminated packaging:
Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.
Residues in empty containers should be neutralised with decontaminant (see section 6).

Containers which are not properly emptied must be disposed pursuant to Directive 2008/98/EC

SECTION 14: Transport Information

Land transport

ADR

UN number or ID number:	UN1263
UN proper shipping name:	PAINT RELATED MATERIAL
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	no
Special precautions for user:	Tunnel code: D/E

RID

UN number or ID number:	UN1263
UN proper shipping name:	PAINT RELATED MATERIAL
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	no
Special precautions for user:	None known

Inland waterway transport
ADN

UN number or ID number:	UN1263
UN proper shipping name:	PAINT RELATED MATERIAL
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	no

Special precautions for user:	None known

Transport in inland waterway vessel
Not evaluated

Sea transport

IMDG

UN number or ID number:	UN 1263
UN proper shipping name:	PAINT RELATED MATERIAL
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	no Marine pollutant: NO
Special precautions for user:	

Air transport

IATA/ICAO

UN number or ID number:	UN 1263
UN proper shipping name:	PAINT RELATED MATERIAL
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	No Mark as dangerous for the environment is needed
Special precautions for user:	None known

14.1. UN number or ID number
See corresponding entries for “UN number or ID number” for the respective regulations in the tables above.

14.2. UN proper shipping name
See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

14.3. Transport hazard class(es)
See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

14.4. Packing group
See corresponding entries for “Packing group” for the respective regulations in the tables above.

14.5. Environmental hazards
See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

14.6. Special precautions for user
See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.

14.7. Maritime transport in bulk according to IMO instruments
Maritime transport in bulk is not intended.

SECTION 15: Regulatory Information

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

Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)

VOC content:	58.1 %	organic solvents
VOC content:	58.1 %	calculated
VOC content:	580.0 g/l	

Prohibitions, Restrictions and Authorizations

UK REACH SI, Annex XVII, Marketing and Use Restrictions
Number on List: 30

UK REACH SI, Annex XVII, Marketing and Use Restrictions
Number on List: 3

UK REACH SI, Annex XVII, Marketing and Use Restrictions
Number on List: 40

dibutyltin dilaurate

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU):
Listed in above regulation: Flammable liquids, Categories 2 or 3 not covered by P5a and P5b

Details relating to the VOC Directive 2004/42/EC:

Subcategory as indicated in Annex IIB:	dropped
Limit value for maximum VOC content as specified in Annex IIB:	dropped

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

15.2. Chemical Safety Assessment

Assessment of safe use has been performed for the mixture and the result is documented in section 7 and 8 of the SDS

SECTION 16: Other Information

For multi-pack systems observe material safety data sheets of all components. Restricted to professional users.

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

Acute Tox.	Acute toxicity
Eye Dam./Irrit.	Serious eye damage/eye irritation
Asp. Tox.	Aspiration hazard
Skin Sens.	Skin sensitization
STOT SE	Specific target organ toxicity — single exposure
STOT RE	Specific target organ toxicity — repeated exposure
Skin Corr./Irrit.	Skin corrosion/irritation
Flam. Liq.	Flammable liquids
Carc.	Carcinogenicity
Eye Irrit.	Eye irritation
Skin Irrit.	Skin irritation
Aquatic Chronic	Hazardous to the aquatic environment - chronic
Resp. Sens.	Respiratory sensitization
Muta.	Germ cell mutagenicity
Repr.	Reproductive toxicity
Aquatic Acute	Hazardous to the aquatic environment - acute
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H225	Highly flammable liquid and vapour.
H373	May cause damage to organs (Central nervous system, Liver, Kidney) through prolonged or repeated exposure.
H312 + H332	Harmful in contact with skin or if inhaled.
H412	Harmful to aquatic life with long lasting effects.
H318	Causes serious eye damage.
H372	Causes damage to organs (Lung) through prolonged or repeated exposure (inhalation).
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H360FD	May damage fertility. May damage the unborn child.

H370	Causes damage to organs (Thymus gland).
H372	Causes damage to organs (Immune system) through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH014	Reacts violently with water.
EUH204	Contains isocyanates. May produce an allergic reaction.

Abbreviations
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN = The European Agreement concerning the International Carriage of Dangerous Goods by Inland waterways. ATE = Acute Toxicity Estimates. CAO = Cargo Aircraft Only. CAS = Chemical Abstract Service. CLP = Classification, Labelling and Packaging of substances and mixtures. DIN = German national organization for standardization. DNEL = Derived No Effect Level. EC50 = Effective concentration median for 50% of the population. EC = European Community. EN = European Standards. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association. IBC-Code = Intermediate Bulk Container code. IMDG = International Maritime Dangerous Goods Code. ISO = International Organization for Standardization. STEL = Short-Term Exposure Limit. LC50 = Lethal concentration median for 50% of the population. LD50 = Lethal dose median for 50% of the population. TLV = Threshold Limit Value. MARPOL = The International Convention for the Prevention of Pollution from Ships. NEN = Dutch Norm. NOEC = No Observed Effect Concentration. OEL = Occupational Exposure Limit. OECD = Organization for Economic Cooperation and Development. PBT = Persistent, Bioaccumulative and Toxic. PNEC = Predicted No Effect Level. PPM = Parts per million. RID = The European Agreement concerning the International Carriage of Dangerous Goods by Rail. TWA = Time Weight Average. UN-number = UN number at transport. vPvB = very Persistent and very Bioaccumulative.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.