Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.02.2020 *Version number 1* *Revision: 19.02.2020*

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

· **1.1 Product identifier**

· **Trade name: 4CR 435-110 PVB 1K Etch Primer**

· **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** Priming

· **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**

GHS02 flame

Flam. Liq. 3	H226	Flammable liquid and vapour.

GHS08 health hazard

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

GHS05 corrosion

Eye Dam. 1	H318	Causes serious eye damage.

GHS09 environment

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

GHS07

Skin Irrit. 2	H315	Causes skin irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H335-H336	May cause respiratory irritation. May cause drowsiness or dizziness.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

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· ***Hazard pictograms***

GHS02 GHS05 GHS07 GHS08 GHS09

· ***Signal word*** *Danger*

· ***Hazard-determining components of labelling:***
isobutanol
Xylene
bisphenol-A-(epichlorhydrin), epoxy resin (number average molecular weight 700-1100)
n-Butyl acetate

· ***Hazard statements***
H226 *Flammable liquid and vapour.*
H315 *Causes skin irritation.*
H318 *Causes serious eye damage.*
H317 *May cause an allergic skin reaction.*
H335-H336 *May cause respiratory irritation. 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.*

· ***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.*
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.*
P310 *Immediately call a POISON CENTER/doctor.*
P321 *Specific treatment (see on this label).*
P362+P364 *Take off contaminated clothing and wash it before reuse.*
P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

· ***Additional information:***
EUH205 Contains epoxy constituents. 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: 1330-20-7 *EINECS: 215-535-7* *Reg.nr.: 01-2119488216-32*	*Xylene* *Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335*	*≥10-≤20%*
CAS: 78-83-1 *EINECS: 201-148-0* *Reg.nr.: 01-2119484609-23*	*isobutanol* *Flam. Liq. 3, H226; Eye Dam. 1, H318; Skin Irrit. 2, H315; STOT SE 3, H335-H336*	*10-25%*

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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: 7779-90-0 *EINECS: 231-944-3* *Reg.nr.: 01-2119485044-40*	*Trizinc bis(orthophosphate)* *Aquatic Acute 1, H400; Aquatic Chronic 1, H410*	*2.5-<10%*
CAS: 25068-38-6	*bisphenol-A-(epichlorhydrin), epoxy resin (number average molecular weight 700-1100)* *Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317*	*2.5-<10%*
CAS: 108-65-6 *EINECS: 203-603-9* *Reg.nr.: 01-2119475791-29*	*2-Methoxy-1-methylethyl acetate* *Flam. Liq. 3, H226; STOT SE 3, H336*	*2.5-<10%*
CAS: 100-41-4 *EINECS: 202-849-4* *Reg.nr.: 01-2119489370-35*	*ethylbenzene* *Flam. Liq. 2, H225; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Aquatic Chronic 3, H412*	*2.5-<10%*
CAS: 64-17-5 *EINECS: 200-578-6* *Reg.nr.: 01-2119457610-43*	*ethanol* *Flam. Liq. 2, H225; Eye Irrit. 2, H319*	*<2.5%*
CAS: 162627-17-0 *EC number: 605-296-0* *Reg.nr.: 01-2119970640-38*	*Fatty acids,C18-unsatd., dimers, reaction products with N,N-dimethyl-1,3-propanediamine and1,3-propanediamine* *Skin Sens. 1A, H317*	*≥0.1-<1%*
CAS: 1314-13-2 *EINECS: 215-222-5* *Reg.nr.: 01-2119463881-32*	*zinc oxide* *Aquatic Acute 1, H400; Aquatic Chronic 1, H410*	*≥0.025-<0.25%*

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

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.
· ***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. Then 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.
· ***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*** *No further relevant information available.*

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

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:***
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
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***
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· ***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:*** *Store away from foodstuffs.*
· ***Further information about storage conditions:*** *Keep container tightly sealed.*
· ***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***

· ***Ingredients with limit values that require monitoring at the workplace:***	
1330-20-7 Xylene	
WEL	Short-term value: 441 mg/m³, 100 ppm Long-term value: 220 mg/m³, 50 ppm Sk; BMGV
78-83-1 isobutanol	
WEL	Short-term value: 231 mg/m³, 75 ppm Long-term value: 154 mg/m³, 50 ppm

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123-86-4 n-Butyl acetate	
WEL	*Short-term value: 966 mg/m³, 200 ppm* *Long-term value: 724 mg/m³, 150 ppm*
108-65-6 2-Methoxy-1-methylethyl acetate	
WEL	*Short-term value: 548 mg/m³, 100 ppm* *Long-term value: 274 mg/m³, 50 ppm* *Sk*
100-41-4 ethylbenzene	
WEL	*Short-term value: 552 mg/m³, 125 ppm* *Long-term value: 441 mg/m³, 100 ppm* *Sk*
64-17-5 ethanol	
WEL	*Long-term value: 1920 mg/m³, 1000 ppm*

· ***Ingredients with biological limit values:***	
1330-20-7 Xylene	
BMGV	*650 mmol/mol creatinine* *Medium: urine* *Sampling time: post shift* *Parameter: methyl hippuric acid*

· ***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.
Do not inhale gases / fumes / aerosols.
Avoid contact with the skin.
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.

Filter A/P2 (EN 141, EN 143)
· ***Protection of hands:***

Protective gloves (EN 374)

· ***Material of gloves***
Fluorocarbon rubber (Viton)
Recommended thickness of the material: ≥ 0.7 mm
· ***Breakthrough time of glove material*** *Value for the permeation: Level ≤ 1*

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· ***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*
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:	*108 °C*
· ***Flash point:***	*23 °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:	*1.1 Vol %*
Upper:	*12 Vol %*
· ***Vapour pressure at 20 °C:***	*12 hPa*
· ***Density at 20 °C:***	*1.146 g/cm³ (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:	*115 s (DIN 53211/4)*
· ***Solvent content:***	
Water:	*0.2 %*
VOC (EC)	*51.91 %*
Solids content (weight-%):	*47.9 %*

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· ***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:***
Possible in traces.
Nitrogen oxides
Hydrogen chloride (HCl)
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:***		
1330-20-7 Xylene		
Oral	*LD50*	*5,251 mg/kg (rat)*
Dermal	*LD50*	*>5,000 mg/kg (rabbit)*
Inhalative	*LC50/4 h*	*29 mg/l (rat)*
7779-90-0 Trizinc bis(orthophosphate)		
Oral	*LD50*	*>5,000 mg/kg (rat)*
1314-13-2 zinc oxide		
Oral	*LD50*	*>5,000 mg/kg (rat)*

· ***Primary irritant effect:***
· ***Skin corrosion/irritation***
Causes skin irritation.
· ***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***
May cause damage to organs through prolonged or repeated exposure.
· ***Aspiration hazard*** *Based on available data, the classification criteria are not met.*

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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:** 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 hazardous substances

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

SECTION 14: Transport information

· **14.1 UN-Number**	
· **ADR, IMDG, IATA**	UN1263
· **14.2 UN proper shipping name**	
· **ADR**	UN1263 PAINT, ENVIRONMENTALLY HAZARDOUS
· **IMDG**	PAINT (Trizinc bis(orthophosphate), Solvent naphtha), MARINE POLLUTANT
· **IATA**	PAINT
· **14.3 Transport hazard class(es)**	
· **ADR**	

· **Class**	3 (F1) Flammable liquids.

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· **Label**	3
· **IMDG**	
	
· **Class**	3 Flammable liquids.
· **Label**	3
· **IATA**	
	
· **Class**	3 Flammable liquids.
· **Label**	3
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	III
· **14.5 Environmental hazards:**	
· **Marine pollutant:**	No Symbol (fish and tree)
· **Special marking (ADR):**	Symbol (fish and tree)
· **14.6 Special precautions for user**	Warning: Flammable liquids.
· **Danger code (Kemler):**	30
· **EMS Number:**	F-E,S-E
· **Stowage Category**	A
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Transport category**	3
· **Tunnel restriction code**	D/E
· **Remarks:**	≤ 5 l: 2.2.3.1.5 ADR
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Remarks:**	≤ 5 l: 2.2.3.1.5 IMDG
· **UN "Model Regulation":**	UN 1263 PAINT, 3, III, 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**
E2 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t

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· ***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***
H225 Highly flammable liquid and vapour.
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.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful 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. 2: Flammable liquids – Category 2
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
Skin Sens. 1A: Skin sensitisation – Category 1A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
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