

DURA BUILD CARE PVT. LTD.



AN ISO 9001 : 2008 COMPANY

"Quality, Integrity Assured."

DURAJEL

Polymer modified water reactive liquid chemical grout for injection

Description:

DURAJEL is a single component hydrophilic polyurethane foam/gel most suitable for injection to stop water infiltration. When it is introduced by pressure/injection grouting method into leaking concrete, stonework or soil substrates, it incorporates large amounts of water that are multiples of its own mass forming a permanently flexible but tough waterproofing gel in conjunction with water through the process of polymerisation. The nature of product formed depends on the amount of water added and the temperature.

At lower water ratios of 1:1 to 1:3 (product to water), **DURAJEL** reacts to a foam having light cellular structure and good tear/tensile resistance. However at higher water ratios viz. 1:5 to 1:12 (product to water), it offers a non-cellular gel structure. Since water is one of the components of cured product structure, the reacted material may shrink and swell as a result of the surrounding wet/dry cycles. The fact that **DURAJEL** functions by swelling/increasing in volume on coming into contact with water discriminates such hydrophilic grouts from their hydrophobic counterparts. In order to achieve maximum results out of **DURAJEL**, it needs to be combined with other systems in our product mix for certain applications. Contact any of our representatives for more details.

Uses :

DURAJEL is a versatile injection grouting product and is widely used in the following areas of construction and allied industries.

- To use as a water barrier/water proofing system in gravel beds.
- To use as a impregnated sealer through cracks of concrete structure.
- As a stabilising and consolidating agent of soils, abutment and bridge piers.
- To prevent water leakage from underground structures e.g. basements, tanks and sumps etc.
- To permanently arrest leakage in the following areas: tunnels and tunnel segments, water retaining structures and dams etc.
- As an excellent solidifying and binding aid in rock and earth fill dams against water percolation.
- To provide waterproofing and tough liner to pile and pier.
- To use as a solidifying agent of industrial and commercial waste water/sewage sludge.
- To prevent landslides on valleys and crown collapse in tunnels.

Advantages & Special Features :

- Low viscosity.
- Excellent solidifying and gelling property with water inside the structure.
- Compatible with alkaline, neutral or acidic water
- Superb adhesion and bonding property.
- High quality – produced under rigid control.

Application:

DURAJEL Polymer liquid is ready to use product. The viscosity of **DURAJEL** liquid polymer is such that it fills up all pores/crevices and voids inside the concrete structure even at 0.5 kg./cm² pressure by grease pump. The step by step application of DURAJEL is mentioned below:

Step - I

Drill or Chisel out to make holes with around 65 mm diameter up to a depth of 65 or 70 mm (reinforcement level) on floors or walls in a grid or staggered pattern with desired c/c length. Further the construction joints should be cut to the level of reinforcement in the form of groove. Fix the nozzles and seal with our instant plugging compound – **Dura 2/ Dura 3** and fresh lump free Ordinary Portland Cement mix. Allow to set for 1 to 4 hours.

Step - II

Introduce the ready-to-use **DURAJEL** liquid polymer by grout pump or gravity pressure, so that the low viscosity liquid runs freely through the pores/cracks inside the entire structure and reacts with water to form a foam/gel depending on the quantity of water. If the resin continuously flows freely out of the crack, stop pumping and apply a surface seal over the crack with rapid setting plugging compound **DURA2**.

Step - III

Remove nozzles and provide **Duramicrokrit**, high strength micro-concrete, for repairing/ leveling the concrete surface as per instructions of Engineer in-charge.

Step - IV

Once the injection work is completed, a good and thorough cleanup is essential using our **DURAJEL C**, because once the resin hardens, it is almost impossible to dissolve it.

Technical Data:

The **DURAJEL** liquid polymer when injected inside the leaking concrete structure against water pressure by fixing normal grout nozzle, forms a solid gel or foam along with water and thereby seals the water infiltration permanently.

Appearance Color	: Pale Yellow	
Specific Gravity (at 30±2° C) (As per guidelines IS:101 part 1/sec 7) 1987	: 1.08	(Tested at Shriram Institute, New Delhi)
Viscosity at 30° C (Using Brookfield viscometer)	: 1008	(Tested at Shriram Institute, New Delhi)
Gel time	: Approx. 100-120 secs	
Corrosiveness	: Non-Corrosive	
Solubility in water	: Gelation	
Components	: Polyurethane resin	
Description of Foam/Gel	: Light yellow foam/gel (depending on amount of water) is formed having very good tensile/bonding strength and elongation.	
Shelf Life	: 12 months if kept in original packing under shed and kept in a cool place.	

Health & Safety : Use gloves/ goggles while handling. Rinse thoroughly with soap and water in case components come in contact with skin/ eyes.
Recommendation : Continue pumping the grout inside the structure until water seepage stops visibly.
Packaging : In 4 Ltr. & 25 Ltr.



IMPORTANT: Though the product may change with some code as suffix or addendum to the principal or original name out of some minor adjustment and fine tuning in the formulation due to our continuous research and development but shall exhibit the stated properties with more improvement.

WARRANTY: Our high potency products are manufactured under stringent National/International Quality Standard specifications and guaranteed against any manufacturing defect. Suggestions and recommendations are made here based on our most practical experience and exposure over 25 years in the field and are believed to be most appropriate and correct BUT no liability can be accepted by us, as the conditions of use of such products are beyond our control.

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●WATER PROOFERS ●POLYMER MODIFIED FOR CEMENT ●ADMIXTURE/PLASTICISER ●EPOXY PRODUCTS ●EPOXY BONDING AGENT●
●FLOORING COMPOUNDS ●GROUTING COMPOUNDS ●REPAIR MATERIAL ●CURING COMPOUNDS ●TILE ADHESIVE & GROUT●
