

**PRODUCT****INJECTION 1  
Summer Grade Epoxy Resin****DESCRIPTION**

INJECTION 1 is a special two-component, low-viscosity, solventless, long pot-life 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.
- Grouting for additional reinforcement.
- Chloride barrier.

**SPECIFICATIONS**

- Form:	Two packs to be mixed immediately before using.
- Colour:	Clear amber.
- Mixing ratio:	2 parts "A" to 1 part "B" by weight or volume
- Density:	1,1 ± 0,05 Kg/dm <sup>3</sup>
- Solids content:	100%
-Viscosity:	5 – 7 Poises
- Pot-Life (200 gr/mass) at 23°C:	> 70 min.
- Workability at 23° C:	3 hrs approx.
at 30°C:	2 hrs approx.
- Touch dry at 23°C:	12 hrs
- Full cure:	7 days
- Compressive strength:	>65 MPa
- Flexural strength:	>55 MPa
- Elastic modulus:	~ 2000 MPa
- Elongation at break:	5%
- Impact Resistance:	50-60 KJ/m <sup>2</sup>
- Adhesion	
mild steel to mild steel:	>3,5 MPa
concrete to concrete:	>2,0 Mpa (100% concrete failure)
-Application Temperature:	Not recommended when ambient and/or surface temperature are below +5°C and falling or exceeding 40°C.
- Storage Life:	18 months (minimum) if stored in the original, tightly sealed packs.
- Packing:	1 Kg, 5 Kos and 66 Kos units



## CHEMICAL RESISTANCE

INJECTION 1 has good chemical resistance to:

- Fresh, salt and demineralized waters.
- Anti-freeze liquids, oils, greases, gasolines, etc.
- Alkalis, chlorides etc.
- 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 larger batches check uniformity of each component, stir parts "A" and "B" separately and thoroughly, measure the two components as specified on the packs into a clean container and proceed as above.

## APPLICATION

### CRACK INJECTION

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 to 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. Special tees are adhered onto the surface of the cracks using Epoxy Paste Adhesive (P.A.103 or PA.103 S.G.). To avoid drilling the concrete as this obstructs injection voids.

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 Epoxy Paste Adhesive in order to stop the resin from leaking with consequent loss of pressure.

Where cracks extend through the entire depth of member and are accessible from below, should be sealed with 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, the Epoxy Paste Adhesive, used to adhere the injection tees, can be removed with hammer and chisel or with a cutting-off machine.

#### GROUTING OF ADDITIONAL REINFORCEMENT

INJECTION 1 is an excellent grouting compound to fix additional reinforcement. It can be used on its own for vertical application and mixed with quartz sand and/or THK2 thickening agent for horizontal application

#### CHLORIDE BARRIER

INJECTION 1 being a 100% solids epoxy resin can be successfully utilized as a chloride barrier coating to protect newly placed concrete from penetration of chlorides from old existing concrete. INJECTION 1 can be applied, on the surface to be protected, by brush or roller with a consumption of 250-300 gr./sq.m. Within 2 hrs from application INJECTION 1 should be sprinkled with dry quartz sand of adequate granulometry (0,3-1,2 mm) to promote the adhesion of new concrete to be subsequently poured. New concrete can be poured as soon as Injection 1 is touch dry, some 12 hours after its application.

#### 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.

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.

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These data supersede all previously published data.

SINIT S.r.l. – Via V. Chiarugi,76 – 45100 ROVIGO (ITALY)

Tel. ++39. 0425 361961(r.a.) – Fax ++39. 0425 410115

E-MAIL [sinit@tin.it](mailto:sinit@tin.it) [www.sinitworks.com](http://www.sinitworks.com)



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