

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

- **1.1 Product identifier**
- **Trade name:** 4CR 7450 Cockpit 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** Surface protection
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
4CR Vertriebsgesellschaft mbH
Oberer Sommerfeldweg 2
94469 Deggendorf
Tel.: + 49 (0) 48 41-6650-15
Fax: + 49 (0) 48 41-6650-16
e-Mail: order@4cr.de
- **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. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



GHS09 environment

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



GHS07

STOT SE 3 H336 May cause drowsiness or dizziness.

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

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



F+; Extremely flammable

R12: Extremely flammable.



N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R66-67: 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! Pressurised container.

Has a narcotising 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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· **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:**

pentane
propan-2-ol
Naphtha (petroleum), hydrotreated light

· **Hazard statements**

H222-H229 *Extremely flammable aerosol. Pressurised container: May burst if heated.*
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 label before use.*
P210 *Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*
P251 *Pressurized container: Do not pierce or burn, even after use.*
P211 *Do not spray on an open flame or other ignition source.*
P405 *Store locked up.*
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.*

· **Additional information:**

EUH066 *Repeated exposure may cause skin dryness or cracking.*
Contains (R)-p-mentha-1,8-diene. *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:**

CAS: 109-66-0 EINECS: 203-692-4	pentane ☒ Xn R65; ☒ F+ R12; ☒ N R51/53 R66-67 ----- ☒ Flam. Liq. 2, H225; ☒ Asp. Tox. 1, H304; ☒ Aquatic Chronic 2, H411; ☒ STOT SE 3, H336	20-<25%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-21194869440-21	propane ☒ F+ R12 ☒ Flam. Gas 1, H220; Press. Gas C, H280	10-<25%

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CAS: 106-97-8 EINECS: 203-448-7 Reg.nr.: 01-2119474691-31	butane  F+ R12  Flam. Gas 1, H220; Press. Gas C, H280	10-<25%
CAS: 75-28-5 EINECS: 200-857-2 Reg.nr.: 01-2119485395-27	isobutane  F+ R12  Flam. Gas 1, H220; Press. Gas C, H280	10-<25%
CAS: 67-63-0 EINECS: 200-661-7 Reg.nr.: 01-2119457558-25	propan-2-ol  Xi R36;  F R11 R67  Flam. Liq. 2, H225;  Eye Irrit. 2, H319; STOT SE 3, H336	3-<10%
CAS: 64742-49-0 EINECS: 265-151-9	Naphtha (petroleum), hydrotreated light  Xn R65;  Xi R38;  F R11;  N R51/53 R66-67  Flam. Liq. 2, H225;  Asp. Tox. 1, H304;  Aquatic Chronic 2, H411;  Skin Irrit. 2, H315; STOT SE 3, H336	3-<10%
CAS: 64742-48-9 EINECS: 265-150-3 Reg.nr.: 01-2119463258-33	Naphtha (petroleum), hydrotreated heavy, benzene content: < 0,1%  Xn R65 R66  Asp. Tox. 1, H304	3-<10%
CAS: 68308-64-5 EINECS: 269-662-8	Quaternary ammonium compounds, cocoalkylethyl dimethyl, Et sulfates  C R34;  Xn R22;  N R50  Skin Corr. 1B, H314;  Aquatic Acute 1, H400;  Acute Tox. 4, H302	0.3-<1%
CAS: 5989-27-5 EINECS: 227-813-5	(R)-p-mentha-1,8-diene  Xi R38;  Xi R43;  N R50/53 R10  Flam. Liq. 3, H226;  Aquatic Acute 1, H400;  Aquatic Chronic 1, H410;  Skin Irrit. 2, H315;  Skin Sens. 1, H317	0.3-<1%

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

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Seek immediate medical advice.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.

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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:**
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **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.
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.
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:**
Store in a cool location.
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
Do not seal receptacle gas tight.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **Storage class: 2 B**
- **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:**

109-66-0 pentane

WEL | Long-term value: 1800 mg/m³, 600 ppm

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106-97-8 butane

WEL Short-term value: 1810 mg/m³, 750 ppm
Long-term value: 1450 mg/m³, 600 ppm
Carc (if more than 0.1% of buta-1.3-diene)

67-63-0 propan-2-ol

WEL Short-term value: 1250 mg/m³, 500 ppm
Long-term value: 999 mg/m³, 400 ppm

· **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.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

· **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.



Protective gloves

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

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

· **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.

· **Eye protection:**

Tightly sealed goggles

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

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· Odour threshold:	<i>Not determined.</i>
· pH-value:	<i>Not determined.</i>
· Change in condition Melting point/Melting range:	<i>Undetermined.</i>
Boiling point/Boiling range:	<i>-44 °C</i>
· Flash point:	<i>< 0 °C (DIN 53213)</i>
· Flammability (solid, gaseous):	<i>Not applicable.</i>
· Ignition temperature:	<i>240 °C (DIN 51794)</i>
· Decomposition temperature:	<i>Not determined.</i>
· Self-igniting:	<i>Product is not selfigniting.</i>
· Danger of explosion:	<i>Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</i>
· Explosion limits:	
Lower:	<i>1.4 Vol %</i>
Upper:	<i>10.9 Vol %</i>
· Vapour pressure at 20 °C:	<i>8300 hPa</i>
· Density at 20 °C:	<i>0.677 g/cm³ (DIN 53217)</i>
· Relative density	<i>Not determined.</i>
· Vapour density	<i>Not determined.</i>
· Evaporation rate	<i>Not applicable.</i>
· Solubility in / Miscibility with water:	<i>Not miscible or difficult to mix.</i>
· Partition coefficient (n-octanol/water):	<i>Not determined.</i>
· Viscosity:	
Dynamic:	<i>Not determined.</i>
Kinematic:	<i>Not determined.</i>
· Solvent content:	
VOC (EC)	<i>96.60 %</i>
Solids content (weight-%):	<i>3.4 %</i>
· 9.2 Other information	<i>No further relevant information available.</i>

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **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*

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SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**

· **Acute toxicity:**

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

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

Oral	LD50	> 5000 mg/kg (rabbit)
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64742-48-9 Naphtha (petroleum), hydrotreated heavy, benzene content: < 0,1%

Oral	LD50	> 5000 mg/kg (rat)
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Dermal	LD50	> 5000 mg/kg (rat)
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5989-27-5 (R)-p-mentha-1,8-diene

Oral	LD50	4400 mg/kg (rat)
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· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** No irritating effect.

· **Sensitisation:** No sensitising effects known.

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 dangerous substances
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14 06 03*	other solvents and solvent mixtures
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15 01 04	metallic packaging
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- **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 · IMDG · IATA	1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS AEROSOLS (PENTANES, Naphtha, aliphatic), MARINE POLLUTANT AEROSOLS, flammable
· 14.3 Transport hazard class(es) · ADR	
	
· Class · Label	2 5F Gases. 2.1
· IMDG	
	
· Class · Label	2.1 2.1
· IATA	
	
· Class · Label	2.1 2.1
· 14.4 Packing group · ADR, IMDG, IATA	Void
· 14.5 Environmental hazards: · Marine pollutant: · Special marking (ADR):	Product contains environmentally hazardous substances: (R)-p-mentha-1,8-diene Yes Symbol (fish and tree) Symbol (fish and tree)
· 14.6 Special precautions for user · Danger code (Kemler): · EMS Number:	Warning: Gases. - F-D,S-U
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

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· **Transport/Additional information:**

· **ADR**

· **Transport category** 2
· **Tunnel restriction code** D

· **IMDG**

· **Limited quantities (LQ)** 1L

· **UN "Model Regulation":** UN1950, AEROSOLS, ENVIRONMENTALLY HAZARDOUS, 2.1

SECTION 15: Regulatory information

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

· **National regulations:**

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.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye 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.
- R10 Flammable.
R11 Highly flammable.
R12 Extremely flammable.
R22 Harmful if swallowed.
R34 Causes burns.
R36 Irritating to eyes.
R38 Irritating to skin.
R43 May cause sensitisation by skin contact.
R50 Very toxic to aquatic organisms.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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.

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· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

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

Flam. Gas 1: Flammable gases, Hazard Category 1

Flam. Aerosol 1: Flammable aerosols, Hazard Category 1

Press. Gas C: Gases under pressure: Compressed gas

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Asp. Tox. 1: Aspiration hazard, Hazard Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

· * Data compared to the previous version altered.