

BETTO SWELL ACR

New Generation, Acrylic Polymer Based, Water Retaining Joint
Tape that expands when it comes into contact with water

MATERIAL DESCRIPTION

BETTO SWELL ACR is a new generation water-repellent joint tape that expands when in contact with water thanks to its three-dimensional polymer chain structure.

AREAS OF USE

- Water tanks,
- Swimming pools,
- In all kinds of structures exposed to sea water,
- Treatment plants,
- Tunnel segments,
- In cold joints where shear concretes meet foundations,
- Where steel profiles and pipes come into contact with concrete,
- It is used as a water retaining flange on PVC pipe inlets and outlets.

TECHNICAL SPECIFICATIONS

Structure of the Material	Acrylic Polymer Based
Color	Red
Water Pressure Resistance	7 Bars in 14 days
Expansion Rate Wet/Dry	300% Red in 7 days 600% Yellow 900% Blue
Density	1.40 g/cm ³
Shore	50
Application Temperature	-10 C / +50 C
Bentonite	Does not contain
Degree of Expansion	CaCO ₃ (Lime Water) and affected by salt content

ADVANTAGES

- **BETTO SWELL ACR** does not damage the fresh concrete by swelling at an ideal speed when it encounters water.
- It is easier to apply than conventional waterstop tapes and minimizes the negative risks that may arise from labor.
- As it expands, the new generation of three-dimensional polymer chains that make up its structure maintain their homogeneity and stability.
- Expansion continues up to 300% - 600% - 900% depending on the type.
- This dimensional change allows the material to form a water barrier and fill possible gaps in the reinforced concrete structure.
- Resistant to various chemicals and sea water.
- Resistant to oil, fuel oil and various solvents.
- Resistant to waters containing high salt concentration.
- Its molecular structure is not affected by the volume expansion caused by the freezing of the water it takes in.
- Resistant to microorganisms.
- **BETTO SWELL ACR** is available in 3 types as Red 300% / Yellow 600% / Blue 900%.
- **BETTO SWELL ACR RING**, Hydrophilic Ring and **BETTO SWELL ACR PLUG**, Hydrophilic Plug are also available for the drill holes. 300 % in 7 days, Wet/dry difference > 300 % Water pressure resistance (14 days) 7 bar, Colors Blue - Red

This product has been tested by (British Board of Agreement).
BBA Test No= 1 T1-61007

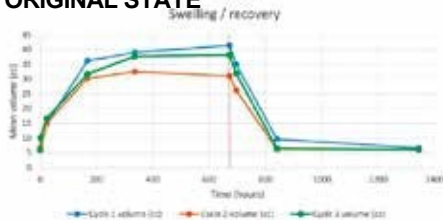
Note: The above values are given for +23°C and 50% relative humidity. High temperatures shorten the time, low temperatures lengthen the time.



Swelling	Cycle1		Cycle 2		Cycle 3		Average change (%)
	Mean mass (cc)	Change (%)	Mean mass (cc)	Change (%)	Mean mass (cc)	Change (%)	
Initial	5.84	-	6.64	13.70	6.02	3.08	8.39
1 hour	6.18	5.82	6.88	17.81	10.07	72.43	32.02
1 day	14.99	156.68	15.07	158.05	16.63	184.76	166.50
7 day	36.19	519.69	30.23	417.64	31.69	442.64	459.99
14 days	39.06	568.84	32.54	457.19	37.71	545.72	523.92
28 day	41.41	609.08	31.07	432.02	38.19	553.94	531.68
Recovery	Cycle1		Cycle 2		Cycle 3		Average change (%)
	Mean mass (cc)	Change (%)	Mean mass (cc)	Change (%)	Mean mass (cc)	Change (%)	
1 day	34.97	498.80	26.22	348.97	31.93	446.75	431.51
7 day	9.63	64.90	6.195	6.08	6.47	10.79	27.25
28 day	6.64	13.70	6.02	3.08	6.14	5.14	7.31

Note: Observations to the samples throughout testing confirms that there was no degradation of the material throughout the duration of the test.

SWELLING / RETURN TO ORIGINAL STATE



Note: The dotted red line indicates the end of the swelling and the start of the recovery cycle.

EXPANSION TABLE VALUES



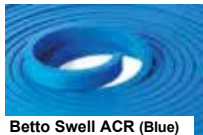
Betto Swell ACR (Red)

Tap Water Wet/Dry Difference	≥%300
Concrete Water (14 days)	≥%200
3% Salt Water (14 days)	≥%100
Water Pressure Resistance (14 days)	7 bars
Color	Red



Betto Swell ACR (Yellow)

Tap Water Wet/Dry Difference	≥%600
Concrete Water (14 days)	≥%400
3% Salt Water (14 days)	≥%200
Water Pressure Resistance (14 days)	7 bars
Color	Yellow



Betto Swell ACR (Blue)

Tap Water Wet/Dry Difference	≥%1300
Rainwater (14 days)	≥%900
Concrete Water (14 days)	≥%600
3% Salt Water (14 days)	≥%300
5% Salt Water (14 days)	≥%260
10% Salt Water (14 days)	≥%240
Water Pressure Resistance (14 days)	7 bars
Color	Yellow



Betto Swell ACR

Day 7	≥%300
Wet/Dry Difference	≥%300
Water Pressure Resistance (14 days)	7 bars
Color	Red-Blue



SURFACE PREPARATION

The surfaces to be treated with **BETTO SWELL ACR** must be free from all kinds of weak materials (such as construction residues and mud), dust, oil and similar particles.

APPLICATION METHOD

BETTO SWELL ACR should be fixed to the center axis of the section to be applied with MS Polymer Sealant. Joints should be min. 10 cm should be overlapped side by side. Before pouring concrete, the product should be checked on site for damage.

Note: Self-adhesive types are available according to preference. Please consult our company.

PACKAGING

Dimensions;

05 mm x 20 mm 20 Meter roll 140 meters 1 box RED/YELLOW/BLUE
10 mm x 20 mm 10 Meter roll 70 meters 1 box RED/YELLOW/BLUE
20 mm x 25 mm 5 Meter roll 25 meters 1 box RED/YELLOW/BLUE



**BETTO SWELL ACR RING and
BETTO SWELL ACR PLUG**

Sold in 100 transparent bags.

SHELF LIFE

12 months from the date of production under appropriate storage conditions.

STORAGE

It should be stored in its unopened original packaging, in a cool and dry environment, protected from frost. For short-term storage, maximum 3 pallets should be stacked on top of each other and shipment should be made on a first-in, first-out system. For long term storage, pallets should not be stacked on top of each other.

MATTERS TO BE CONSIDERED

- It should be removed from its packaging when it is to be used and protected from water contact until it is covered with concrete after application.
- In case of a sudden rise in the groundwater level, a period of time should be waited for the waterproofing of the cold joint, taking into account that the expansion will be completed gradually.
- For large water structures, please consult our Technical Service for appropriate product preference.

SECURITY MEASURES

During application, work clothes, protective gloves, goggles and masks should be worn in accordance with the Occupational Health and Safety Rules. Due to the irritating effects of uncured materials, the components should not come into contact with the skin and eyes, in case of contact, wash immediately with plenty of water and soap, and in case of ingestion, consult a doctor immediately. Food and beverage materials should not be brought into the application areas. Keep out of the reach of children.



BETON

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