

# DE NEEF<sup>®</sup> Gelacryl Superflex AR

2-component acrylic based injection system developed for waterproofing injections into joints, cracks, pores, capillaries, voids and honeycombed concrete.

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

## Product description

Gelacryl Superflex AR is a 2-component polyacrylate gel. The A-component is a poly-acrylate resin, the B-component is a polymer blend. The 2-components are injected with a 2-component 1:1 ratio piston pump. Once polymerised, Gelacryl Superflex AR forms a resilient, highly elastomeric gel.

Resin = Gelacryl Superflex.

Polymer blend B-component = Gelacryl AR2.

Accelerator = TE400.

Initiator = SP200

## Fields of application

- Curtain grouting.
- Remedial repair of water leaks.
- Preventative waterproofing of structures.
- Water control during tunnelling operations.
- Waterproofing subterranean structures in concrete or masonry (cellars, underground car parks, etc.).
- Waterproofing cracks in concrete or rock.
- Waterproofing tunnel segments.
- Waterproofing tunnel liners.
- Expansion joints with small movement.

## Advantages

- Gelacryl Superflex AR injection systems are injected with a twin piston, 1/1 ratio pump.
- Exceptionally low viscosity. Gelacryl Superflex AR penetrates into cracks 0,1 mm wide.
- Excellent post-expansion properties in contact with water.
- Gelacryl Superflex AR does not need continuous contact with water.
- Excellent adhesion to concrete.
- Very good chemical resistance to most acids, alkalis and biological attack (\*).
- Can be used in temperatures ranging from 5 °C to 70 °C.
- Polyacrylate resin, free of acryl-amides.

## Application

Consult the MSDS before mixing and/or handling.

- The injection grout needs to be prepared immediately before the injection. Both components are pre-weighted, no further dilution of component 2 with water is required. Prior to injection only the additives need to be added to both components.

*Component 1 Gelacryl Superflex component*

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

*Component 2 Gelacryl AR 2 component*

- Slowly and under continuous mixing to avoid lumps, add the required quantity of SP200. Mix well.

Component A	Component B
Gelacryl Superflex	Gelacryl AR2
TE400	SP200

### Typical formulations/gel times

Temperature (°C)	Component 1		Component 2			Gel time
	Gelacryl Superflex (KG)	TE400 (L)	Gelacryl AR2 (KG)	SP200 (KG)	SP200 (containers)	
5	50	2.75	42	2.250	5	1'55"
5	50	2.00	42	1.800	4	3'00"
10	50	3.00	42	2.475	5.5	1'20"
10	50	2.00	42	1.575	3.5	2'00"
10	50	1.5	42	1.350	3	2'50"
15	50	2.00	42	1.800	4	1'10"
15	50	1.5	42	1.350	3	2'00"
15	50	1.00	42	0.900	2	2'45"
20	50	1.5	42	1.125	2.5	1'00"
20	50	1.00	42	0.675	1.5	1'50"
20	50	0.75	42	0.450	1	2'55"
25	50	1.25	42	0.900	2	55"
25	50	0.75	42	0.450	1	1'50"
25	50	0.50	42	0.450	1	3'10"
35	50	0.75	42	0.675	1.5	50"
35	50	0.50	42	0.375	0.75	1'40"
35	50	0.375	42	0.225	0.5	3'50"

For gel times at higher temperatures, please contact your De Neef partner.

## Injection

- The injection work should be carried out with the DE NEEF® IP 2C-Gel twin piston, 1/1 ratio high pressure pump.

## Surface preparation

- Remove surface contaminants and debris to establish the pattern of the crack or joint. Cracks need to be sealed with an approved method. • Drill holes of the correct diameter for the selected packer. Drill at an angle of 45°. Preferably the holes should be drilled staggered around the crack to insure good coverage of the crack in case it is not perpendicular to the concrete surface.
- The depth of the bore should be approximately half of the thickness of the concrete. As a rule of thumb the distance of the drill point from the crack is 1/2 the wall thickness.
- Distance between holes can vary by 15 to 90 cm, depending on the actual situation.
- Insert the correctly sized packer into the hole up to 2/3 of its length. Tighten with a wrench or spanner by turning clockwise until enough tension has been reached to keep the packer in place during injection.
- Flush the crack with water before injecting with resin. This will flush out dust, debris and prime the crack for the injection resin and improve penetration of the product into the crack.

## Injection

- Start the injection at the first packer.
- Start injecting at the lowest pressure setting of the pump. Slowly increase the pressure until the resin begins to flow. Pressures may vary depending on the size of the crack, the thickness of the concrete and the general condition of the concrete.
- A little leakage of resin through the concrete or crack is useful in showing the extent of resin travel. Large leaks should be plugged with rags, wait for the resin to set, then inject again.
- During the injection water will first flow from the crack, followed by foaming resin. After this, pure resin will flow from the crack.
- Stop pumping when the pure resin reaches the next packer.
- Move to the next packer and repeat the procedure.
- After injecting through a few of the packers, go back to the first one and re-inject with resin.
- Let the resin cure thoroughly before removing packers. The resulting holes can be filled with hydraulic cement.
- When the injection is finished, clean all tools and equipment which have been in contact with the resin with water.
- Products should be disposed according to local legislation.

## Technical Data / Properties

Property	Unit	Value	Standard
<b>Gelacryl Superflex resin</b>			
Density at 21 °C	Kg/dm <sup>3</sup>	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
<b>Gelacryl AR2</b>			
Viscosity at 21 °C	mPas	Approx. 34.5	EN ISO 3219
Density	Kg/dm <sup>3</sup>	Approx. 1.019	EN ISO 2811
Solids	%	Approx. 50	ISO 3251
<b>TE400</b>			
Density at 21 °C	Kg/dm <sup>3</sup>	Approx. 0.95	ISO 2811
Viscosity at 25 °C	mPas	Approx. 2	EN ISO 3219
Flash point	°C	62	
<b>SP200 RI</b>			
Density at 21 °C	Kg/dm <sup>3</sup>	Approx. 1.900	ISO 2811
Solubility	%	Approx. 79	Internal test
<b>Reacted gel</b>			
Resistance against hydrostatic pressure	Bars	7	EN 14068
Workability	mPas	< 60	ISO 3251
Expansion in contact with water	%	Approx. 150	EN 14498

## Appearance

Gelacryl Superflex resin: blue liquid.

Gelacryl AR2: white liquid.

TE400: transparent liquid.

SP200: white Salt.

The product cures into a flexible rubber.

## 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 = 21 l.
- 1 pallet = 24 jerry cans.

### *Gelacryl AR2*

- 21 kg plastic jerry can = 21 l.
- 1 pallet = 24 jerry cans.

### *TE400*

- 0.75l plastic bottle
- 1 box = 16 bottles

### *SP200I*

- 0,45 kg plastic bottle.
- 1 box = 22 bottles.

## Storage

Gelacryl Superflex, Gelacryl AR2, TE 400 and SP200 should be stored in a frost-free environment under cover, clear of the ground, in the original closed containers.

The storage temperature must be below 35 °C.

Shelf life: 1 year.

## Accessories

To be ordered separately

- Pumps and packers

(Please consult the relevant Technical Data Sheet)

## 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](http://gcpat.com) or by contacting GCP at +1-703-741-5970.

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