

PRODUCT

**INJECTION 1
Injection Epoxy Resin 1**

DESCRIPTION

INJECTION 1 is a special two-component, low-viscosity, solventless, injection epoxy resin.
INJECTION 1 combines high strength with good flexibility, will not shrink or become brittle.
INJECTION 1 has an excellent adhesion to most known surfaces in the construction industry such as concrete, metal, stone, marble, wood etc.

USES

- Pressure injection grouting of micro-cracks, cracks and voids in concrete.
- Pressure injection grouting of pre-stressed cable sheaths.

SPECIFICATIONS

- Form: Two packs to be mixed immediately before using.
- Colour: Comp. A : Clear amber.
Comp. B: Clear amber
Mixing: Clear amber
- Mixing ratio: 2 parts "A" to 1 part "B" by weight or volume
- Density: 1,05 ± 0,05 Kg/dm³
- Solids content: 100%
- Viscosity:
25°C Resin 165 MPa.s
25°C Hardener 420 Mpa.s
25°C Mixture 190 MPa.s
- Pot-Life on the mass of 1 Kg at 20°C: 30 min.
- Full cure: 7 days

- Mechanical characteristics

Characteristics	Method	Unit	Value
Tensile strength	ISO 527-1-2 (93)	MPa	40-42
Elastic modulus	ISO 527-1-2 (93)	MPa	1750-1950
Compressive strength	ASTM D 695	MPa	55-60
Adhesion to concrete		MPa	4**

** Concrete failure

-Application Temperature: Not recommended when ambient and/or surface temperature are below +5°C and falling or exceeding 40°C.

- Storage Life: 24 months (minimum) if stored in the original, tightly sealed packs.

- Packing: 6 kg. (4 kg comp. A + 2 kg. comp. B).
30 kg. (20 kg. comp. A + 10 kg. comp. B)



CHEMICAL RESISTANCE

INJECTION 1 has good chemical resistance to:

- Fresh, salt and demineralized waters.
- Anti-freeze liquids, oils, greases, gasolines, etc.
- Alkalis.
- Acids of medium concentration.

HOW TO USE

PREPARATION OF CRACK AND VOIDS

Remove all dust, debris or disintegrated material from cracks or voids by using compressed air or vacuuming.

MIXING

Check uniformity of each component and stir parts "A" and "B" separately.

Mix only the quantity of material that can be used before expiration of pot-life. For standard quantities, pour all of part "B" into can containing part "A". Mix thoroughly using a mechanical low speed mixer with a paint mixing paddle until material attains uniform consistency and colour. Carefully scrape the sides and bottom of the containers while mixing. Thorough mixing will take 3 to 5 minutes.

For smaller batches check uniformity of each component, stir parts "A" and "B" separately and thoroughly, measure the two components as specified on the label into a clean container and proceed as above. A perfect uniform mixing must be obtained.

APPLICATION

SINIT, based on many years experience throughout the world, has studied and patented "a low pressure injection system" (patent N. 932151).

The injected resin must exert a certain pressure without exceeding 3 bars against the internal surfaces of the cracks, as a guarantee of a secure adhesion, especially in the presence of humidity. Extreme attention should be paid to the effect of high pressure: a pressure of one bar develops the equivalent thrust of ten tons per square meter.

To avoid drilling the concrete as this obstructs injection voids, special patented plastic tees are adhered onto the surface of the cracks using Epoxy Paste Adhesive (P.A.103 or P.A.103 S.G. for hot climates).

These special tees of about 17 sq.cm. of area, cover a wide section of the crack with consequent better distribution of the resin and considerable reduction of the time necessary for injection. They are installed every 30-60 cm. while the entire crack is sealed with P.A.103 Epoxy Paste Adhesive in order to stop the resin from leaking with consequent loss of pressure.

Where cracks extend through the entire thickness of member and are accessible from the other side, should be sealed on both sides with P.A.103 Epoxy Paste Adhesive.

With an "injection pot" the resin is pumped at low pressure into a hose attached to injection tees.

The injection starts from the bottom of the crack proceeding from the lowest tee to the next higher up each time the succeeding tee shows evidence of the resin advancing. Be sure last tee filled is closed before proceeding to the next.

Repeat the process until the entire crack is filled.



After INJECTION 1 has cured and cracks are sealed, P.A.103 Epoxy Paste Adhesive, used to adhere the injection tees, can be removed with hammer and chisel or with a cutting-off machine.

CLEAN UP

All tools and equipment must be immersed or cleaned with "SOLVENT OMNIA" or toluene or acetone before curing occurs.

HANDLING AND TOXICITY

"A" and "B" Component For Industrial Use Only!

Skin contact should be avoided by wearing impervious gloves (rubber or disposable polyethylene) and by using suitable goggles for eyes; barrier creams such as Kerodex K7 may also assist in affording additional protection. Any accidentally contaminated skin areas should be cleansed immediately with soap and water and/or a suitable resin removal cream. For eyes, clean with plenty of water and get medical attention immediately.

The use of solvents for skin cleansing should be avoided.

NOTE

INJECTION 1 is also available as INJECTION 1 S.G. (Summer Grade) offering same properties with adjusted pot-life for use in hot climate.

All information and direction contained in this technical data sheet are given in good faith and are based on the best known practical test.

SINIT, when having no control over transport, storage, handling, use and application of its product, will disclaim responsibilities for any unsatisfactory results obtained.

All tests have been carried out at 23°C.

Revised: May 2019

These data supersede all previously published data.



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