

System 300

NEWTON INJECTION RESINS

Injection Resin Comparison Matrix

Rev 1.0 - 3 April 2019

PROPERTIES	320-FP	321-FSP	322-SP	323-SA	324-SR
MAIN USE	Stage 1 stemming of high flow water leaks	Stage 1 stemming and Stage 2 sealing of water leaks	Stage 2 sealing of water leaks & Injection Hoses	Stage 2 sealing of water leaks, Injection Hoses & Curtain Injection	Where movement or settlement is expected. Movement joints.
Material	Polyurethane	Polyurethane	Polyurethane	Acrylic	Acrylic Rubber
Foaming	Yes - with water	Yes - with water	Yes - with water	No	No
Sealing	No	No	Yes - No water	Yes	Yes
Parts	2	1	2	4 (one being water)	5
Catalyst	Yes	No	No	Yes	Yes
Pack size - kg	25 + 2.3	25	12 + 13.2	25 + 1.25 + 0.06	See pages 1 & 3
Part A	Polyurethane	Polyurethane	Polyurethane - A	Acrylic resin	Acrylic resin
Part B	Catalyst	N/A	Polyurethane - B	Catalyst	Additive
Part C	N/A	N/A	N/A	Initiator	Catalyst
Part D	N/A	N/A	N/A	Water	Strengtheners
Part E	N/A	N/A	N/A	N/A	Initiator
Viscosity at 20°C	111 mPa/s	280 mPa/s	103 mPa/s	60 mPa/s	25 mPa/s
Viscosity Category	Low	Medium - low	Low	Very low	Very low
Is water required	Yes - to foam	Yes - to foam	No - Yes to foam	No - hydrophilic	No
Water source	In substrate	In substrate or added	In substrate	Added	N/A
Controlled reaction	Yes - by catalyst	No	No	Yes - by initiator	Yes - by initiator
Final form	Rigid open cell foam	Flexible closed cell foam	Flexible closed cell foam or resin	Flexible & elastic hydrophilic resin	Very flexible & elastic rubber gel
Final performance	Stable	Stable	Stable	Swells with water	Stable
Shrinkage	No	No	No	Slight	Slight
Flexibility	None	Some	Good	Very good	Extremely good
Working time	Use immediately	Use immediately	60 mins	Working day*	Working day*
Reaction time	15 sec to 4 min	2 minutes	6 hours to 5 days	44 sec to 4.8 min	18 sec to 18 min
Rate of expansion	1700-2200%**	300%**	10%**	290%***	120%***
Adhesion	Good	Good	High	High	Very high
SUBSTRATES	320-FP	321-FSP	322-SP	323-SA	324-SR
Concrete	Yes	Yes	Yes	Yes	Yes
Steel	Yes	Yes	Yes	Yes	Yes
Mortar	No	Yes	Yes	Yes	Yes
USES	320-FP	321-FSP	322-SP	323-SA	324-SR
Running water	Stage 1	Stage 1 & 2	Stage 2	Stage 2	Stage 2
Large dry cracks	No	Yes*	Yes	No	Yes
Fine wet cracks	No	Stage 1 & 2	Stages 1 & 2	Yes	Yes
Fine dry cracks	No	Stage 1 & 2	Yes	Yes	Yes
Voids/porosity - wet	Stage 1	Stage 1 & 2	Stage 2	No	No
Voids/porosity - dry	No	Stage 1 & 2	Yes	Yes	Yes
Injection hoses	No	No	Yes	Yes	No
Curtain injection	No	No	No	Yes	Yes****
Penetrations - wet	Yes	Yes	Yes	Yes	Yes
Penetrations - dry	No	Yes****	Yes****	Yes****	Yes
Structural repair	No	No	No	No	No
Movement expected	No	Yes****	Yes	Yes	Yes
Movement joints	No	No	No	No	Yes