

# GELACRYL



# TECHNICAL DATA SHEET

Gelacryl is a 2-component acrylic based injection resin developed for waterproofing, control of water infiltration and stabilising and coagulating a variety of loose soils.



### • field of application

- Water control during tunnelling operations.
- Curtain grouting.
- Waterproofing of underground structures in concrete or masonry (cellars, underground car parks).
- Sealing of cracks in concrete and rock formations.
- Sealing of tunnel liners.
- Mixed with cement for the waterproofing and consolidation of structures and voids.

### • advantages

- Gelacryl is injected with a twin piston, 1/1 ratio pump.
- Gelacryl is delivered on site with a composition of 45% solids which can be diluted to 22% solids, depending on the nature of the application. In diluting the basic material, the viscosity can be adapted depending on the site requirements.
- The low viscosity of Gelacryl ensures a deep penetration in the joint and the soil around the joint.
- Exhibits very low permeability for long lasting waterproofing.
- Non-flammable.
- No environmental labelling required.
- Poly-acrylate resin, free of acrylamides.
- Has a very good overall chemical resistance and is resistant to petroleum, mineral/vegetable oils and greases<sup>(\*)</sup>.

### • description

Gelacryl is an acrylic based hydrophilic gel, 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 forms a resilient, elastomeric gel.

Resin : Gelacryl.  
Catalyst : TE 300.  
Initiator : SP 200.  
Decelerator : KF 500.

• **application**

Consult the MSDS before mixing and/or handling.

**1. Composition**

- The injection grout needs to be prepared immediately before the injection. Do not dilute the resin to less than 23% solids when injecting.

Component 1	Component 2
Gelacryl	Water
TE 300	SP 200

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

**2. Preparation**

**Component 1**

- Gelacryl vessel. Add the required quantity of TE 300 catalyst to the Gelacryl resin. Gelacryl and TE 300 need to be thoroughly mixed.

**Component 2**

- SP 200 vessel. The vessel is first filled with the required quantity of water as the Gelacryl vessel after which the SP 200 is added. The mixture is thoroughly mixed.

**3. Gel times (typical mixtures)**

- Depending on the concentrations of TE 300 catalyst and SP 200 initiator in their respective blends, varying gel times can be obtained. Air, material and background temperatures will also influence gel times. The pH and the nature of the injection substrate will also affect gel times. The following typical gel times can be obtained by mixing the components according to the following formulations.

T (°C)	Product	Resin (l)	TE300 (l)	Water (l)	SP200 (kg)	Number of containers	Geltime
5	GA	42,00	1,70	42,00	1,80	4	1'
5	GA	42,00	1,70	42,00	1,35	3	2'
5	GA	42,00	1,70	42,00	0,90	2	3'
10	GA	42,00	1,30	42,00	1,80	4	1'
10	GA	42,00	1,30	42,00	0,90	2	2'
10	GA	42,00	1,30	42,00	0,45	1	3'
15	GA	42,00	1,00	42,00	1,35	3	1'
15	GA	42,00	1,00	42,00	0,90	2	2'
15	GA	42,00	1,00	42,00	0,45	1	3'
20	GA	42,00	0,80	42,00	1,35	3	1'
20	GA	42,00	0,80	42,00	0,90	2	2'
20	GA	42,00	0,80	42,00	0,45	1	3'

**4. Injection**

- The injection work should be carried out with a twin piston, 1/1 ratio pump (IP 2C-200-A). 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.

• **technical data/properties**

Property	Value	Norm
<b>Gelacryl</b>		
Density	Approx. 1,17 kg/dm <sup>3</sup>	ASTM D-1638
Viscosity	Approx. 18 mPas at 25°C	ASTM D-1638
Solids	Approx. 45%	ASTM D-1010
Boiling Point	100°C	Test DNC
Freezing point	< -20°C	Test DNC
Solubility in water	100%	Test DNC
<b>Catalyst TE 300</b>		
Concentration	Approx. 85%	Test DNC
<b>Initiator SP 200</b>		
Density	Approx. 1,9 kg/dm <sup>3</sup>	ASTM D-1638
Solubility in water	Approx. 79%	Test DNC
<b>Decelerator KF 500</b>		
Concentration	10%	Test DNC
Dilution	Clean tap water	
Cured resin based on a 22% solids mixture.		
Solubility	Insoluble in water and petroleum derivatives	Test DNC
Expansion in contact with water	< 30%	Test DNC
Dehydration	Can dehydrate in dry conditions.	Test DNC

• **appearance**

Gelacryl Resin : green liquid.  
 TE 300 : transparent liquid.  
 SP 200 : white salt.  
 KF 500 : orange liquid.  
 After curing, product turns into a flexible gel, which remains flexible under water.

• **consumption**

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

• **packaging**

- Gelacryl**
- 25 kg plastic jerry-can.
  - 1 pallet = 24 jerry-cans.
- TE 300**
- 25 kg plastic jerry-can.
  - 1 pallet = 24 jerry-cans.
- SP 200**
- 0,45 kg plastic bottle.
  - 1 box = 22 bottles.
  - 1 pallet = 24 boxes.
- KF 500**
- 25 kg plastic jerry can.
  - 1 pallet = 24 jerry-cans.

• **storage**

Gelacryl, TE 300, 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.  
 Shelflife: 1 year.

• accessories

**To be ordered separately**

- IP 2C-200-A air driven twin piston pump.
- Packers and connectors.  
(Please consult the relevant Technical Data Sheet).

• health & safety

Gelacryl is classified as irritating.

Always wear appropriate protective gear: rubber gloves, goggles and boots. In case of contact with the eyes, flush with water for 15 minutes. If swallowed, call a physician immediately.

For full information, consult the relevant Material Safety Data Sheet.

(\*) For chemical resistance to particular materials and substances, please contact your De Neef representative.