

TechnoSeal® Gelflex AY 200

Hydrophilic, cross-linked Vinyl Ester Methacrylate resin for Injection into honeycombed concrete, capillaries, pores, voids and cracks via injection hoses and packers.

Description:

TechnoSeal®Gelflex AY 200 is a versatile, environmentally compatible, 2-component Hydrophilic, cross-linked Vinyl Ester Methacrylate resin modified injection grout developed for injection into pores, cracks, capillaries, voids and honeycombed concrete via injection hoses and packers.

TechnoSeal®Gelflex AY 200 consisting of 2 components: a resin and an initiator which are pumped with a twin piston pump at a 1:1 ratio. Once polymerised, TechnoSeal®Gelflex AY 200 forms a resilient, highly elastic gel which is capable of absorbing and desorbing water. Due to its exceptionally low viscosity and low surface tension, TechnoSeal®Gelflex AY 200 exhibits better penetration into cracks than water.

Typical applications include

- Pressure sealing & Injection through TechnoFix® InjectoSeal HS - hose system.
- Protection against leaks in concrete joints.
- Stabilisation of sandy or silty soil
- Sealing of cracks in concrete foundation piles, tubings etc.
- Large area sealing of soil in contact with structural elements, viz. tunnels, trenches etc.

Features and Benefits

- Excellent penetration capacity due to very low viscosity
- Adjustable curing speed
- High sealing effect
- High elasticity
- Swells reversible with the entry of moisture, preventing further ingress of water into the structure
- Chemical resistance v/s most organic, or inorganic liquids
- No isocyanates - suitable for potable water contact

Typical Properties at 25°C

Syst em	The TechnoSeal®Gelflex AY 200system consists of three products: -Component A1: TechnoSeal®Gelflex AY 200 Resin -Component A2: TechnoSeal®Gelflex AY 200 catalyst (A2) catalyst, a liquid activator for standard setting times between 10 seconds and 30 minutes. -Component B1: TechnoSeal®Gelflex AY 200 initiator, in powder form to be dissolved in Polymer or water.		
Chemical base	Acrylate polymer	Density of mix at 25°C	Approx. 1.057 kg/litre
Temperature of application	+5°C to +40°C	Appearance	Orange liquid
Viscosity at 20°C	33 mPa.s (EN ISO 3219)	Dry-wet cycles	Conform (EN 14498)
pH	6.5-7.0	Mixing ratio	1:1 by volume

Curing after treatment

Not required.

Shelf Life & Storage

Store at a temperature above 0°C and below 25°C. Do not expose directly to light or sunlight. Storage in these conditions for min. 12 months

Method of Application

The following mixtures need to be prepared

Mixture 1: TechnoSeal®Gelflex AY 200 Resin (A1) + TechnoSeal®Gelflex AY 200 catalyst (A2)

Mixture 2: TechnoSeal®Gelflex AY 200 Initiator (B1) + TechnoSeal®Gelflex AY 200 Polymer (B2)

The mixtures are then mixed in ratio of 1:1 Prepare the mixture of components A1 and A2 and B1 + water in two opaque plastic containers each with a lid. Take an equal volume of each component and check the setting time of the mixture. Adjust the ratio if necessary. The mixture of component A1 and A2 is stable for at least a few hours, if kept covered in a cool and dry place even longer. The mixture of component B1 + Polymer or water is stable for a few days below a temperature of 25°C.

Application For slow setting one can use a mono-component pump. Only prepare amounts that can be injected before the gel sets by mixing one volume of components A1 and A2 and one volume of components B1 and water. For all types of setting, the use of a two component methacrylate pump is recommended. Both the mixtures are injected in a volume ratio of 1:1.

Handling

When handling the TechnoSeal®Gelflex AY 200 system, observe the recommendation set out in the MSDS sheets. Only stainless steel or plastic containers can be used (PVC, polyethylene, polypropylene). Avoid any contact between the A2 component or catalyst and the B1 component or initiator without having been diluted in their respective mixture (resin + cat and initiator + polymer or water). The mixtures have to be perfectly homogeneous before use. Do not add more than three volumes of polymer or water.

Properties of the injection fluid

Composition- The standard injection fluid is obtained by mixing two mixtures in a ratio of 1:1. However depending on the conditions of the injected substrate the quantity of water present in the injection solution may be up to 3 time the volume of resin.

Viscosity-The viscosity of the TechnoSeal®Gelflex AY 200 solution will depend on the temperature and dilution. It will remain constant up to the setting point.

Setting point -Gelling slows down at low temperature. In acid conditions the reaction is slowed down, while under alkaline conditions the reaction is speeded up. The presence of minerals and metals (specially iron and copper) may increase or decrease the rate of setting, depending on their concentration. When immersed in water the unconfined gel can absorb up to 2 times its own weight of water in a few weeks without cracking. Under humid conditions the volume of the gel will remain approximately constant. In the absence of water, the gel will slowly shrink, without cracking. These dimensional changes are reversible and do not degrade the gel.

Health and Safety instructions

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TechnoSeal®Gelflex AY 200 and TechnoFix®CleenzoPlus should not come in contact with the skin and eyes, or be swallowed. Ensure adequate ventilation and avoid inhalation of vapours. Some people are sensitive to resins, hardeners and solvents. Wear suitable protective clothing, gloves and eye protection. In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed seek medical attention immediately- do not induce vomiting.

Equipment Care

All tools and equipments should be cleaned immediately with TechnoFix®CleenzoPlus-Epoxy and PU cleaner solvent after application. Hardened materials must be cleaned mechanically.

Packaging

TechnoSeal®Gelflex AY 200 system is supplied in 50 kg composite pre-weighted kit size.

Additional information

Techno Builders Solutions® By Sterling Technotrade India Pvt.Ltd -The Specialist Construction Chemicals Company® range of associated products includes high performance concrete Admixtures, Adhesives, Protective Coatings, Concrete Repairs, Industrial Flooring, Grouts & Anchors, Joint Sealants, Surface Treatments, curing compounds, repair mortars, release agents, Grinding Aids & Waterproofing.

*Separate datasheet are available on these products.

DISCLAIMER: The product information & application details given by the company & its agents has been provided in good faith & meant to serve only as a general guideline during usage. Users are advised to carry out tests & take trials to ensure on the suitability of products meeting their requirement prior to full scale usage of our products. Since the correct identification of the problems, quality of other materials used and the on-site workmanship are factors beyond our control, there are no expressed or implied guarantee / warranty as to the results obtained. The company does not assume any liability or consequential damage for unsatisfactory results, arising from the use of our products.

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