

Power-Protect O-95

Oil-based Polyurethane Foam Injection Resin

Description

Single component, low viscosity, Hydrophobic closed cell polyurethane foam injection resin .

Applications

It can stop the water leaking in the building very fast, widely used in Subway Station, Tunnel, Culvert, Foundation Improvement, Soil Settlement, Reservoir, Port Project, Top Slab, Cracks Construction Join, Shrinkage Crack, Basement hairline crack etc.

Advantages

- Short waiting times during the works.
- Better crack penetration due to low viscosity
- Better sealing due to great adhesion with concrete.
- High resistance to aggressive chemicals.
- Permanent repair and long-term flexibility.
- Very reactive with water and can complete foaming process within 1-3 minutes.
- Can retain its properties when mixed with weak base/acid, even with seawater.

Test report for Hrophilic polyurethane injection resin

Item	Standard Index	Test Results
Density (g/cm ³ 25°C±0.5°C)	≥1.00	1.16
Viscosity (Mpa.S 25°C±0.5°C)	≤1.0×10 ³	450 to 900
Curing Time /s	≤800	321
Foaming Capability /%	≥1000	2050
Non-Volatile Content/ %	≥75	78
Flash Point °C	≥124	130
The ignite Temperature °C		402

Usage

“Power-Protect O-95” is fit for hairline cracks, wide crack and joints, and for gushing leaks. These can be especially challenging because large quantities of water can wash out the resin before it sets. That is why we have developed a products and technique to tackle gushers. “Power-Protect O95” is explosively expansive to shut down gushing leaks in seconds. It can expand up to 20 times its original volume, and it forms a rigid foam. Try injecting these materials behind the structure for best results.

Consumption

Has to be estimated by the engineer or operator and depends on the size of the cracks and voids, which need injecting and on the expansion rate of the chosen resin.

Cleaning

- Resins must be cleaned up immediately before it sets.
- Packers must be removed within 24 - 48 hours and patched with appropriate epoxy mortar .
- Electrical grinder can be used to remove excess cured resin that flowed out the cracks.

Packaging

Power-Protect O95 is available in 10 KGS Special Iron Pails

Power-Protect O-95

Oil-based Polyurethane Foam Injection Resin

Preparation

If water leakage is found in the water tank or retaining wall, conduct a visual survey to locate the apparent source of the leakage. If the concrete structure is plaster all plaster should be removed from the affected area to expose the concrete below. There after mark the crack through which the water leakage is observed .

Drilling

Use a high quality rotary hammer drill to make injection holes with a varied distance from 15-50 cm to each other, according to the width of crack.

The drilling angle should be approximately 45 degrees or less to concrete surface and intersecting the crack, at a distance of ½ the depth of the concrete element from the crack. Clean all the holes from dust using air pump.

Fixing

Install injection packers into drilled holes ensuring that top of the sleeve is just below the surface of the concrete to secure sealing of the injector.

Application

- Power-Protect O95 is to be applied using the Injection machine (Ex. Smart X).
- Make sure that the delivery line and all the fitting are connected tightly and in new condition at all time. Also ensure that no contamination has entered the delivery system.
- Start the Injection machine with low speed to start the pumping process and increase gradually.

Application(Continue..)

Once the desired working pressure is obtained set the switch of the machine so that this pressure will both be exceeded. In a regular injection the injection pressure will be well below the 400 bar mark.

- Continue until the crack is filled completely and resin can be seen emerging from the crack surface.
- Then start the process with the next packer until all the packers are done.
- Allow curing overnight and removing the packers and close the holes with special epoxy mortar that can be applied by trowel, spatula or knife.
- If the water is seen at adjacent place 7 days later, the procedure should be repeated until the whole structure is dried.
- Seal the crack permanently by inject Power-Protect W-70 (see Datasheet)

Health & Safety

Power-Protect O95 is classified as harmful. Power-Protect O95 is classified as irritant. In case of spills and accidents, refer to the Material Safety Data Sheet of the products or when in doubt contact the Manufacturer .

Always wear protective clothing, gloves and protective goggles when handling chemical products.

For full information, consult the relevant Material Health and Safety Data Sheet.

Appearance

Transparent brown liquid

Power-Protect O-95

Oil-based Polyurethane Foam Injection Resin

Storage

To avoid problems, it is very important to understand that Power-Protect O-95 is both temperature and moisture sensitive.

Therefore, materials should be stored in an area with temperatures not exceeding 30°C or not lower than 10°C.

The maximum shelf-life is one year.

Equipment

- SMART-X Integrated Injection Machine
- Compact 6 powerful Injection Machine
- SP-5 single component injection machine
- Set of Injection Packers



Important Note:

The technical information and application advice in this publication is based on the present state of our best scientific and practical knowledge. As the nature of the information herein is general, no assumption can be made as to the product's suitability for a particular use or application, and no warranty as to its accuracy, reliability or completeness, either expressed or implied, is given other than those required by State legislation. The owner, his representative or the contractor is responsible for checking the suitability of products for their intended use. Field service, where provided, does not constitute supervisory responsibility.

www.powerproofqatar.com/O95



POWER PROOF TRADING & CONTRACTING
Telephone : +974- 44 88 32 66
Hot Line : +974- 70 00 93 11
Email : info@powerproofqatar.com