

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

- **1.1 Product identifier**
- **Trade name:** 4CR 4040 Rostversiegelung
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Sealing
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
4CR Vertriebsgesellschaft mbH
Oberer Sommerfeldweg 2
D-94469 Deggendorf
Tel.: +49 (0) 40 69 60 99 315
Fax: +49 (0) 40 69 60 99 316
E-Mail: Info@4CR.com
www.4CR.com
- **1.4 Emergency telephone number:** +49(0)700 24112112 (CRM)

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.
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GHS08 health hazard

Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
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.



GHS09 environment

Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects.
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GHS07

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.

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

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· **Hazard pictograms**



· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

*Hydrocarbons, C9, aromatics
aromatic polyisocyanate prepolymer
xylene
m-tolylidene diisocyanate*

· **Hazard statements**

*H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
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.
H411 Toxic to aquatic life with long lasting effects.*

· **Precautionary statements**

*P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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:**

EUH204 Contains isocyanates. May produce an allergic reaction.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

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	25-50%
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		(Contd. of page 2)
CAS: 68958-67-8	aromatic polyisocyanate prepolymer ⚠ Eye Irrit. 2, H319; Skin Sens. 1, H317	10-25%
CAS: 108-65-6 EINECS: 203-603-9 Reg.nr.: 01-2119475791-29	2-methoxy-1-methylethyl acetate ⚠ Flam. Liq. 3, H226	10-25%
CAS: 123-86-4 EINECS: 204-658-1 Reg.nr.: 01-2119485493-29	butyl acetate ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	≥10-≤20%
CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119488216-32	xylene ⚠ 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	≥10-≤20%
CAS: 100-41-4 EINECS: 202-849-4 Reg.nr.: 01-2119489370-35	ethylbenzene ⚠ Flam. Liq. 2, H225; ⚠ STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Aquatic Chronic 3, H412	≥0.1-<2.5%
CAS: 26471-62-5 EINECS: 247-722-4 Reg.nr.: 01-2119454791-34	m-tolyldiene diisocyanate ⚠ Acute Tox. 1, H330; ⚠ Resp. Sens. 1, H334; Carc. 2, H351; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335; Aquatic Chronic 3, H412	≥0.1-<1%

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

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.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Seek immediate medical advice.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

· **Information for doctor:**

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Nitrogen oxides (NO_x)

Carbon monoxide (CO)

Hydrogen cyanide (HCN)

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- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

· **6.2 Environmental precautions:**

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

Contain and collect spillages with non-combustible absorbent materials (e.g. sand, earth, diatomaceous earth) and place in a suitable container.

Decontaminate immediately with suitable mixture (flammable):

- as such usable (inflammatory!):

water 45 Vol.%

ethanol or isopropanol 50 Vol.%

ammonia solution (Density= 0.88) 5 Vol.%

- alternatively (non-flammable):

sodium carbonate 5 Vol.%

water 95 Vol.%

Add the same decontaminant to any residues and allow to stand for several days in an non-sealed container until no further reaction occurs. Once this stage is reached, close the container and dispose of in accordance with the waste regulations (see Section 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.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Persons with a history of asthma, allergies or chronic or recurrent respiratory diseases should only be employed in processes in which this product is used under appropriate medical supervision.

· **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** No special requirements.

· **Information about storage in one common storage facility:**

Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.

Store away from foodstuffs.

· **Further information about storage conditions:**

Keep container tightly sealed.

Store separately from oxidising agents, strongly alkaline and strongly acidic materials, amines, alcohol and water.

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- **Storage class:** 3
- **7.3 Specific end use(s)** No further relevant information available.

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:**

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

WEL	Short-term value: 548 mg/m ³ , 100 ppm Long-term value: 274 mg/m ³ , 50 ppm Sk
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123-86-4 butyl acetate

WEL	Short-term value: 966 mg/m ³ , 200 ppm Long-term value: 724 mg/m ³ , 150 ppm
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1330-20-7 xylene

WEL	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV
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100-41-4 ethylbenzene

WEL	Short-term value: 552 mg/m ³ , 125 ppm Long-term value: 441 mg/m ³ , 100 ppm Sk
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26471-62-5 m-tolyldiene diisocyanate

WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
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- **Ingredients with biological limit values:**

1330-20-7 xylene

BMGV	650 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid
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- **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

- **Personal protective equipment:**

All personal protective equipment, including respiratory protective equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.

- **Respiratory protection:**



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.

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· **Protection of hands:**



Protective gloves (EN 374)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of 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.

· **Breakthrough 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

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Fluid
· Colour:	According to product specification
· Odour:	Characteristic
· Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	124°C

· **Flash point:** 25°C (DIN 53213)

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 315°C (DIN 51794)

· **Decomposition temperature:** Not determined.

· **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:	0.7 Vol %
· Upper:	10.8 Vol %

· **Vapour pressure at 20°C:** 10.7 hPa

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· Density at 20°C:	0.941 g/cm ³ (DIN 53217)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	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 20°C:	13 s (DIN 53211/4)
· Solvent content:	
VOC (EC)	79.85 %
Solids content (weight-%):	20.1 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Possible in traces.
Nitrogen oxides
Hydrogen chloride (HCl)
Hydrogen cyanide (prussic acid)
Carbon monoxide
Nitrogen oxides (NOx)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

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

Hydrocarbons, C9, aromatics

Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)

1330-20-7 xylene

Oral	LD50	5,251 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4 h	29 mg/l (rat)

26471-62-5 m-tolyldiene diisocyanate

Oral	LD50	5,110 mg/kg (rat)
Inhalative	LC50/4 h	107 mg/l (rat) (Aerosol)

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- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation**
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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.
- **Aspiration hazard**
May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) : hazardous for water
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.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **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.

· **European waste catalogue**

08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

-GB

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SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, IMDG, IATA** UN1263

· **14.2 UN proper shipping name**

· **ADR** UN1263 PAINT RELATED MATERIAL,
ENVIRONMENTALLY HAZARDOUS

· **IMDG** PAINT RELATED MATERIAL (Solvent naphtha), MARINE
POLLUTANT

· **IATA** PAINT RELATED MATERIAL

· **14.3 Transport hazard class(es)**

· **ADR**



· **Class** 3 (F1) Flammable liquids.

· **Label** 3

· **IMDG**



· **Class** 3 Flammable liquids.

· **Label** 3

· **IATA**



· **Class** 3 Flammable liquids.

· **Label** 3

· **14.4 Packing group**

· **ADR, IMDG, IATA** III

· **14.5 Environmental hazards:**

Product contains environmentally hazardous substances:
Solvent naphtha

· **Marine pollutant:**

Yes
Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

· **14.6 Special precautions for user**

Warning: Flammable liquids.

· **Danger code (Kemler):**

30

· **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**

· **Transport category** 3

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· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L
· UN "Model Regulation":	UN 1263 PAINT RELATED MATERIAL, 3, III, ENVIRONMENTALLY HAZARDOUS

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**
E2 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **National regulations:**

Class	Share in %
I	≥0.1-<1
NK	50-100

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

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.
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.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
- **Classification according to Regulation (EC) No 1272/2008**
The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.
- **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)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation

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ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
 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)
 VOC: Volatile Organic Compounds (USA, EU)
 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. 4: Acute toxicity – Category 4
 Acute Tox. 1: Acute toxicity – Category 1
 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
 Carc. 2: Carcinogenicity – Category 2
 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.**