


## 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** 4CR 5400 Steinschlagschutz Spray schwarz
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** Protective coating
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
4CR Vertriebsgesellschaft mbH  
Donaustraße 2  
94469 Deggendorf  
Tel.: +49 (0) 4841/665015  
Fax: +49 (0) 4841/665016  
e-Mail: 4cr@b2bmail.eu
- **Emergency telephone number:** +49(0)700 24112112 (MIP)

## 2 Hazards identification

- **Classification of the substance or mixture**
  - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
 F+; Extremely flammable  
 R12: Extremely flammable.  
 R52/53-66-67: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.
  - **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.  
 At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.  
 Warning! Pressurized container.  
 Has a narcotizing effect.
  - **Classification system:**  
 The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
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- **Label elements**
  - **Labelling according to EU guidelines:**  
 The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
  - **Code letter and hazard designation of product:**  
 F+ Extremely flammable
  - **Risk phrases:**  
 12 Extremely flammable.  
 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 66 Repeated exposure may cause skin dryness or cracking.  
 67 Vapours may cause drowsiness and dizziness.
  - **Safety phrases:**  
 2 Keep out of the reach of children.  
 3 Keep in a cool place.  
 9 Keep container in a well-ventilated place.  
 13 Keep away from food, drink and animal feedingstuffs.  
 46 If swallowed, seek medical advice immediately and show this container or label.  
 51 Use only in well-ventilated areas.

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· **Special labelling of certain preparations:**

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

45.7 % by mass of the contents are flammable

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.































· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

CAS: 75-28-5 EINECS: 200-857-2	isobutane  F+ R12 -----  Flam. Gas 1, H220;  Press. Gas, H280	10-25%
CAS: 64742-82-1 EINECS: 265-185-4	Naphtha (petroleum), hydrodesulfurized heavy  Xn R65;  N R51/53 R10-66-67 -----  Flam. Liq. 3, H226;  Asp. Tox. 1, H304;  Aquatic Chronic 2, H411;  STOT SE 3, H336	10-25%
CAS: 74-98-6 EINECS: 200-827-9	propane  F+ R12 -----  Flam. Gas 1, H220;  Press. Gas, H280	10-25%
CAS: 1330-20-7 EINECS: 215-535-7	xylene  Xn R20/21;  Xi R38 R10 -----  Flam. Liq. 3, H226;  Acute Tox. 4, H312;  Acute Tox. 4, H332;  Skin Irrit. 2, H315	10-25%
CAS: 141-78-6 EINECS: 205-500-4	ethyl acetate  Xi R36;  F R11 R66-67 -----  Flam. Liq. 2, H225;  Eye Irrit. 2, H319;  STOT SE 3, H336	2.5-10%
CAS: 106-97-8 EINECS: 203-448-7	butane  F+ R12 -----  Flam. Gas 1, H220;  Press. Gas, H280	2.5-10%
CAS: 100-41-4 EINECS: 202-849-4	Ethylbenzene  Xn R20;  F R11 -----  Flam. Liq. 2, H225;  Acute Tox. 4, H332	≤ 1.0%

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

### 4 First aid measures

· **Description of first aid measures**

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Generally the product does not irritate the skin.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:** If symptoms persist consult doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Do not inhale explosion gases or combustion gases.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **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

- **Handling:**
- **Precautions for safe handling**  
Keep away from heat and direct sunlight.  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about fire - and explosion protection:**  
Do not spray onto a naked flame or any incandescent material.  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store in a cool location.  
Observe official regulations on storing packagings with pressurized containers.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Do not seal receptacle gas tight.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.

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- **Storage class:** 2B
- **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.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

### 1330-20-7 xylene

WEL Short-term value: 441 mg/m<sup>3</sup>, 100 ppm  
Long-term value: 220 mg/m<sup>3</sup>, 50 ppm  
Sk; BMGV

### 141-78-6 ethyl acetate

WEL Short-term value: 400 ppm  
Long-term value: 200 ppm

### 106-97-8 butane

WEL Short-term value: 1810 mg/m<sup>3</sup>, 750 ppm  
Long-term value: 1450 mg/m<sup>3</sup>, 600 ppm  
Carc (if more than 0.1% of buta-1.3-diene)

### 100-41-4 Ethylbenzene

WEL Short-term value: 552 mg/m<sup>3</sup>, 125 ppm  
Long-term value: 441 mg/m<sup>3</sup>, 100 ppm

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

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.
- **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.  
Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**



Protective gloves

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.

- **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.

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· **Eye protection:**

Tightly sealed goggles

### 9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

**Form:** Aerosol  
**Colour:** According to product specification

· **Odour:** Characteristic· **Odour threshold:** Not determined.· **pH-value:** Not determined.· **Change in condition**

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:** < 0°C

· **Flash point:** < 0°C (DIN 53213)· **Ignition temperature:** 200°C (DIN 51794)· **Decomposition temperature:** Not determined.· **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:** 0.6 Vol %  
**Upper:** 10.9 Vol %

· **Vapour pressure at 20°C:** 8300 hPa· **Density at 20°C:** 0.9 g/cm<sup>3</sup> (DIN 53217)· **Relative density** Not determined.· **Vapour density** Not determined.· **Evaporation rate** Not applicable.· **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

· **Segregation coefficient (n-octanol/water):** Not determined.· **Viscosity:**

**Dynamic:** Not determined.  
**Kinematic:** Not determined.

· **Solvent content:**

**Organic solvents:** 56.2 %  
**VOC (EC)** 505.8 g/l

· **Solids content (weight-%):** 43.8 %· **Other information** No further relevant information available.

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### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide

### 11 Toxicological information

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

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

**64742-82-1 Naphtha (petroleum), hydrodesulfurized heavy**

Oral	LD50	>2000 mg/kg (rat)
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Dermal	LD50	>2000 mg/kg (rat)
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Inhalative	LC50/4 h	5 mg/l (rat)
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**1330-20-7 xylene**

Oral	LD50	4300 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

### 12 Ecological information

- **Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): 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.  
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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· <b>European waste catalogue</b>	
08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances
14 06 03*	other solvents and solvent mixtures
15 01 04	metallic packaging

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

### 14 Transport information

· **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 2 5F Gases.
- **Danger code (Kemler):** -
- **UN-Number:** 1950
- **Packaging group:** -
- **Hazard label:** 2.1
- **UN proper shipping name:** 1950 AEROSOLS
- **Tunnel restriction code** D

· **Maritime transport IMDG:**



- **IMDG Class:** 2.1
- **UN Number:** 1950
- **Label** 2.1
- **Packaging group:** -
- **EMS Number:** F-D,S-U
- **Marine pollutant:** No
- **Proper shipping name:** AEROSOLS

· **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 2.1
- **UN/ID Number:** 1950
- **Label** 2.1
- **Packaging group:** -
- **Proper shipping name:** AEROSOLS, flammable

- **Special precautions for user Warning:** Gases.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

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### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations:**

· **Information about limitation of use:**

100-41-4	Ethylbenzene	3A
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Class	Share in %
NK	50-100

- **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**

- H220 Extremely flammable gas.
- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H280 Contains gas under pressure; may explode if heated.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H336 May cause drowsiness or dizziness.
- H411 Toxic to aquatic life with long lasting effects.
- R10 Flammable.
- R11 Highly flammable.
- R12 Extremely flammable.
- R20 Harmful by inhalation.
- R20/21 Harmful by inhalation and in contact with skin.
- R36 Irritating to eyes.
- R38 Irritating to skin.
- 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:** Laboratory
- **\* Data compared to the previous version altered.**