

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

- **1.1 Product identifier**
- **Trade name:** 4CR 7437 2K-Highspeed-Klarlack
- **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** Clear coating material, Varnish
- **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**



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



Eye Irrit. 2	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H336	May cause drowsiness or dizziness.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

- **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

- **Signal word** Danger
- **Hazard-determining components of labelling:**
Hexamethylene diisocyanate, oligomers
acetone
n-Butyl acetate
Hydrocarbons, C9, aromatics
- **Hazard statements**
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H336 May cause drowsiness or dizziness.

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H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

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.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

EUH204 Contains isocyanates. May produce an allergic reaction.

Restricted to professional users.

Buildup of explosive mixtures possible without sufficient ventilation.

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: 67-64-1 EINECS: 200-662-2 Reg.nr.: 01-2119471330-49	acetone ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	10-25%
CAS: 123-86-4 EINECS: 204-658-1 Reg.nr.: 01-2119485493-29	n-Butyl acetate ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	<15%
CAS: 28182-81-2 NLP: 500-060-2 Reg.nr.: 01-2119485796-17	Hexamethylene diisocyanate, oligomers ⚠ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	5-<10%
CAS: 112-07-2 EINECS: 203-933-3 Reg.nr.: 01-2119475112-47	2-Butoxyethyl acetate ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	2.5-<5%
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%
EC number: 915-687-0 Reg.nr.: 01-2119491304-40	Reaction mass of pentamethyl-piperidyl sebacate ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Sens. 1A, H317	≥0.25-<1%

· **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.

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 rinse with water.

· After eye contact:

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

· After swallowing: If symptoms persist consult doctor.

· 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

In case of fire, the following can be released:

Nitrogen oxides (NO_x)

Carbon monoxide (CO)

Hydrogen cyanide (HCN)

· 5.3 Advice for firefighters

· Protective equipment:

Mouth respiratory protective device.

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.

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.%

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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**

Keep away from heat and direct sunlight.

Ensure good ventilation/exhaustion at the workplace.

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:**

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:**

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

Store away from foodstuffs.

· **Further information about storage conditions:**

Do not seal receptacle gas tight.

Keep container tightly sealed.

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

· **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/m³, 500 ppm

Long-term value: 766 mg/m³, 400 ppm

67-64-1 acetone

WEL Short-term value: 3620 mg/m³, 1500 ppm

Long-term value: 1210 mg/m³, 500 ppm

123-86-4 n-Butyl acetate

WEL Short-term value: 966 mg/m³, 200 ppm

Long-term value: 724 mg/m³, 150 ppm

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28182-81-2 Hexamethylene diisocyanate, oligomers

EBW Short-term value: 0.5 mg/m³
exposition evaluation valu TRGS 430 (EBW)

112-07-2 2-Butoxyethyl acetate

WEL Short-term value: 332 mg/m³, 50 ppm
Long-term value: 133 mg/m³, 20 ppm
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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.
Avoid contact with the eyes.
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.

Air-fed respiratory protective equipment must be work when this product is sprayed. In case of low exposure, eg brush painting, use a respiratory filtering device.

Under dry, cool conditions it is possible for the isocyanate to remain unreacted in the paint film for up to 30 hours after application. If dry flatting is unavoidable, use air-fed respiratory protective equipment.

· **Protection of hands:**

Solvent resistant gloves

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)

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

· **Material of gloves**

Nitrile rubber, NBR

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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Safety glasses

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Tightly sealed goggles

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Aerosol
· Colour:	Clear
· 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:	2.6 Vol %
· Upper:	18.6 Vol %

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

· **Density at 20 °C:** 0.78 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)** 86.42 %

· **Solids content (weight-%):** 13.6 %

· **9.2 Other information** No further relevant information available.

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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:**

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** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation**
This product is a respiratory sensitiser when sprayed. COSHH requires that persons exposed are subject to appropriate health surveillance.
May cause an allergic skin reaction.
- **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** Based on available data, the classification criteria are not met.

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:** Harmful to fish

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- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) : slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Harmful to 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
· **IMDG** AEROSOLS
· **IATA** AEROSOLS, flammable
- **14.3 Transport hazard class(es)**
· **ADR**

· **Class** 2 5F Gases.
· **Label** 2.1

- **IMDG, IATA**

· **Class** 2.1
· **Label** 2.1
- **14.4 Packing group**
· **ADR, IMDG, IATA** Void
- **14.5 Environmental hazards:**
· **Marine pollutant:** No
- **14.6 Special precautions for user** Warning: Gases.
· **Hazard identification number (Kemler code):** -

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· EMS Number:	F-D,S-U
· Stowage Code	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
· UN "Model Regulation":	UN 1950 AEROSOLS, 2.1

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
- **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.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.

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H312 Harmful in contact with skin.
 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.
 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)

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

Acute Tox. 4: Acute toxicity – Category 4

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

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1A: Skin sensitisation – Category 1A

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

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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