

## Technical Data Sheet

### WILLFLEX® 09

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### Phenol-formaldehyde foam system, fast reacting two-component injection resin

#### 1. Applications

**WILLFLEX® 09** is a two-component, fast reacting injection foam resin intended to use in mining and tunneling.

- Filling of cavities e. g. in roads and longwalls
- Filling of cavities to prevent gas accumulations
- for solidification of loose rock pile

#### 2. Component characteristics\*\*

		WILLFLEX® 09 -A (Resin)	WILLFLEX® 09 -B (Catalyst)
Form		brown, turbid liquid	pink or brown liquid
Viskosität bei 25°C	mPa*s	200 – 600	< 50
Dichte bei 20°C	g/cm³	1.28 ± 0.1	1.48 ± 0.1

**WILLFLEX® 09 -A** (Resin) is a modified solution of phenol-formaldehyde resin. The viscosity increases over time, typical for the product.

**WILLFLEX® 09 -B** (Catalyst) is a solution of organic and inorganic acids.

#### 3. Reaction data\*

Component mixing ratio

	WILLFLEX® 09 -A (Resin)	WILLFLEX® 09 -B (Catalyst)
by volume	4	1

The system use with different mixing ratio can cause the reaction time changes and mechanical strength changes.

Reaction profile at:	15°C	20°C	25°C
Start time [s]	immediately	immediately	immediately
Reaction time [s]	90 ± 15	60 ± 15	50 ± 15
Tack free time [min]	<5	<5	<5
Foam factor	45 ± 10	55 ± 10	63 ± 14
Consumption [kg/m³]	30 ± 5	25 ± 5	22 ± 5
Compressive strength at 10% deformation [kPa]	>20	>20	>20

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### 4. Processing conditions and storage

WILLFLEX® 09 might be applied via pipe or hose. Both components have to be pumped at ratio 4:1 via two component pump and hoses. The resins are mixed in an inline mixer and injected immediately. The product should be stored in a dry place. Improper store will shorten shelf life.

	WILLFLEX® 09 -A (Resin)		WILLFLEX® 09 -B (Catalyst)
Shelf Life, month	2	12	12
Storage temperature, °C	<20	<5	-5 bis +30

**\*\*The indicated data are laboratory values.**

The information in this data sheet corresponds to our knowledge and experiences at the present time. The information does not constitute legally binding assurance of properties. Before you use the product, check this on its suitability. Since the processing are beyond our control, it is subject solely to user.