

IPAPUR SP

IPAPUR SP/L

Low viscose, highly elastic, Pu Injection resin

Product Specifications:

IPAPUR SP injection resins are solvent-free colourless low viscose two component injection-resins based on polyurethane with adjustable reactivity and **foaming performance in contact with water**.

IPAPUR SP/L (normal) because of the longer pot life can also be injected with 1-component injection machines.

IPAPUR SP (**Rapid Type with 4% of Activator**) based on the high reactivity can only be applied with 2-component injection machines.

Areas of Application:

IPAPUR SP are injection resins for limited flexible filling of cracks (PUR-I) according to ZTV-RISS. and can be used at the humidity conditions dry, humid, pressureless watercarrying, as well as under water-pressure according to table 2 of ZTV RISS. For pressure-water-carrying cracks an injection with IPAPUR VM, a very rapid Pu Injection Foam should be done before. (See application instructions).

Technical DATA

		Normal Type	Rapid Type
Mixing Ratio	weight parts	3:1	3:1
	vol. parts	3.1	3.1
Colour	Comp. I	light brown	
	Comp. II	light yellow	
viscosity at 23°C			
a) in the rotationviscosimeter	mPas	180-200	180-200
b) in the 4mm DIN pot	sec.	40-50	40
density at 23°C	g/cm ³	1,1	1,3
application time at 8°C	min.	10	120
	at 15°C	10	90
	at 23°C	10	45
minimum hardness respectively temperature of object	°C	3-5	3-5
hardened through at 23°C	days	7^	7
absorption of water after 28 days at 23°C n. DBV			
sample 50x50x1mm	weight %	1	1
loss of weight after 28 days at 60°C			
thickness of sample 1mm	weight %	2	2
Shore-A-hardness		40	30
breaking extense (DIN 53 455)	%	30	30

Characteristics

IPAPUR SP harden without shrinkage at dry environment to a flexible polyurethane material with high elongation with high tensile strength and good adhesion to concrete. In contact with water the volume increases by foaming which improves ability of elongation and although brings a durable sealing against water.

IPAPUR SP hardened is alkaline resistant and will not be attacked by fresh concrete.

The products have a passivating action against steel and as a deactivating PUR material they are harmless to bitumen layers, foils jointbands and concrete.

IPAPUR SP meets the requests mentioned in „Kunststoff-Trinkwasser-Empfehlungen“ to small leveled sealings.

Therefore it is suitable for sealing of cracks in drinking water containers.

IPAPUR SP performs the requirements of the Deutschen Bundesbahn (German Railway) to injection resins from polyurethane and therefore can be applied also in building of the DB (e.g. for cracks in tunnel-walls).

Requirements to the preparation of substrate

The cracks to be filled must be free of dirt. The crack sides must have enough solidity to maintain an adhesion of the filling material. Existing contaminations must be removed by blowing out with oilfree pressed air respectively with clear water.

Application specifications

IPAPUR SP are delivered in separate cans containing comp. I (Isocyanate) and comp. II (Polyol).

IPAPUR SP rapid type is according to the reaction time concipated for 2-comp. machines.

For application with 1-comp. inj. machines we deliver it with application time of 45 min

When applying it, comp. I and comp. II have to be mixed intensively before. Therefor comp. II is poured into comp. I. It is important that comp. II runs out completely. The mixture of the two components should be done by a mechanical mixing machine at max. max. 300 Upm (very slowly running drilling-machine with suitable mixer) Mix very intensively, **but avoid air entrainment!**

Mixing Instructions:

Thoroughly and homogeneously mix components *but avoid air-entrainment* ! In the process, take the utmost care to prevent any water from dropping into the mixing container.

In any way stir intensively from the bottom that the hardener distributes also vertical. It must be stirred until the mixture is homogenous (ca. 5 min.) temperature of both components should have at least 15°C. Do not apply out of the delivery can. After mixture fill into the container of the machine and again stir intensively.

Advice.

At dry cracks before application of IPAPUR SP the crack must be preinjected with water.

If heavy water-carrying cracks according to table 2 (humidity conditions) are to be injected according to ZTV-RISS, the cracks must be injected with IPAPUR VM. before. After a waiting time of at least ½ hour will it be filled over the same packers into the crack. eventually it is necessary to change the nipples.