



SINMAST S 2

PRODUCT DESCRIPTION

SINMAST S 2 is a two component low viscosity, solvent free, multipurpose pure epoxy binder. Also, epoxy injectable binder ideal for use in both summer and winter time.

ADVANTAGES

- Strong bonding to the substrate
- High compressive strength
- High flexural strength
- Very good flow characteristics
- Insensitive to moisture after curing
- Non shrink
- Suitable for several civil engineering applications
- SINMAST S 2 can contribute to LEED points

FIELDS OF APPLICATION – USES

- Bonding fresh concrete to hardened
- Fixing and anchoring reinforcement rods into concrete
- Cavity filling
- As injection resin to bond concrete cracks and to restore the monolithic structure (crack width 1.0–3.0 mm)
- As epoxy binder for the production of epoxy mortars (epoxy with quartz sand)

PRODUCT INFORMATION – PHYSICAL PROPERTIES

Chemical base	2 component epoxy resin
Form	Viscous liquid
Mixing ratio (A+B)	75:25
Color	
Part A	Transparent
Part B	Slightly yellowish
Density (A+B)	~1,1 kg/lt.
Glass Transition (EN 12614)	>40° C (passes the requirements according to EN 1504-4 : 2004)
Open time (EN 12189)	50 min.
Workable life (EN ISO 9514)	35 min. (+23 °C)
Water transmissibility W (kg/m ² h ^{0.5})	0,047
Hardness (according to SHORE D)	77





MECHANICAL PROPERTIES

SINMAST S 2 meets all standards according to EN 1504-4:2004, EN 1504-5:2004 & EN 1504-6:2005

Modulus of elasticity in compression according to EN 13412	≥ 2000 N/mm ² - Pass
Shear strength (EN 12615)	Dry concrete : ≥ 6 N/mm ² - Pass
	Wet concrete : ≥ 6 N/mm ² - Pass
Adhesion (EN 12636)	Hardened concrete – to – hardened concrete in dry condition : Fracture in the concrete – Pass
	Fresh to hardened concrete : Fracture in the concrete – Pass
Suitability for application and curing under special environmental conditions (EN 12615)	Hardened concrete – to – hardened concrete in dry condition : Fracture in the concrete – Pass
Adhesion according to EN 12615 (alternative test method)	Fresh to hardened concrete : Fracture in the concrete – Pass
Compressive strength (EN 12190)	≥ 30 N/mm ² - Pass
Pull out according to EN 1881 (displacement ≤ 0,6mm AT LOAD of 75 kN)	Pass
Durability (thermal & moisture) according to EN 13733	Pass (for 25 cycles)
Creep under tensile load (pr EN 1544)	Displacement ≤ 0,6 mm after continuous loading of 50 kN after 3 months)

USE DIRECTION

1. AS A BETON-CONTACT SYSTEM FOR NEW CONCRETE TO HARDENED

SINMAST S 2 is applied by roller or brush in one layer with a consumption of 350 – 450 gr/m² depending on the roughness of the substrate. Fresh concrete or mortar should be poured while the layer of SINMAST S 2 is still fresh (within 2 – 2,5 hours from application at 20° C)

2. AS FOR ANCHORING

Begin with opening holes with a bigger diameter than the rods to be installed (the depth of the holes depends on the loads). Remove the dust from the hole to ensure maximum adhesion.

For holes in vertical elements, the drilling should not be horizontal but diagonal. SINMAST S 2, then is poured into the hole in an amount 40% less than the amount needed, so when the rod is placed in the hole, the material will flow out. Finally, slightly rotate the rod.

PRODUCTS



3. AS INJECTION FOR CONCRETE CRACKS

Remove plaster (if any) from both sides of the crack or any other loose or friable particles. Then, blow the dust out from the crack. Seal the crack and place the injection nipples (at a distance approximately of 20 cm) using SINMAST P 103 epoxy paste. After hardening of SINMAST P 103, inject the material under pressure from one end of the crack to the other, until SINMAST S 2 overflows from the adjacent nipple (for vertical cracks, start from the lowest point to the highest). Seal off the first nipple and proceed with the next. Once the crack is filled and SINMAST S 2 is fully cured, cut and remove the “neck” of the injection nipples and restore the plaster.

4. AS A PRIMING COAT (PRIMER)

As primer for epoxy coatings on concrete surfaces, apply one layer of SINMAST S 2 with consumption 200 – 300 gr/m² before the application of epoxy coatings. The successive epoxy layers should be applied on SINMAST S 2 not earlier than 6 hours after, but not later than 24 hours.

Temperature during the application	+8° C min / +35° max.
Dew point	Temperature of substrate during application shall be at least 3° C above dew point
Substrate	The substrate must be clean, dry and free from grease, oil, fats or any other factors that could prevent maximum bonding. The substrate should be at least 28 days old and, if any, loose particles should be removed prior to application. Steel substrates must be derusted properly (Sa 2 ½ / SIS)
Mixing	Manually or mechanically mix the whole content of both containers (A+B) for at least 4 minutes (low speed / 300 – 350 r.p.m.) or until the material appears in a uniform color. You should always keep the predetermined mixing proportions by weight.
Consumption	1,1 kg/m ² /mm of thickness
Tools	Brush, roller
Cleaning of tools	Clean all tools with MEXYL before the hardening of material. Cured material can be removed only by mechanical means.
Packaging	1, 3, 10, 20 kg (other packages also available) / A+B
Shelf life	At least 18 months from the production date supposed that material is sealed and stored in areas protected from direct sun exposure, humidity.
Safety information	The use of this product is subject to safety precautions regarding epoxy resins and organic amines. Users shall always refer to most recent material safety data sheet (MSDS)