

Printing date 19.02.2020

Version number 1

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

· 1.1 Product identifier

· Trade name: 4CR 0409-352 AC Hardener glass

- · 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 Hardening agent/ Curing agent

 \cdot 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

(EC) No 1272/2000 to D

· Classification acco	oraing to Keg	ulalion (EC) No 1272/2008
GHS02 j	flame	
Flam. Liq. 3	H226	Flammable liquid and vapour.
GHS08	health hazard	
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.
GHS05	corrosion	
Eye Dam. 1	H318	Causes serious eye damage.
GHS07		
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H335-H336	May cause respiratory irritation. May cause drowsiness or dizziness.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.
	ng to Regulations sified and lab s	ion (EC) No 1272/2008 pelled according to the CLP regulation. GHS08
· Signal word Dang	er	

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Hazard-determining components of labelling:			
Hexamethylene diisocyanate, oligomers			
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane			
n-Butyl acetate			
Hydrocarbons, C9, aromatics			
Hazard statements			
H226 Flammable liquid and vapour.			
H318 Causes serious eye damage.			
H317 May cause an allergic skin reaction.			
H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.			
H304 May be fatal if swallowed and enters airways.			
H412 Harmful to aquatic life with long lasting effects.			
Precautionary statements			
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.			
P321 Specific treatment (see on this label).			
P331 Do NOT induce vomiting.			
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.			
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if			
present and easy to do. Continue rinsing.			
P362+P364 Take off contaminated clothing and wash it before reuse.			
Additional information:			
EUH066 Repeated exposure may cause skin dryness or cracking.			
EUH204 Contains isocyanates. May produce an allergic reaction.			
2.3 Other hazards			
Results of PBT and vPvB assessment			
PBT: Not applicable.			
vPvB: Not applicable.			

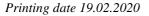
SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

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

· Dangerous components: CAS: 123-86-4 n-Butyl acetate 25-50% EINECS: 204-658-1 🚸 Flam. Liq. 3, H226; 🚺 STOT SE 3, H336 Reg.nr.: 01-2119485493-29 CAS: 28182-81-2 Hexamethylene diisocyanate, oligomers 25-50% NLP: 500-060-2 (1) Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335 Reg.nr.: 01-2119485796-17 CAS: 64742-95-6 Hydrocarbons, C9, aromatics 5-<10% ♦ Flam. Liq. 3, H226; ♦ Asp. Tox. 1, H304; ♦ Aquatic Chronic 2, H411; ♦ STOT SE 3, H335-H336 EC number: 918-668-5 Reg.nr.: 01-2119455851-35 CAS: 108-65-6 2-Methoxy-1-methylethyl acetate 2.5-<10% EINECS: 203-603-9 🚸 Flam. Liq. 3, H226; 🚸 STOT SE 3, H336 Reg.nr.: 01-2119475791-29 [3-(2,3-epoxypropoxy)propyl]trimethoxysilane CAS: 2530-83-8 ≥3-<10% EINECS: 219-784-2 Eye Dam. 1, H318 Reg.nr.: 01-2119513212-58 CAS: 1330-20-7 Xylene 2.5-<5% Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; EINECS: 215-535-7 Reg.nr.: 01-2119488216-32 *Éye Irrit. 2, H319; STOT SE 3, H335* (Contd. on page 3)

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• 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:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- 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: Generally the product does not irritate the skin.
- After eye contact:

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

- · After swallowing: Seek immediate medical advice.
- 4.3 Indication of any immediate medical attention and special treatment needed
- No further relevant information available.
- Information for doctor:

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

In case of fire, the following can be released: Nitrogen oxides (NOx) Carbon monoxide (CO)

Hydrogen cyanide (HCN)

- · 5.3 Advice for firefighters
- **Protective equipment:** Mouth respiratory protective device.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equip	
Wear protective equipment. Keep unprotec	eted persons away.
 6.2 Environmental precautions: 	
Inform respective authorities in case of see	epage into water course or sewage system.
Do not allow to enter sewers/ surface or gr	round water.
· 6.3 Methods and material for containmen	t and cleaning up:
	, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste a	ccording to item 13.
Ensure adequate ventilation.	0
Do not flush with water or aqueous cleans	ing agents
Contain and collect spillages with non-c	combustible absorbent materials (e.g. sand, earth, diatomaceous
earth) and place in a suitable container.	
Decontaminate immediately with suitable i	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

Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.

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: Keep ignition sources away - Do not smoke. Protect against electrostatic charges.*

· 7.2 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: Do not store together with reducing agents, heavy-metal compounds, acids and alkalis. Store away from foodstuffs.

• Further information about storage conditions: Keep container tightly sealed. Store separately from oxidising agents, strongly alkaline and strongly acidic materials, amines, alcohol and water.

· Storage class: 3

• 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.

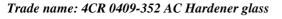
· 8.1 Control	parameters
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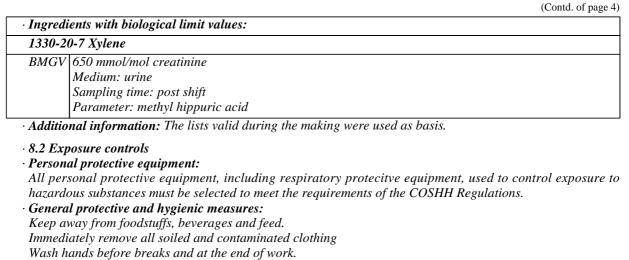
123-86-4 n-Butyl acetate	
WEL Short-term value: 966 mg/m ³ , 200 ppm Long-term value: 724 mg/m ³ , 150 ppm	
28182-81-2 Hexamethylene diisocyanate, oligomers	
EBW Short-term value: 0.5 mg/m ³ exposition evaluation valu TRGS 430 (EBW)	
108-65-6 2-Methoxy-1-methylethyl acetate	
WEL Short-term value: 548 mg/m ³ , 100 ppm Long-term value: 274 mg/m ³ , 50 ppm Sk	
1330-20-7 Xylene	
WEL Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV	
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- 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 (EN 374)

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.

· 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

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form:

Fluid

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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.	: 124-128 °C
· Flash point:	30 °C (DIN 53213)
· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	370 °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:	1.2 Vol %
Upper:	7.5 Vol %
• Vapour pressure at 20 •C:	10.7 hPa
· Density at 20 °C:	0.973 g/cm ³ (DIN 53217)
· Relative density	Not determined.
· Vapour 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.
Kinematic at 20 °C:	13 s (DIN 53211/4)
· Solvent content:	
VOC (EC)	61.02 %
Solids content (weight-%):	39.0 %
• 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.
- \cdot 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- \cdot 10.6 Hazardous decomposition products:

Possible in traces.

Nitrogen oxides Hydrogen chloride (HCl)

Hydrogen cyanide (prussic acid)

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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.
- \cdot Serious eye damage/irritation
- Causes serious eye damage.
- · Respiratory or skin sensitisation
- May cause an allergic skin reaction.
- · CMR effects (carcinogenity, 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 respiratory irritation. 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.

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.
- Ecotoxical effects:
- · Remark: Harmful to 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.
- 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.

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08 01 11* waste paint and varnish containing organic solvents or other hazardous substances

· European waste catalogue

• Uncleaned packaging:

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

14.1 UN-Number ADR, IMDG, IATA	UN1263
14.2 UN proper shipping name ADR IMDG, IATA	UN1263 PAINT RELATED MATERIAL PAINT RELATED MATERIAL
14.3 Transport hazard class(es)	
ADR	
Class	3 (F1) Flammable liquids.
Label	3
Class	3 Flammable liquids.
Label	3
14.4 Packing group ADR, IMDG, IATA	III
14.5 Environmental hazards: Marine pollutant:	No
14.6 Special precautions for user	Warning: Flammable liquids.
Danger code (Kemler): EMS Number:	30 E E S E
Stowage Category	F-E, <u>S-E</u> A
14.7 Transport in bulk according to Anno Marpol and the IBC Code	ex II of Not applicable.
Transport/Additional information:	
ADR Transport category Tunnel restriction code	3 D/E
IMDG Limited quantities (LQ)	5L
UN "Model Regulation":	UN 1263 PAINT RELATED MATERIAL, 3, III

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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 P5c FLAMMABLE LIQUIDS
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
- · REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· 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

H226 Flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H312 Harmful in contact with skin. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H373 May cause damage to organs through prolonged or repeated exposure. 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) 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 PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Liq. 3: Flammable liquids - Category 3 Acute Tox. 4: Acute toxicity - Category 4 Skin Irrit. 2: Skin corrosion/irritation – Category 2 Eye Dam. 1: Serious eye damage/eye irritation - Category 1 Eye Irrit. 2: Serious eye damage/eye irritation - Category 2 Skin Sens. 1: Skin sensitisation - Category 1 STOT SE 3: Specific target organ toxicity (single exposure) - Category 3

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STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2 Asp. Tox. 1: Aspiration 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

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