

Technical Datasheet

FRS-CP Corrosion Protection Primer Red/Grey



Characteristics



- Epoxy-based corrosion protection coating especially for exposed steel plates and steel reinforcing bars
- Very high chemical resistance against acids, alkaline and salt solutions
- Corrosion protection of embedded steel reinforcement
- DoP according to EN 1504-7
- Strong adhesion to steel and concrete
- High tensile strength ($\geq 35 \text{ N/mm}^2$)
- Low chloride ion content
- Two different colour options for better visibility and signaling

General Information

Composition	2-component epoxy mortar	
Appearance	Grey viscous liquid and Red viscous liquid	
Delivery Unit and packaging	1 x Steel can (Filling weight 5 kg, A+B Comp.)	
Mixing ratio	Component A : Component B = 1:1 by weight	
Art.-No.	561930	FRS-CP Grey colour (5 kg)
	562071	FRS-CP Red colour (5 kg)
Shelf life	36 months (after manufacturing date)	
Storage conditions	Storage in dry conditions at temperatures between + 5°C and + 40°C. Before using the product, please ensure that the product is at application temperature. The product must be protected from direct sun exposure.	

Approvals and Assessments

EN 1504-7	EN 1504-7:2005
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Technical data of the components

Property	Performance	Unit	Remark
Chemical base	Epoxy mortar with amine hardener		
Solid content	≥ 99	% by mass	
Consistency component A (mortar)	Transparent viscous liquid		
Consistency component B (hardener)	Viscous paste		
Density component A (mortar)	1,16	g/cm ³	EN ISO 2811
Density component B (hardener)	1,82	g/cm ³	EN ISO 2811
Viscosity Component A (mortar)	10 000	mPa*s	Brookfield, spindle 6
Viscosity Component B (hardener)	80 000	mPa*s	Brookfield, spindle 6
Color Component A (mortar)	Colorless		
Color Component B (hardener)	Red or Grey		
Flashpoint	> 100	°C	

The values stated represent typical characteristics of the product and are not to be understood as binding products specifications.

Technical data of the mixture

Property	Performance	Unit	Remark
Workability time at 10 °C - 20 °C (5 kg)	≥ 25	min.	EN ISO 9514
Workability time at 20 °C - 30 °C (5 kg)	≥ 15	min.	EN ISO 9514
Workability time at 30 °C - 40 °C (5 kg)	≥ 10	min.	EN ISO 9514
Curing time at 10 °C - 20 °C	48	h	
Curing time at 20 °C - 30 °C	24	h	
Curing time at 30 °C - 40 °C	12	h	
Viscosity, mixture	3 000	mPa*s	EN ISO 3219
Density, mixture	1,49	g/cm ³	EN ISO 2811-1
Consistency, mixture	Viscous liquid		
Colour of mixture and cured adhesive	Red or Grey		

The values stated represent typical characteristics of the product and are not to be understood as binding products specifications.

Technical data of the cured adhesive

Property	Performance	Unit	Remark
Temperature range of use	- 40 to + 40	°C	Without long term load reduction
Temperature range short-term	80	°C	With load reduction during temperature exposure above 40°C
Water resistance	Resistant		
Weathering resistance	Resistant		
UV resistance	Conditionally resistant, in case of permanent UV radiation an adequate coating is recommended		
Tensile strength	≥ 35	N/mm ²	ISO 527-1, after 7 d at RT
Young's modulus (tension)	≥ 5 000	N/mm ²	ISO 527-1, after 7 d at RT
Compressive strength	≥ 85	N/mm ²	EN ISO 604, after 7 d at RT
Flexural strength	≥ 45	N/mm ²	EN ISO 178, after 7 d at RT
Lap shear strength (steel-steel at RT)	≥ 14	N/mm ²	DIN EN 1465, after 1 d at RT
	≥ 14	N/mm ²	DIN EN 1465, after 2 d at RT
	≥ 14	N/mm ²	DIN EN 1465, after 7 d at RT
Glass transition temperature	≥ 45	°C	EN 12614, after 24 h at RT
	≥ 45	°C	EN 12614, after 72 h at RT
	≥ 50	°C	EN 12614, after 7 d at RT

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Measurement data

The technical data given in this datasheet are based on laboratory testing according to given EN or ASTM norms. Actual measured data may deviate depending on the measurement procedures, devices and norms used.

Processing instructions

Mixing ratio mortar to hardener

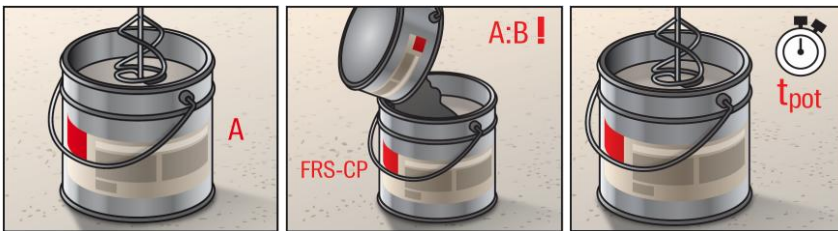
- Component A to component B: 1 part by weight to 1 part by weight

Processing temperatures (underground, air and adhesive)

- at least + 10 °C (and at least 3 K above dew point)
- maximum + 40 °C

FRS-CP consists of two components, supplied in prepacked quantities. Stir component A, then add component B completely. When taking subsets, please take care to ensure the exact mixing ratio using a sufficiently accurate scale.

Stir slowly (max. 300 rpm.) until a homogeneous mass is formed. The hardener needs to be evenly distributed. While mixing, please ensure that the sides and bottom of the pail are stirred for long enough. Care should be taken to keep entrainment of air to a minimum while mixing. Mixing time needs to be at least 3 minutes. After mixing, the resin must be refilled into a clean container or pail and mixed again.



FRS-CP is directly applied on the steel surface by brush, roller or via airless spray. Please apply at least two layers of 250 µm in order to obtain sufficient corrosion protection. The consumption rate is approx. 0.30 kg/m² for each layer.

Surface pretreatment

1. The steel surface must be prepared by appropriate surface blasting methods. Loose and minder-resistant material must be removed.
2. Steel surfaces must be metallically pure in accordance with standard purity SA 2 ½ according to DIN EN ISO 12944-4. The steel surface must be dry and free of flash rust and other separating or corrosion-promoting substances. Blasting with quartz-free granulate, for example, is suitable as a preparation and cleaning method.

Cleaning of tools

The stirrer and all application tools must be clean before mixing FRS-CP Corrosion Protection Primer. No substances may be used during cleaning that have separating or accelerating properties on the epoxy resins. After application FRS-CA Cleaning Agent or other potent organic solvents such as acetone, toluene, ethyl acetate, butyl acetate or others can be used. Take care to clean all equipment within pot life. Cured material can only be removed mechanically.

Chemical resistance

The hardened resin is largely resistant to diluted acids and alkalis as well as to many solvents, mineral oils, diesel, and gasoline. The long-term exposure of solvents can lead to a product volume increase and affects the performance. Short-term contact (24 h – 48 h) should not have significant impact on the product performance. Concentrated acids and alkalis, in particular organic acids such as acetic acid can impair performance, especially upon prolonged or repeated exposure.

Please take notice of the safety information and advice given on the packaging labels and safety data sheets.

Please note that the data and information provided above are guidelines from laboratory and real-life experience and are not binding. This general information describes our products and their use, but due to varied working conditions, not every case can be covered. We recommend conducting tests or consulting the fischer technical team if in doubt. We provide information to outline our products and services, without guaranteeing specific properties or suitability for a particular purpose. Please always refer to the latest Technical Data Sheet as well as any national and international regulations. Upon publication of a new version, the previous Technical Data Sheet becomes invalid. Product users must retrieve the latest product data sheet at www.fischer-international.com. Our current general terms and conditions apply.