Safety Data Sheet
acc. to OSHA HCS

Printing date 09/13/2018 Reviewed on 09/13/2018

*
1 Identification

· **Product identifier**

· **Trade name: 4CR 7210 2K-HS-Klarlack 2:1 SR**
· **Application of the substance / the mixture** Paint

· **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
· **Emergency telephone number:** +49(0)700 24112112 (CRM)

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2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.

GHS08 Health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H336 May cause drowsiness or dizziness.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS02 GHS07 GHS08

· **Signal word** Warning

· **Hazard-determining components of labeling:**
butyl acetate
xylene
Hydrocarbons, C9, aromatics
ethylbenzene
· **Hazard statements**
H226 Flammable liquid and vapor.
H317 May cause an allergic skin reaction.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/13/2018 *Reviewed on 09/13/2018*

Trade name: 4CR 7210 2K-HS-Klarlack 2:1 SR

(Contd. of page 1)

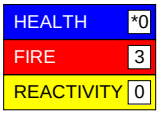
· ***Precautionary statements***

P210	*Keep away from heat/sparks/open flames/hot surfaces. No smoking.*
P260	*Do not breathe dust/fume/gas/mist/vapors/spray.*
P280	*Wear protective gloves/protective clothing/eye protection/face protection.*
P303+P361+P353	*If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*
P304+P340	*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*
P405	*Store locked up.*

· ***Classification system:***
· ***NFPA ratings (scale 0 - 4)***

Health = 0
Fire = 3
Reactivity = 0

· ***HMIS-ratings (scale 0 - 4)***



*Health = *0*
Fire = 3
Reactivity = 0

· ***Other hazards***
· ***Results of PBT and vPvB assessment***
· ***PBT:*** *Not applicable.*
· ***vPvB:*** *Not applicable.*

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3 Composition/information on ingredients

· ***Chemical characterization: Mixtures***
· ***Description:*** *Mixture of the substances listed below with nonhazardous additions.*

· ***Dangerous components:***		
123-86-4	*butyl acetate*	*25-50%*
64742-95-6	*Hydrocarbons, C9, aromatics*	*2.5-<10%*
112-07-2	*2-butoxyethyl acetate*	*≥0.1-<5%*
1330-20-7	*xylene*	*≥0.1-<5%*
100-41-4	*ethylbenzene*	*≥0.1-<2.5%*
26761-45-5	*2,3-epoxypropyl neodecanoate*	*≥0.1-<1%*
	Reaction mass of pentamethyl-piperidyl sebacate	*≥0.1-<1%*

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4 First-aid measures

· ***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.*
· ***After swallowing:*** *If symptoms persist consult doctor.*
· ***Information for doctor:***
· ***Indication of any immediate medical attention and special treatment needed***
No further relevant information available.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/13/2018 *Reviewed on 09/13/2018*

Trade name: 4CR 7210 2K-HS-Klarlack 2:1 SR

(Contd. of page 2)

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5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **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:** No special measures required.

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6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **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.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
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.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
123-86-4	butyl acetate	5 ppm
112-07-2	2-butoxyethyl acetate	15 ppm
1330-20-7	xylene	130 ppm
100-41-4	ethylbenzene	33 ppm
868-77-9	2-hydroxyethyl methacrylate	1.9 mg/m3
78-83-1	isobutanol	150 ppm
77-58-7	dibutyltin dilaurate	1.1 mg/m3
108-65-6	2-methoxy-1-methylethyl acetate	50 ppm
556-67-2	octamethylcyclotetrasiloxane	30 ppm

· **PAC-2:**		
123-86-4	butyl acetate	200 ppm
112-07-2	2-butoxyethyl acetate	35 ppm
1330-20-7	xylene	920* ppm
100-41-4	ethylbenzene	1100* ppm
868-77-9	2-hydroxyethyl methacrylate	21 mg/m3
78-83-1	isobutanol	1,300 ppm
77-58-7	dibutyltin dilaurate	8 mg/m3
108-65-6	2-methoxy-1-methylethyl acetate	1,000 ppm
556-67-2	octamethylcyclotetrasiloxane	68 ppm

· **PAC-3:**		
123-86-4	butyl acetate	3000* ppm

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/13/2018 Reviewed on 09/13/2018

Trade name: 4CR 7210 2K-HS-Klarlack 2:1 SR

(Contd. of page 3)

112-07-2	2-butoxyethyl acetate	210 ppm
1330-20-7	xylene	2500* ppm
100-41-4	ethylbenzene	1800* ppm
868-77-9	2-hydroxyethyl methacrylate	1,000 mg/m3
78-83-1	isobutanol	8000* ppm
77-58-7	dibutyltin dilaurate	48 mg/m3
108-65-6	2-methoxy-1-methylethyl acetate	5000* ppm
556-67-2	octamethylcyclotetrasiloxane	130 ppm

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7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **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:** Store away from foodstuffs.
· **Further information about storage conditions:** Keep receptacle tightly sealed.
· **Storage class:** 3
· **Specific end use(s)** No further relevant information available.

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8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

123-86-4 butyl acetate	
PEL	Long-term value: 710 mg/m³, 150 ppm
REL	Long-term value: 950 mg/m³, 200 ppm
TLV	Short-term value: 712 mg/m³, 150 ppm Long-term value: 238 mg/m³, 50 ppm
112-07-2 2-butoxyethyl acetate	
REL	Long-term value: 33 mg/m³, 5 ppm
TLV	Long-term value: 130 mg/m³, 20 ppm
1330-20-7 xylene	
PEL	Long-term value: 435 mg/m³, 100 ppm
REL	Short-term value: 655 mg/m³, 150 ppm Long-term value: 435 mg/m³, 100 ppm

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/13/2018 Reviewed on 09/13/2018

Trade name: 4CR 7210 2K-HS-Klarlack 2:1 SR

(Contd. of page 4)

TLV	Short-term value: 651 mg/m³, 150 ppm Long-term value: 434 mg/m³, 100 ppm BEI
100-41-4 ethylbenzene	
PEL	Long-term value: 435 mg/m³, 100 ppm
REL	Short-term value: 545 mg/m³, 125 ppm Long-term value: 435 mg/m³, 100 ppm
TLV	Long-term value: 87 mg/m³, 20 ppm BEI

· **Ingredients with biological limit values:**

1330-20-7 xylene	
BEI	1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids
100-41-4 ethylbenzene	
BEI	0.7 g/g creatinine Medium: urine Time: end of shift at end of workweek Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific, semi-quantitative) - Medium: end-exhaled air Time: not critical Parameter: Ethyl benzene (semi-quantitative)

· **Additional information:** The lists that were valid during the creation 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.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **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**

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/13/2018 *Reviewed on 09/13/2018*

Trade name: 4CR 7210 2K-HS-Klarlack 2:1 SR

(Contd. of page 5)

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:**

Tightly sealed goggles

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Color:	According to product specification
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	124°C (255 °F)
· **Flash point:**	36°C (97 °F) (DIN 53213)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	370°C (698 °F) (DIN 51794)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Explosion limits:**	
Lower:	1.2 Vol %
Upper:	7.5 Vol %
· **Vapor pressure at 20°C (68 °F):**	10.7 hPa (8 mm Hg)
· **Density at 20°C (68 °F):**	0.992 g/cm³ (8.278 lbs/gal) (DIN 53217)
· **Relative density**	Not determined.
· **Vapor 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.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/13/2018 Reviewed on 09/13/2018

Trade name: 4CR 7210 2K-HS-Klarlack 2:1 SR

(Contd. of page 6)

Kinematic at 20°C (68 °F):	90 s (DIN 53211/4)
· **Solvent content:**	
VOC content:	52.09 % 517 g/l / 4.3 lb/gl
Solids content (weight-%):	47.9 %
· **Other information**	No further relevant information available.

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10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** Carbon monoxide

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11 Toxicological information

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

· **LD/LC50 values that are 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:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
1330-20-7	xylene	3
100-41-4	ethylbenzene	2B

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

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12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/13/2018 *Reviewed on 09/13/2018*

Trade name: 4CR 7210 2K-HS-Klarlack 2:1 SR

(Contd. of page 7)

· **Ecotoxical effects:**
· **Remark:** Harmful to fish
· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (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 of together with household garbage. Do not allow product to reach sewage system.

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

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14 Transport information

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	UN1263
· **UN proper shipping name**	
· **DOT**	Paint
· **ADR**	UN1263 Paint
· **IMDG, IATA**	PAINT
· **Transport hazard class(es)**	
· **DOT**	

· **Class**	3 Flammable liquids
· **Label**	3
· **ADR**	

· **Class**	3 (F1) Flammable liquids
· **Label**	3

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/13/2018 *Reviewed on 09/13/2018*

Trade name: 4CR 7210 2K-HS-Klarlack 2:1 SR

(Contd. of page 8)

· **IMDG, IATA**

· **Class**	3 Flammable liquids
· **Label**	3
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	III
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user**	Warning: Flammable liquids
· **Danger code (Kemler):**	30
· **EMS Number:**	F-E,S-E
· **Stowage Category**	A
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Remarks:**	≤ 450 l: 2.2.3.1.5 ADR
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Remarks:**	≤ 30 l: 2.2.3.5 IMDG-Code
· **UN "Model Regulation":**	UN 1263 PAINT, 3, III

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15 Regulatory information

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

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

112-07-2	2-butoxyethyl acetate
1330-20-7	xylene
100-41-4	ethylbenzene

· **Proposition 65**

· **Chemicals known to cause cancer:**

100-41-4	ethylbenzene

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/13/2018 *Reviewed on 09/13/2018*

Trade name: 4CR 7210 2K-HS-Klarlack 2:1 SR

(Contd. of page 9)

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**		
1330-20-7	xylene	I
100-41-4	ethylbenzene	D

· **TLV (Threshold Limit Value established by ACGIH)**			
112-07-2	2-butoxyethyl acetate	A3	e"0.1-<5%
1330-20-7	xylene	A4	e"0.1-<5%
100-41-4	ethylbenzene	A3	e"0.1-<2.5%
77-58-7	dibutyltin dilaurate	A4	~0-≤0.1%

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS02 GHS07 GHS08

· **Signal word** Warning

· **Hazard-determining components of labeling:**
butyl acetate
xylene
Hydrocarbons, C9, aromatics
ethylbenzene
· **Hazard statements**
H226 Flammable liquid and vapor.
H317 May cause an allergic skin reaction.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
· **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405 Store locked up.

· **National regulations:**

Class	Share in %
NK	50-100

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

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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.

· **Date of preparation / last revision** 09/13/2018 / 8

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/13/2018 *Reviewed on 09/13/2018*

Trade name: 4CR 7210 2K-HS-Klarlack 2:1 SR

(Contd. of page 10)

· ***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
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
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)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
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
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flam. Liq. 3: Flammable liquids – Category 3
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
· **** Data compared to the previous version altered.***