WILLGEL® Y

3-component acrylic gel

1. Applications

WILLGEL® Y is a reaction time adjustable, low viscosity, three component methacrylate-based hydrogel that cures to a limited elastic product.

Due to the water-like viscosity of the mixed product, **WILLGEL® Y** penetrates easily into substrates, building materials and soil. The product is injected into the structure or soil using a special 3-component pump and is used in particular for:

- Soil consolidation
- Sealing of water inlets
- Backfilling of cavities in the presence of larger amounts of water

2. Substance data*

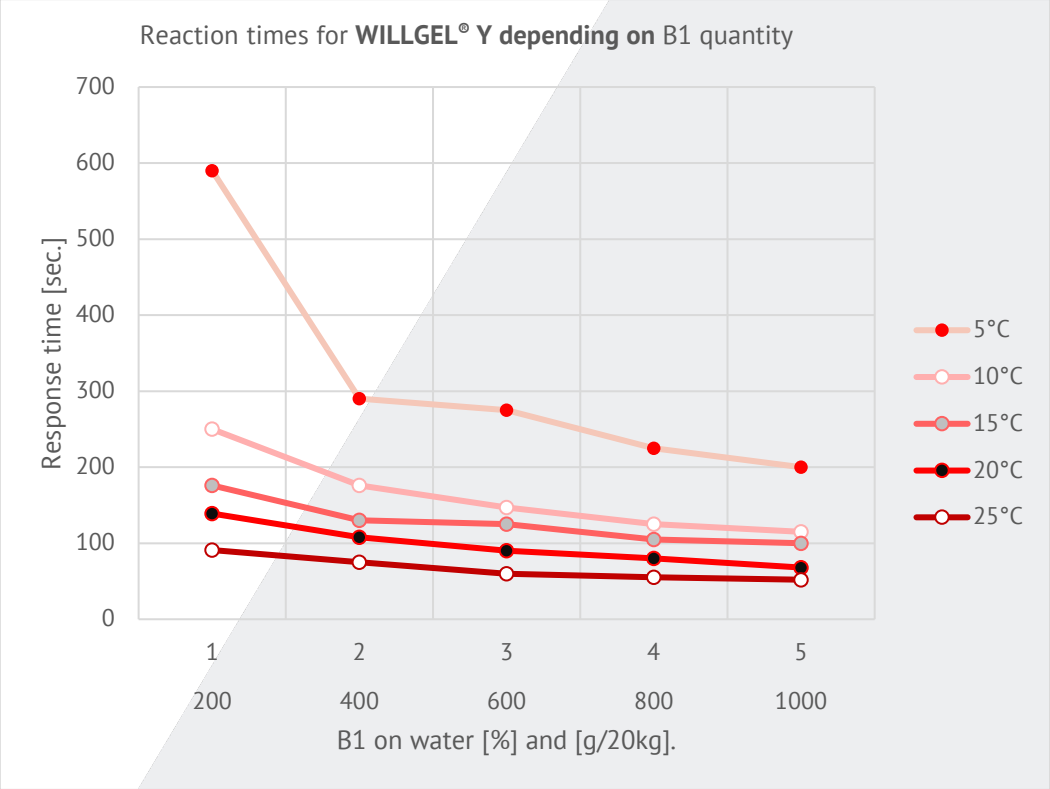
WILLGEL® Y		**-A1**	**-A2**	**-B**	**Norm**
Density at 20°C	g/cm³	1.00 – 1.10	0.928 – 0.938	1.68	DIN 51757
Appearance		clear liquid	slightly yellowish	white powder	
Smell		characteristic acrylic	Amin	odourless	

3. Reaction and mechanical data*

WILLGEL® Y - Mixture		**Mixing ratio**	**Norm**
Components A1 : A2	Weight parts	20 : 1	
Component B : Water (POLY)	Weight parts	0.4 : 20	
A : B	Volume parts	1 : 1	
Mixing viscosity at 20°C	mPa*s	6	PV_FW20

WILLGEL® Y - camber time* depending on B1 dosage								Norm
B1 on water			Application temperature					
g/ 20 kg	%		5°C	10°C	15°C	20°C	25°C	
200	1	Sec.	590	250	176	139	91	PV_FW22
400	2	Sec.	290	176	130	108	75	PV_FW22
600	3	Sec.	275	147	125	90	60	PV_FW22
800	4	Sec.	225	125	105	80	55	PV_FW22
1000	5	Sec.	200	115	100	68	52	PV_FW22

**By the camber time (also gel time) the whole mass has gelled and can no longer be conveyed.*



It is also possible to increase the amount of water on both sides (A and B) by a *maximum of 50% to* obtain longer reaction times and an even lower viscosity. The final product is then weaker, but still has sufficient soil consolidation properties.
To achieve higher mechanical end properties, e.g. adhesion, tear resistance and low sensitivity to dry-wet cycles, it is possible to replace the water on the B-side with **WILLGEL® POLY** (see WILLGEL® POLY Technical Data Sheet).

4. Composition and properties

WILLGEL® Y -A1 is a mixture of methacrylates, **WILLGEL® Y -A2** is an amine-like catalyst and **WILLGEL® Y -B** is an inorganic water-soluble salt.
The correct combination of components together with water or **WILLGEL® POLY** results in a low viscosity end product with good chemical resistance to many acids, alkalis, solvents, fuels etc. During the reaction as well as in the cured state, **WILLGEL® Y** does not release any toxic substances to soil and groundwater. Product components not incorporated during the reaction process are rapidly and completely biodegradable.

5. Preparation/Processing

Processing
The A2 component is completely transferred into the A1 container and mixed for approx. 3 minutes.
The B-component is transferred to an appropriate container and filled with 20 litres of tap water and also mixed and completely dissolved for approx. 3 minutes with a wooden paddle (do not use a metal stirrer).
In special cases (e.g. joint injection) **WILLGEL® POLY** is used instead of water to mix the B-component. Attention must be paid to this,
that the B component dissolves completely in the **WILLGEL® POLY**. To ensure this,
it is recommended to fill the container with the B-component with water and mix until the salt is completely dissolved. Then add this solution to the **WILLGEL® POLY** and mix homogeneously.

The ready-to-use A and B sides prepared in this way are processed in a mixing ratio of 1 : 1 (parts by volume) and are to be processed within about 8 hours.

Recommended pump technology: Air-operated, three-component piston pumps made of stainless steel, e.g. *WILLPUMP® AGK 3, DESOI AirPower S25-3C, WIWA* INJECT *14025* or equivalent.

Application temperature
The recommended processing temperature is between 5°C and 40°C.

Material consumption
Consumption depends on the respective application.

For further information on application areas, planning principles and injection procedures, please contact the technical sales department.

6. Safety notes

WILLGEL® Y - A1, **WILLGEL® Y -A2** and **WILLGEL® Y -B** are classified as dangerous according to REGULATION (EC) No 1272/2008. Before starting processing, it is therefore necessary to inform yourself about precautionary measures and safety advice by means of the safety data sheets.

7. Storage

12 months after production in original packaging when stored in dry conditions between 10°C and 25°C, protected from frost, heat, and direct sunlight. The minimum durability is reflected by the batch number on the container.

8. Delivery form

WILLGEL® Y		**(item. no.)**
-A1	20 litre plastic canister of 20 kg	WGEL-Y-A1-20
-A2	1 litre plastic bottle à 1kg	WGEL-Y-A2-1.0
-B	0.5 l plastic bottle à 0.4 kg	WGEL-Y-B-0.4

Other delivery forms on request.

9. Waste management

In Germany, empty packaging can be taken back by the KBS or Interseroh-System for steel or plastic packaging. The return is limited exclusively to used, completely empty packaging of the same type, shape, and size that we carry in our product range.

Transport and outer packaging are not included.

For more information on the location and further modalities of the return, please visit the website of the recycling partner acting on our behalf:

interseroh
zero waste solutions
244922

Interseroh+ GmbH

www.interseroh.plus
info@interseroh.plus
Tel.: +49 (0)2203 9147 - 1268

KBS 0234

Kreislaufsystem
Blechverpackungen Stahl GmbH
www.kbs-recycling.de
info@kbs-recycling.de
Tel.: +49 (0)211 239228 - 0

Reacted product residues can be disposed of in smaller quantities with household waste, in larger quantities as construction waste or incinerated.
Non-reacted product components must be disposed of in accordance with local regulations.

10. Legal notes

The indicated data are laboratory values.

Our technical application advice, which we give to support the customer or applicator on the base of our experience and to the best of our knowledge according to the current state of knowledge in practice and science, is non-binding and does not represent an agreed quality. The data and processing instructions are based on laboratory tests.

In practice, the measured values may be different due to influences outside our control. We explicitly reserve the right to make technical changes during further development.

The technical documents should be read carefully before starting work.

With the publication of a new version of the technical data sheet, all previous data sheets lose their validity. The applicator must test the products for their suitability for the intended application.

With the publication of this data sheet, previous editions become void.

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