Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.05.2023 Version number 3 (replaces version 2) Revision: 02.05.2023

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

· **1.1 Product identifier**

· **Trade name: 4CR 42-150 2K Zinc-rich Primer Coating**

· **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 International GmbH & Co. KG
Donnerstrasse 10b
22763 Hamburg
Tel.: +49 (0) 40 69 60 99 30
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**

flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

environment

Aquatic Acute 1 H400 Very toxic to aquatic life.
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

· **2.2 Label elements**

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

· **Hazard pictograms**

GHS02 GHS07 GHS09

· **Signal word** Warning

· **Hazard-determining components of labelling:**
Bisphenol-A-(epichlorhydrin), epoxy resin (number average molecular weight 700-1100)
maleic anhydride
Fatty acids, C14-18 and C16-18-unsatd., maleated

· **Hazard statements**
H226 Flammable liquid and vapour.

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 02.05.2023 *Version number 3 (replaces version 2)* *Revision: 02.05.2023*

Trade name: 4CR 42-150 2K Zinc-rich Primer Coating

(Contd. of page 1)

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H410 Very toxic 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.*
P261 *Avoid breathing dust/fume/gas/mist/vapours/spray.*
P280 *Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.*
P303+P361+P353 *IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.*
P403+P235 *Store in a well-ventilated place. Keep cool.*

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

· ***Dangerous components:***

CAS: 7440-66-6 *EINECS: 231-175-3* *Reg.nr.: 01-2119467174-37*	*zinc powder - zinc dust (stabilized)* *Aquatic Acute 1, H400; Aquatic Chronic 1, H410*	*50-100%*
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*	*5-<10%*
CAS: 78-93-3 *EINECS: 201-159-0* *Reg.nr.: 01-2119457290-43*	*Methyl ethyl ketone* *Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066*	*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, EUH205*	*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%*
CAS: 123-86-4 *EINECS: 204-658-1* *Reg.nr.: 01-2119485493-29*	*n-Butyl acetate* *Flam. Liq. 3, H226; STOT SE 3, H336, EUH066*	*1-<2.5%*

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 02.05.2023 Version number 3 (replaces version 2) Revision: 02.05.2023

Trade name: 4CR 42-150 2K Zinc-rich Primer Coating

(Contd. of page 2)

CAS: 85711-46-2 EINECS: 288-306-2 Reg.nr.: 01-2119976378-19	Fatty acids, C14-18 and C16-18-unsatd., maleated Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1B, H317	≥0.1-<1%
CAS: 108-31-6 EINECS: 203-571-6 Reg.nr.: 01-2119472428-31	maleic anhydride Resp. Sens. 1, H334; STOT RE 1, H372; Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Sens. 1A, H317, EUH071 Specific concentration limit: Skin Sens. 1A; H317: C ≥ 0.001 %	≥0.001-<0.1%

· **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:** Immediately remove any clothing soiled by the product.
· **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.
· **After swallowing:** If symptoms persist consult doctor.
· **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, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **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:** No special measures required.

*

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 section 13.
Ensure adequate ventilation.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 02.05.2023 Version number 3 (replaces version 2) Revision: 02.05.2023

Trade name: 4CR 42-150 2K Zinc-rich Primer Coating

(Contd. of page 3)

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

· **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
78-93-3 Methyl ethyl ketone	
WEL	Short-term value: 899 mg/m³, 300 ppm Long-term value: 600 mg/m³, 200 ppm Sk, BMGV
100-41-4 Ethylbenzene	
WEL	Short-term value: 552 mg/m³, 125 ppm Long-term value: 441 mg/m³, 100 ppm Sk
123-86-4 n-Butyl acetate	
WEL	Short-term value: 966 mg/m³, 200 ppm Long-term value: 724 mg/m³, 150 ppm
108-31-6 maleic anhydride	
WEL	Short-term value: 3 mg/m³ Long-term value: 1 mg/m³ Sen

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

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 02.05.2023 *Version number 3 (replaces version 2)* *Revision: 02.05.2023*

Trade name: 4CR 42-150 2K Zinc-rich Primer Coating

(Contd. of page 4)

78-93-3 Methyl ethyl ketone	
BMGV	*70 µmol/L* *Medium: urine* *Sampling time: post shift* *Parameter: butan-2-one*

· ***Additional information:*** *The lists valid during the making were used as basis.*

· ***8.2 Exposure controls***
· ***Appropriate engineering controls*** *No further data; see section 7.*
· ***Individual protection measures, such as 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.
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.

· ***Hand protection***
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***
Fluorocarbon rubber (Viton)
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/face protection***

Tightly sealed goggles

*
SECTION 9: Physical and chemical properties

· ***9.1 Information on basic physical and chemical properties***
· ***General Information***

· ***Physical state***	*Fluid*
· ***Colour:***	*According to product specification*
· ***Odour:***	*Characteristic*

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 02.05.2023 *Version number 3 (replaces version 2)* *Revision: 02.05.2023*

Trade name: 4CR 42-150 2K Zinc-rich Primer Coating

(Contd. of page 5)

· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	Undetermined.
· **Boiling point or initial boiling point and boiling range**	79-80.5 °C
· **Flammability**	Flammable.
· **Lower and upper explosion limit**	
· **Lower:**	1.1 Vol %
· **Upper:**	7 Vol %
· **Flash point:**	29 °C (DIN 53213)
· **Auto-ignition temperature:**	500 °C (DIN 51794)
· **Decomposition temperature:**	Not determined.
· **pH**	Not determined.
· **Viscosity:**	
· **Kinematic viscosity at 20 °C**	100 s (DIN 53211/4)
· **Dynamic:**	Not determined.
· **Solubility**	
· **water:**	Not miscible or difficult to mix.
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure at 20 °C:**	105 hPa
· **Density and/or relative density**	
· **Density at 20 °C:**	2.438 g/cm³ (DIN 53217)
· **Relative density**	Not determined.
· **Vapour density**	Not determined.

· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Fluid
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· **Solvent content:**	
· **VOC (EC)**	17.70 %
· **Solids content (weight-%):**	82.3 %
· **Change in condition**	
· **Evaporation rate**	Not determined.

· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Void
· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	Flammable liquid and vapour.
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void
· **Pyrophoric solids**	Void
· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void
· **Oxidising solids**	Void
· **Organic peroxides**	Void
· **Corrosive to metals**	Void

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 02.05.2023 Version number 3 (replaces version 2) Revision: 02.05.2023

Trade name: 4CR 42-150 2K Zinc-rich Primer Coating

(Contd. of page 6)

· **Desensitised explosives**	Void

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 hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Based on available data, the classification criteria are not met.
· **Skin corrosion/irritation** Causes skin irritation.
· **Serious eye damage/irritation** Causes serious eye irritation.
· **Respiratory or skin sensitisation** May cause an allergic skin reaction.
· **11.2 Information on other hazards**

· **Endocrine disrupting properties**		
78-93-3	Methyl ethyl ketone	List II

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
7440-66-6 zinc powder - zinc dust (stabilized)	
EC50 (dynamic)	0.9 mg/kg (daphnia) (US EPA 821-R-02-012)

· **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.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.
· **12.7 Other adverse effects**
· **Remark:** Very 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.

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 02.05.2023 *Version number 3 (replaces version 2)* *Revision: 02.05.2023*

Trade name: 4CR 42-150 2K Zinc-rich Primer Coating

(Contd. of page 7)

Very toxic for aquatic organisms

*
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 or ID number**	
· **ADR, IMDG, IATA**	*UN1263*
· **14.2 UN proper shipping name**	
· **ADR**	*UN1263 PAINT, ENVIRONMENTALLY HAZARDOUS*
· **IMDG**	*PAINT (zinc powder - zinc dust (stabilized)), MARINE POLLUTANT*
· **IATA**	*PAINT*
· **14.3 Transport hazard class(es)**	
· **ADR**	
· **Class**	*3 (F1) Flammable liquids.*
· **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:**	*Yes*
	Symbol (fish and tree)
· **Special marking (ADR):**	*Symbol (fish and tree)*
· **14.6 Special precautions for user**	*Warning: Flammable liquids.*

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 02.05.2023 *Version number 3 (replaces version 2)* *Revision: 02.05.2023*

Trade name: 4CR 42-150 2K Zinc-rich Primer Coating

(Contd. of page 8)

· ***Hazard identification number (Kemler code):***	*30*
· ***EMS Number:***	*F-E,S-E*
· ***Stowage Category***	*A*
· ***14.7 Maritime transport in bulk according to IMO instruments***	*Not applicable.*
· ***Transport/Additional information:***	
· ***ADR***	
· ***Limited quantities (LQ)***	*5L*
· ***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***
E1 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
· ***Qualifying quantity (tonnes) for the application of lower-tier requirements*** *100 t*
· ***Qualifying quantity (tonnes) for the application of upper-tier requirements*** *200 t*

· ***National regulations:***
· ***Additional classification according to Decree on Hazardous Materials, Annex II:***

Class	Share in %
NK	10-25

· ***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.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
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.

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 02.05.2023 *Version number 3 (replaces version 2)* *Revision: 02.05.2023*

Trade name: 4CR 42-150 2K Zinc-rich Primer Coating

(Contd. of page 9)

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H372 Causes damage to organs through prolonged or repeated exposure.
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.
EUH066 Repeated exposure may cause skin dryness or cracking.
EUH071 Corrosive to the respiratory tract.
EUH205 Contains epoxy constituents. May produce an allergic reaction.

· ***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 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)
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 Corr. 1B: Skin corrosion/irritation – Category 1B
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
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
Skin Sens. 1B: Skin sensitisation – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
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 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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