

IPAPUR VM 1K

1 Comp.foaming Polyurethane Injection Resin, Foaming in Contact with Water, used To Seal Water-Bearing Cracks and Cavities

Description of material

highly reactive modified one component polyisocyanat-prepolymer, which hardens to a firm, elastic polyurethane-foam.
POLYURETHANE V 1K is a solvent-free, brown liquid.

Application areas:

POLYURETHANE V 1K being a one component product has compared with the usual sealing resins the following advantages:

1. By a lengthened curing time the material flows slowly into the cavities and therefore reaches an optimal water displacing effect.

2. The contact with the humidity from the surrounding leads to subsequent curing at simultaneous long-term effective sealing. Also at temperatures around 0°C the reaction is still very fast. The long-reacting foam sticks firmly to the underground and stays flexible even at temperatures of -20°C. The cured POLYURETHANE V 1K is resistible against acids and leaches and does not attack neither bitumen nor joint-bindings or concrete.

The data are valid for room temperature after intensive mixing with ca. 5% water, at free extension possibility of the material. Quantity and characteristics of the foam are slightly depending of the quantity of water and their distribution within POLYURETHANE V 1K.

Processing Notes:

Sealing Cracks/Defects Subject To Pressurized Or Inrushing Water:

- Determine and mark orientation of cracks. Drill 13 mm holes on alternating sides along the crack, spacing them (depending upon crack width) every 15 - 20 cm and angling them approx. 45 ° so as to have the bore-holes pierce the crack at points corresponding to about half the thickness of the wall.
- Use pressurised water or an air gun to flush or blow drilling fines out of the holes.
- Fill cracks having a width of more than 0,5 mm. To do so, use IPATOP SM or IPA cement-based filler; with highly water-logged cracks, add IPANEX R (see data sheet).
- Assemble and tension the 13 mm dia. Revolta-type valves or threaded packers.
- Once the filler has cured, place a check valve on to the lowest valve and start injecting.

- Begin by injecting POLYURETHANE V 1K, which will foam if in contact with water, using a IPA high-pressure injector to do so.
- Upon foaming inject IPAPUR IF, IPAPUR IS IPANOL IH or IPAPOX IH/E through the same valves or packers in order to close the open-celled pores of the PUR foam.
- Upon curing, remove packers if any, and close remaining bore-holes using IPATOP SM.

Technical Data:

Appearance	yellowish-brown liquid	
Viscosity	at 23°C	mPas300
Density	at 20°C	g/cm1,2
Flame point	°C	>200
Processing Temperature	not below 0° C	
Extension of volume	15-20 times	
Storage	dry	
Shelf Life	in an airtight container, one year	
Supplied In:	containers holding 10kgs	
Times of reaction at contact with water	(at20°C)	
Starting time	sec.	ca. 30
Climbing time	Min.	Ca. 4
Setting time (adherent free)	min.	ca. 10

Caution:

Even though the material itself has a sufficiently long pot life, a solid skin may form on its surface due to the influence of ambient humidity. Once this layer has been pierced, the remaining mixture can be used, its quality being unimpaired. Use IPA cleaning agent to remove any residues remaining on tooling and equipment.

Safety Recommendations:

POLYURETHANE V1k is irritant!
The product contains Isocyanates!
Observe all protective measures prescribed by any competent social insurance association against occupational hazards in the chemical industry. Use gloves and protective goggles. Avoid any contact between the product and your skin. For improved protection, apply cream to your hands. Use a good deal of water to wash away any splashes of material reaching your skin or an eye; afterwards, immediately consult a physician .

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