

Gelacryl Superflex

Gelacryl Superflex is a 2-component acrylic based resin developed for injection into pores, cracks, capillaries, voids and honeycombed concrete.

This Technical Data Sheet is to be used outside the European Union only.

Product description

GELACRYL™ Superflex is a 2-component acrylic based hydrophilic resin, consisting of 2 components: a resin and an initiator which are pumped with a twin piston pump at a 1:1 ratio. Once polymerised, Gelacryl Superflex forms a resilient, highly elastic gel. Due to its exceptionally low viscosity and low surface tension, Gelacryl Superflex exhibits better penetration into cracks than water.

Resin: Gelacryl Superflex

Catalyst: TE 400

Initiator: SP 200

Decelerator: KF 500

Fields of Application

- Curtain grouting.
- Injection of Re-Injecto and Re-Injecto LB re-injectable injection tubes.
- Repairing water leaks in structures under permanent water pressure.
- Preventative waterproofing of structures under permanent water pressure.
- Waterproofing of underground structures in concrete or masonry (cellars, underground car parks, etc.).
- Sealing of cracks in concrete.
- Waterproofing of tunnel liners.

Product Advantages

- Gelacryl Superflex is injected with a twin piston, 1:1 ratio pump.
- The exceptionally low viscosity allows Gelacryl Superflex penetrates cracks 0.1 mm wide.
- Large post-expansion in contact with water: approx. 150%.
- Non-corrosive.
- Excellent adhesion to concrete.
- Has a very good chemical resistance to most acids, alkalis and micro-organisms (*).
 - Polyacrylate resin, free of acrylamides.

(*) For chemical resistances please contact your GCP representative.

Application

Consult the MSDS before mixing and/or handling.

- Gelacryl Superflex is developed to be used below ground or in conditions of permanent moisture. • Gelacryl Superflex is typically injected into defective areas. Holes are drilled in the affected area at a 45° angle. Water can be forced into the hole to determine whether all cracks can be injected and if additional holes need to be drilled.
- Visible surface leaks should be sealed with a fast setting cement. Allow the cement to harden completely before injecting Gelacryl Superflex.
- Use standard packers or equipment according to local regulations.
- Gelacryl Superflex is then injected with a high-pressure pump capable of 200 bars. This forces the Gelacryl Superflex deep into the structures and allows penetration of even the smallest cracks.
- When surface leaks show up during pumping, stop immediately and seal the leak by approved method.

1. Composition

- The injection grout needs to be prepared immediately before the injection. Do not dilute the resin to less than 20% solids when injecting.

Component 1	Component 2
Gelacryl Superflex	Water
TE400	SP200

- After preparation, the components are injected simultaneously at a ratio of 1:1.

2. Preparation

Component 1

- Gelacryl Superflex container. Add the required quantity of TE400 catalyst to the Gelacryl Superflex resin. Gelacryl and TE400 need to be thoroughly mixed.

Component 2

- SP 200 tank. The tank is first filled with the required quantity of water as the Gelacryl Superflex tank after which the SP 200 is added. The mixture is thoroughly mixed.
- Typically, a 2% accelerator is used. At temperatures below 15°C or in case of high water ingress, use 3-4% accelerator. This will give a normal gel time of 1-3 minutes which is appropriate for waterproofing active leaks.

	Component 1		Component 2			
Temperature (°C)	Gelacryl Superflex (KG)	TE400 (L)	Water (KG)	SP200 (KG)	SP200 (containers)	Gel time
5	50	2.75	43	2.250	5	1'55"
5	50	2.00	43	1.800	4	3'00"
10	50	3.00	43	2.475	5.5	1'20"
10	50	2.00	43	1.575	3.5	2'00"
10	50	1.5	43	1.350	3	2'50"

	Component 1		Component 2			
Temperature (°C)	Gelacryl Superflex (KG)	TE400 (L)	Water (KG)	SP200 (KG)	SP200 (containers)	Gel time
15	50	2.00	43	1.800	4	1'10"
15	50	1.5	43	1.350	3	2'00
15	50	1.00	43	0.900	2	2'45"
20	50	1.5	43	1.125	2.5	1'00"
20	50	1.00	43	0.675	1.5	1'50"
20	50	0.75	43	0.450	1	2'55"
25	50	1.25	43	0.900	2	55'
25	50	0.75	43	0.450	1	1'50"
25	50	0.50	43	0.450	1	3'10"
35	50	0.75	43	0.675	1.5	50'
35	50	0.50	43	0.375	0.75	1'40"
35	50	0.375	43	0.225	0.5	3'50"

For injection of Re-Injecto or Re-Injecto LB injection tubes.

Gelacryl side

- First add the required amount of TE400 to the Gelacryl Superflex resin and mix well.
- Next add the required amount of KF500 to the Gelacryl Superflex resin and mix well.
- TE400 and KF500 need to be measured and added accurately to achieve the desired gel time.

SP200 side

- Measure the required amount of water and add the SP200. Mix thoroughly.

	Component 1			Component 2			
Temperature (°C)	Gelacryl Superflex (KG)	TE400 (L)	KF500 (L)	Water (L)	SP200 (KG)	SP200 (containers)	Gel time
20	50	0.50	0	43	0.45	1	4'50"
20	50	0.75	0.75	43	0.90	2	14'00"
40	50	0.75	0.62	43	0.68	1.5	6'00"
40	50	0.75	0.75	43	0.68	1.5	12'30"

3. Injection

- The injection work should be carried out with a twin piston, 1:1 ratio high pressure pump. Please read the relevant Technical Data Sheet. For injection procedure, please read the Injection Manual.
- Delayed gel times (for example for soil injections) can be reached by adding KF 500 decelerator. Contact our technical department for correct formulations.

Appearance

After curing, product turns into a flexible gel, which remains flexible under water.

Gelacryl Superflex Resin: Blue liquid

TE 400: Transparent liquid

SP 200: White salt

KF 500: Orange liquid

Consumption

Must be estimated by the engineer or operator and depends on width and depth of the cracks and voids to be filled.

Packaging

Gelacryl Superflex:

25 kg plastic jerry-can

1 pallet = 24 jerry-cans

TE 400: 0.75L plastic bottle

1 box = 16 bottles

SP 200:

0.45 kg plastic bottle

1 box = 22 bottles

KF 500:

25 kg plastic jerry-can

1 pallet = 24 jerry-cans

Storage

Gelacryl Superflex, TE 400, SP 200 and KF 500 should be stored in a frost-free environment under cover, clear of the ground, in the original closed packaging. Storage temperature must be below 35 °C. Shelf life: 1 year.

Accessories

To be ordered separately

- Pumps and packers

Health & Safety

Users must read and understand the product label and safety data sheet (SDS) for each system component before use. All users should acquaint themselves with this information prior to working with the material. Carefully read detailed precaution statements on the product label and SDSs before use. The most current SDSs can be obtained from the GCP website at gcpat.com or by contacting GCP at +1-703-741-5970.

Technical Data / Properties

Property	Unit	Value	Standard
Gelacryl Superflex resin			
Density at 21 °C	Kg/dm ³	Approx. 1.186	EN ISO 2811
Viscosity at 21 °C	mPas	Approx. 25	EN ISO 3219
Solids	%	Approx. 45	EN ISO 3251
Boiling point	°C	100°C	Internal test
TE400			
Density at 21 °C	Kg/dm ³	Approx. 0.950	ISO 2811
Viscosity at 25 °C	mPas	Approx. 2	EN ISO 3219
Flash point	°C	62	
SP200			
Density at 21 °C	Kg/dm ³	Approx. 1.900	ISO 2811
Solubility	%	Approx. 79	Internal test
KF500			
Concentration	%	Approx. 10	
Dilution		Clean tap water	
Reacted gel based on a 22% solids mixture			
Elongation	%	Approx. 300%	
Expansion in contact with water	%	Approx. 150	EN 14498

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