

Gelacryl 2000

Gelacryl 2000 is a 2-component acrylic based injection resin developed for water proofing, control of water infiltration and stabilising a variety of loose soils.



fig.1



fig.2



fig.3

• **field of application**

- Waterproofing of underground structures (cellars, tunnel walls, etc.).
- Sealing of cracks in concrete and rock formations.

• **advantages**

- Gelacryl 2000 is injected with a twin piston, 1/1 ratio pump.
- Hydrophilic gel when cured with 10 to 15% maximum expansion when re-immersed in water.
- Non-flammable, complies with the LUL Engineering Standard E1042 A3; Fire Safety Performance of Materials used in the Underground: March 1998.
- Water based, is suitable for use in contact with potable water. "Water Regulations Advisory Scheme – Approved Product".
- Poly-acrylate resin, free of acrylamides.
- In cured form, has a very good overall chemical resistance^(*) and is resistant to petroleum, mineral / vegetable oils and greases.

• **description**

Gelacryl 2000 is an acrylic based hydrophilic gel, consisting of 2 components: a resin and a catalyst, which are pumped with a twin piston pump at a 1/1 ratio. Once polymerised, Gelacryl 2000 forms a resilient, elastomeric gel.

Resin = Acrylic resin

Catalyst = Mixture of oxidizing agent and a corrosion inhibitor

Initiator = Gelacryl accelerator

• **application**

Consult the MSDS before mixing and/or handling.

Composition.

The injection grout needs to be prepared immediately before the injection. Do not dilute the resin to less than 22% solids when injecting.

Component 1	Component 2
Gelacryl 2000 Accelerator	Water Catalyst powder

The components are injected at a 1:1 ratio.

Preparation.

- Component 1.

Gelacryl 2000 container. Gelacryl 2000 and the accelerator should be mixed thoroughly.

- Component 2.

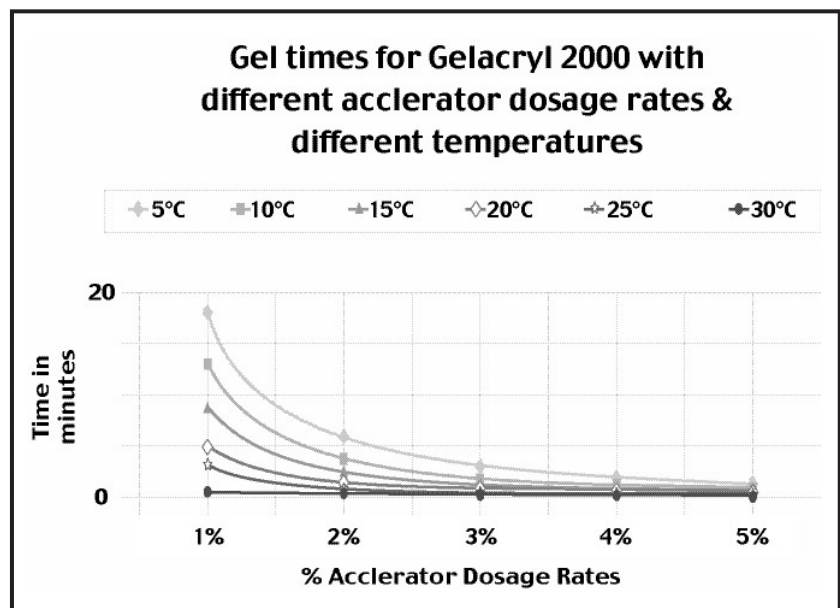
25 litre Gelacryl catalyst container. Add 25 litres of water to the Gelacryl catalyst powder container and mix thoroughly.

Gel times (typical mixtures).

Depending on the amount of accelerator used in the resin component, varying gel times can be achieved. Gel times will also be influenced by air, material and background temperatures. The pH and the nature of the injection substrate will also affect this.

Gel times in minutes for Gelacryl 2000 with different accelerator dosage rates and different temperatures.

	1%	2%	3%	4%	5%
5°C	18.00	5.20	3.20	2.11	1.17
10°C	13.00	3.70	2.10	1.40	0.93
15°C	8.25	2.75	1.67	1.04	0.68
20°C	4.75	1.75	1.10	0.69	0.43
25°C	2.83	0.8	0.57	0.33	0.18
30°C	0.42	0.33	0.22	0.13	0.13



Injection.

The injection work should be carried with a twin piston pump at 1:1 ratio (IP 2C-160-A twin piston pump). Please read relevant Technical Data Sheet.

For injection procedure, please read Injection Manual.

• **technical data / properties**

Property	Value	Norm
Gelacryl resin		
Density	Approx. 1,17 kg/dm ³	ASTM D-1638
Viscosity	Approx. 18 mPas at 25°C	ASTM D-1638
Solids	Approx. 45%	ASTM D-1010
pH	6 - 8	Test DNC
Boiling Point	100°C	Test DNC
Gelacryl Accelerator		
Concentration	Approx. 85%	Test DNC
Gelacryl Catalyst Powder		
Density	Approx. 1,9 kg/dm ³	ASTM D-1638
Solubility in water	Approx. 79%	Test DNC
pH	4 - 5	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	10 to 15%	Test DNC
Dehydration	Can dehydrate in dry conditions.	Test DNC

• **appearance**

Gelacryl 2000 Resin : Green liquid
 Gelacryl Accelerator : Orange viscous liquid
 Gelacryl Catalyst : White free flowing Powder
 After curing, product turns into a flexible gel, which remains flexible under water.

• **consumption**

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

• **packaging**

Gelacryl 2000 resin : 25 kg plastic jerry-can.
 Gelacryl Accelerator : 1kg plastic bottle.
 Gelacryl Catalyst : 1kg powder in 25 litre jerry-can.

• **storage**

All Gelacryl products 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:
 a) IP 2C-160-A air driven twin piston pump.
 (Please consult the relevant data sheet).
 b) Packers and connectors.
 (Please consult the relevant data sheet).

• **health & safety**

Gelacryl is classified as irritating.
 Always wear appropriate protective gear.
 For full information, consult the relevant Material Safety Data Sheet.

^(*) For chemical resistances, please contact your De Neef representative.

The provided information is the result of study and experience. All details are given in good faith, but are in no case to be considered as a warranty, nor make us assume any responsibility, even in case of detraction of third party's rights.

v. 17022004-01



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