

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

- **1.1 Product identifier**
- **Trade name:** 4CR 5400 Steinschlagschutz Spray
- **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** Protective coating
- **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**



flame

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



environment

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



Skin Irrit. 2 H315 Causes skin irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

- **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



GHS09

- **Signal word** Danger
- **Hazard-determining components of labelling:**
Naphtha (petroleum), hydrotreated light
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
cyclohexane
Methyl ethyl ketone

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· **Hazard statements**

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

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 carefully and follow all instructions.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **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:**

CAS: 115-10-6 EINECS: 204-065-8 Reg.nr.: 01-2119472128-37	dimethyl ether ⚠ Flam. Gas 1A, H220; Press. Gas (Liq.), H280	25-50%
CAS: 64742-49-0 EINECS: 265-151-9 Reg.nr.: 01-2119475514-35	Naphtha (petroleum), hydrotreated light ⚠ Flam. Liq. 2, H225; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	≥10-<25%
EC number: 927-510-4 Reg.nr.: 01-2119475515-33	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics ⚠ Flam. Liq. 2, H225; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	≥10-<25%
CAS: 110-82-7 EINECS: 203-806-2 Reg.nr.: 01-2119463273-41	cyclohexane ⚠ Flam. Liq. 2, H225; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	2.5-<10%
CAS: 78-93-3 EINECS: 201-159-0 Reg.nr.: 01-2119457290-43	Methyl ethyl ketone ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	2.5-<10%
CAS: 141-78-6 EINECS: 205-500-4 Reg.nr.: 01-2119475103-46	ethyl acetate ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	2.5-<10%
CAS: 64742-95-6 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	2.5-<5%

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

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SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Seek immediate medical advice.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.

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:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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**
Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:**
Do not spray onto a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Pressurised 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.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Store away from foodstuffs.

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- **Further information about storage conditions:**
Do not seal receptacle gas tight.
Keep container tightly sealed.
- **Storage class:** 2 B
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.

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

115-10-6 dimethyl ether

WEL	Short-term value: 958 mg/m ³ , 500 ppm Long-term value: 766 mg/m ³ , 400 ppm
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110-82-7 cyclohexane

WEL	Short-term value: 1050 mg/m ³ , 300 ppm Long-term value: 350 mg/m ³ , 100 ppm
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78-93-3 Methyl ethyl ketone

WEL	Short-term value: 899 mg/m ³ , 300 ppm Long-term value: 600 mg/m ³ , 200 ppm Sk, BMGV
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141-78-6 ethyl acetate

WEL	Short-term value: 1468 mg/m ³ , 400 ppm Long-term value: 734 mg/m ³ , 200 ppm
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· **Ingredients with biological limit values:**

78-93-3 Methyl ethyl ketone

BMGV	70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one
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- **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.
Immediately remove all soiled and contaminated clothing
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.

· **Protection of hands:**

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



Protective gloves (EN 374)

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **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:** Not required.

SECTION 9: Physical and chemical properties

· **9.1 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/freezing point:	Undetermined.
· Initial boiling point and boiling range:	-24 °C

· **Flash point:** 0 °C (DIN 53213)

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

· **Ignition temperature:** 235 °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:	0.8 Vol %
· Upper:	18.6 Vol %

· **Vapour pressure at 20 °C:** 5,200 hPa

· **Density at 20 °C:** 0.848 g/cm³ (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.

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· **Solvent content:**

VOC (EC) 81.57 %

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Solids content (weight-%): 18.4 %

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:** Carbon monoxide

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:**

64742-49-0 Naphtha (petroleum), hydrotreated light

Oral	LD50	>2,000 mg/kg (rabbit)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	>190 mg/l (rat)

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Oral	LD50	5,840 mg/kg (rat)
Dermal	LD50	2,920 mg/kg (rat)
Inhalative	LC50/4 h	23.3 mg/l (rat)

110-82-7 cyclohexane

Oral	LD50	12,705 mg/kg (rat)
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64742-95-6 Hydrocarbons, C9, aromatics

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

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **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 drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard**
May be fatal if swallowed and enters airways.

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SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

64742-49-0 Naphtha (petroleum), hydrotreated light

EC50 >1,000 mg/kg (bacteria)

· **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.

· **Uncleaned packaging:**

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

SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, IMDG, IATA**

UN1950

· **14.2 UN proper shipping name**

· **ADR**

UN1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS

· **IMDG**

AEROSOLS (Naphtha, aliphatic, CYCLOHEXANE), MARINE POLLUTANT

· **IATA**

AEROSOLS, flammable

· **14.3 Transport hazard class(es)**

· **ADR**



· **Class**


2 5F Gases.


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· Label	2.1

· IMDG	
	
· Class	2.1
· Label	2.1

· IATA	
	
· Class	2.1
· Label	2.1

· 14.4 Packing group · ADR, IMDG, IATA	Void
· 14.5 Environmental hazards:	Product contains environmentally hazardous substances: cyclohexane, Naphtha, aliphatic
· Marine pollutant:	Yes Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)

· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Code	Warning: Gases. - F-D,S-U SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
· Segregation Code	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

· Transport/Additional information:	

· ADR	
· Limited quantities (LQ)	1L
· Transport category	2
· Tunnel restriction code	D

· IMDG	
· Limited quantities (LQ)	1L

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· **UN "Model Regulation":** UN 1950 AEROSOLS, 2.1, 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**

P3a FLAMMABLE AEROSOLS

E2 Hazardous to the Aquatic Environment

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t

· **National regulations:**

· **Additional classification according to Decree on Hazardous Materials, Annex II:**

Class	Share in %
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**

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.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic 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

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord relatif au transport international 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)

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LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Gas 1A: Flammable gases – Category 1A

Aerosol 1: Aerosols – Category 1

Press. Gas (Liq.): Gases under pressure – Liquefied gas

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Asp. Tox. 1: Aspiration hazard – Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

*** Data compared to the previous version altered.**