



# MAXFLEX®

## W-SEAL

### WATER-SWELLING ELASTOMERIC SEALANT FOR JOINTS AND CRACKS

#### DESCRIPTION

**MAXFLEX® W-SEAL** is a moisture-cured, one-component, water-swelling sealant with excellent elasticity for use in all kinds of construction joints and cracks. It increases in contact with water more than 500% its original volume, acting as an effective hydro-expansive sealing within joints and blocking the water ingress.

It is supplied ready-to-use in 600 ml bag for application by caulking gun directly on places with difficult access or irregular surfaces such as corners, joints, cracks, etc., in construction.

#### APPLICATION FIELDS

- Sealing construction joints and wall/slab joints subject to permanent water immersion: water tanks, swimming pools, etc.
- Sealing joints in heavy or light prefabricated panels, pre-cast units such as box culvert, utility vaults, etc.
- Sealing of joints in water distribution networks.
- Adhesive for water-swelling profiles on concrete or metal surfaces.
- Sealing of cold joints between metal and concrete profiles.
- Excellent sealing of joints in pipe penetrations, form ties, around rebars, H-section steel beams and other waterproofing works where it is difficult or impossible to use pre-formed water-swelling profiles.
- Sealing of cracks in watertight concrete structures.

#### ADVANTAGES

- It expands more than 500% its original volume, while maintaining its elastomeric properties.
- Long-lasting sealant. It is bentonite-free, and therefore does not disintegrate or dissolved under permanent water immersion unlike those based on bentonite compounds.

- After curing, it has better physical properties than conventional polyurethane sealants.
- Suitable for applications with difficult access or where hydro-expansive profiles cannot be easily placed, such as irregular shaped joints, rough surfaces, odd penetrations, etc.
- Excellent adhesion directly on different building substrates: concrete, metal, glass, PVC, etc. Does not require primer.
- Ready to use and quick application by standard caulking guns.

#### APPLICATION INSTRUCTIONS

##### Surface preparation

Substrate must be structurally sound and clean, free of dust, coatings, efflorescence, oil, grease, gypsum, or any foreign material that could affect to adhesion. If necessary, clean by mechanical means such as air compressed, grinding, sandblasting and wire brushing or with non-grease solvents for removing greases and oils.

Surface must be preferably dry, or slightly damp without free standing water. Do not leave in contact with wet concrete for prolonged period, as it will reduce adhesion and swelling capacity before casting.

##### Application

**MAXFLEX® W-SEAL** is ready to use by a standard caulking gun with a properly sized nozzle. Break on top of the bag. Cut the nozzle at the appropriate position diagonally to suit bead size. Put the bag into caulking gun and proceed with application. Press the nozzle against the surface to prevent air bubbles.

Provide a minimum thickness of concrete covering around **MAXFLEX® W-SEAL** of 50 mm, to

ensure that expansive pressure of the sealant does not break or crack the concrete.

For use as adhesive and fixer for water-swelling profiles such as **MAXJOINT® W-SEAL**, apply an uniform and continuous profile of **MAXFLEX® W-SEAL** with at least 10-12 mm diameter and ensuring full contact with concrete surface. Place **MAXJOINT® W-SEAL** pressing slightly without gaps between them and no later than 30 minutes after **MAXFLEX® W-SEAL**.

Pour the concrete over **MAXFLEX® W-SEAL** once it has cured minimum 24 hours.

### Application conditions

Do not apply when rain, water contact, condensation, wet concrete, or dew is expected before casting concrete.

Do not apply with substrate and/or ambient temperature is at or below 5°C, or when temperatures are expected to fall below 5°C within 24 h after application. Do not apply to frozen or frost-covered surfaces.

The relative humidity for the air should be less than 90%. Surface and air temperature must be at least 3°C higher than dew point during the application and curing process.

### Curing

**MAXFLEX® W-SEAL** can be covered with concrete once it has cured at least 24 hours (at 20°C and 50% R.H.). Applications conducted at lower temperatures with high humidity or poor ventilation will require longer drying and curing times.

### Cleaning

Tools and equipment can be cleaned with **MAXSOLVENT®** immediately after use. Once the product hardens, it can only be removed by mechanical methods.

### CONSUMPTION

The estimated consumption for **MAXFLEX® W-SEAL** bag depends on nozzle diameter and can be calculated from the following table:

*Average nozzle diameter vs. length*

| Nozzle diameter, mm (in) | Length, meter (ft) |
|--------------------------|--------------------|
| 3 (1/8)                  | 70-80 (250)        |
| 6 (1/4)                  | 16-20 (60)         |
| 8 (3/8)                  | 8-10 (30)          |
| 10 (1/2)                 | Approx. 6 (16)     |

These figures may vary depending on the roughness, surface conditions and application method. A preliminary test on-site will determine the coverage exactly.

### IMPORTANT INDICATIONS

- Protect from rain, dew, water contact, etc before casting concrete.
- Avoid applications in edges or superficial positions with thin concrete layer coverings (less than 50 mm concrete layer covering) or in exposed places without confinement.
- Do not apply at temperatures below 5°C.
- Do not use for expansion joints and/or. subject to high joint movement; use water-swelling profile **MAXJOINT® W-SEAL**.
- For further information and other uses not specified on this Technical Bulletin, consult our Technical Department.

### PACKAGING

**MAXFLEX® W-SEAL** is supplied in 600 ml bag (20 bags per box).

### STORAGE

Twelve months in its original unopened packaging in a dry and covered place, protected from freezing and direct sunlight, with temperatures between 5°C and 30°C.

### SAFETY AND HEALTH

**MAXFLEX® W-SEAL** is not a toxic product but it contains polyisocyanates susceptible of causing allergies. Do not apply without rubber gloves. In case of eye contact, rinse immediately with clean water without rubbing. In case of skin contact, wash with abundant water and soap. If ingested, seek immediate medical assistance. Do not induce vomiting.

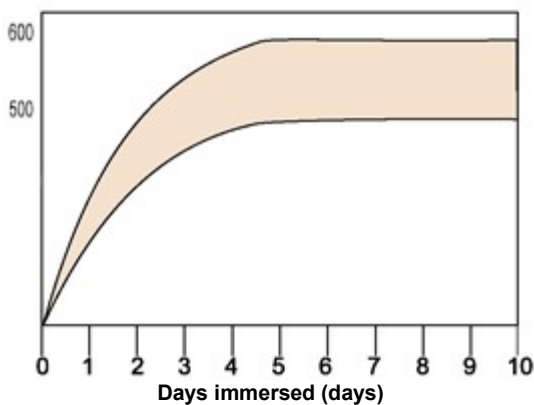
For further information, Safety Data Sheet for **MAXFLEX® W-SEAL** is available by request.

The final user must do disposal of the product and its empty container according to official regulations.

## TECHNICAL DATA

| Characteristics of the product   |                                   |
|--|-----------------------------------|
| Base   | Bentonite-free polyurethane       |
| General appearance and colour  | Elastic sealant with ivory colour |
| Specific gravity   | 1,40 ± 0,10                       |
| Conditions for application and curing                                  |                                   |
| Substrate and ambient temperature for application, (°C)                | 5-35                              |
| Skin formation time at 20°C and 50% R.H., (min)                        | 120-150                           |
| Curing speed at 20°C and 50% R.H., (mm per each 24h)                   | 1,8                               |
| Characteristics for the cured product                                  |                                   |
| Expansion in water, (%)  | > 500                             |
| Service temperature, (°C)  | -30 to +90                        |
| Shore A hardness, ISO 868  | 35                                |
| Elongation at break, DIN 53504, (%)                                    | 800 %                             |
| E-modulus, DIN 53504, (N/mm <sup>2</sup> )                             | 0,35                              |
| Tear strength, DIN 53504, (N/mm <sup>2</sup> )                         | 0,65                              |
| Consumption  |                                   |
| Coverage per each 600 ml bag with nozzle 6 mm diameter (linear meters) | 16-20                             |

Increase in volume (%)



## SWELLING PROPERTIES

### Test method

- 1.- Immersed in water after curing 7 days, then the increase in volume (%) is measured.
- 2.- Dimension test specimen: 20 x 10 x 50 mm.
- 3.- Water temperature: 15 – 20°C.

## GUARANTEE

The information contained on this leaflet is based on our experience and technical knowledge, obtained through laboratory testing and from bibliographic material. **DRIZORO®**, **S.A.U.** reserves the right to introduce changes without prior notice. Any use of this data beyond the purposes expressly specified on the leaflet will not be the Company's responsibility unless authorised by us. We shall not accept responsibility exceeding the value of the purchased product. The data shown on consumptions, measurement and yields are for guidance only and based on our experience. These data are subject to variation due to the specific atmospheric and jobsite conditions so reasonable variations from the data may be experienced. In order to know the real consumption data, a test at jobsite must be done, and it will be conducted under the client responsibility. This version of bulletin replaces the previous one.



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