MAXFLEX® 100 W

CE

LOW-MODULUS, MODIFIED-POLYURETHANE SEALANT FOR JOINTS IN PERMANENT IMMERSION AND IN CONTACT WITH POTABLE WATER

DESCRIPTION

MAXFLEX® 100 W is a one-component, low-modulus, isocyanate-free modified polyurethane sealant with high weathering resistance, suitable for sealing joints or cracks in contact with potable water and in permanent immersion.

APPLICATION FIELDS

- Sealing of joints and cracks in permanent contact with potable water in storage tanks, channels, water treatment plants, cisterns, etc.
- Expansion joints in different construction elements, pre-cast concrete, mortars, brickworks, etc.
- Sealing of joints in facades, curtain walls, windows and door outside frames, etc.
- Joints in contact with chemicals in storage bunds, chemical tanks, sewage treatment plants, etc.

ADVANTAGES

- Suitable for contact with potable water.
- Can be applied to damp surfaces.
- Low elasticity modulus and withstands joint movements up to 25 %.
- Suitable for vertical, horizontal and overhead joints.
- Good adhesion on common construction materials: concrete, mortar, brickworks, ceramic, natural stone, etc.
- High resistance to weathering and ambient agents.
- Good chemical resistance to sea water, sewage waters, diluted acids and alkalis, etc.
- Isocyanate-free sealant, odourless and non-corrosive.
- Can be painted over once it is fully cured.
- Easy to apply. One-component and ready to use.

APPLICATION INSTRUCTIONS

Joint dimensions
The minimum joint width shall be 8 mm and the maximum 40 mm. As a general rule, the sealant depth shall be approximately half the joint width, except for joints less than 15 mm wide, where depth and width shall be equal. For expansion joints, the joint width shall be at least four times the maximum expected movement.

Use a closed cell polyethylene backer rod such as ***MAXCEL®*** (*Technical Bulletin No. 48*), with a diameter 25 % larger than joint width, to control the sealant depth and prevent adhesion to the bottom of the joint. Do not prime surface over the backer-rod.

Surface preparation
The substrate must be sound and clean, free from grease, dust and any other contamination that could affect adhesion. The surface may be damp but must be free from standing water. If necessary, clean by mechanical means and compressed air, or use solvents to remove grease and oil.

In order to optimise adhesion to porous substrates, joints subject to high stresses or permanent immersion, apply ***PRIMER® 1*** (Technical Bulletin No. 68) by brush with a recommended coverage from 0,13 to 0,17 l/m^2. Apply the sealant once the primer solvent has evaporated and the primer is still tacky, normally after 30–120 minutes depending on ambient conditions. After this period, or if the primer has dried, apply a new coat.

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To prevent staining the edges of the joints and provide a better finish, it is advisable to place masking tape on both sides of the joint before applying the primer or the sealant.

Application

MAXFLEX® 100 W cartridges and bags are ready to use using a caulking gun with a properly sized nozzle. Do not open product packaging until all previous jobs have been completed.

During application, press the sealant firmly against the joint sides and backer rod to prevent air entrapment, filling the joint completely. For wide joints, apply in three stages: first to both sides and then as a bead in the centre.

After application, in order to smooth over the surface, soapy water can be used. Sealant application is finished by removing the masking tape before the curing begins.

MAXFLEX® 100 W can be painted or coated after curing at least 3 days. Preferably use flexible and solvent-free coatings (***MAXURETHANE® FLEX, MAXSHEEN® ELASTIC***, etc.). Check previously adhesion and compatibility of the coating.

Application conditions

Do not apply if rain or contact with water, moisture, condensation or dew is expected during the first 24 hours. The optimum application temperature range is 10°C to 30°C. Do not apply when substrate or ambient temperatures are below 5°C, or if lower temperatures are expected during the first 24 hours. Do not apply to frozen surfaces or surfaces with standing water. Substrate and ambient temperatures must be at least 3°C above the dew point. Do not apply when relative humidity exceeds 90 %. Avoid application at high temperatures (>35°C), in strong winds or in direct sunlight.

Curing

Allow a minimum curing time of 3 days before coating and 10 days before permanent contact with water (at 20°C and 50 % R.H.). Lower temperatures, higher relative humidity and larger joints require longer curing times. Check the curing rate given in the Technical Data table.

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® 100 W*** can be calculated from:

*Consumption (ml of sealant/linear metre of joint) = Width of the joint (mm) * Depth of the sealant (mm)*

For a 10x10 mm joint, the estimated consumption is about 95 ml per 1 m length of joint.

Coverage for a 290 ml cartridge or for 600 ml bag of ***MAXFLEX® 100 W*** can be estimated from:

*Coverage (linear metres of joint/cartridge) = 290 * 1 / Width of the joint (mm) * 1 / Depth of the sealant (mm)*

*Coverage (linear metres of joint/bag) = 600 * 1 / Width of the joint (mm) * 1 / Depth of the sealant (mm)*

This estimated consumption may vary depending on the surface texture, porosity and condition, as well as the application method. Carry out an on-site test to determine the actual consumption.

IMPORTANT INDICATIONS

- Avoid contact with water, solvents or any other compound during the curing.
- Do not apply with temperatures below 5°C.
- Apply ***MAXFLEX® 100 W*** on recommended ***DRIZORO®*** primers and while it is still tacky.
- Do not exceed the recommended ratio width/depth of the joint.
- For joints wider than 40 mm use ***MAXFLEX® XJS.***
- Do not use in joints with expected movement capability higher than 25 %.
- For further information and other uses not specified in this Technical Bulletin, consult our Technical Department.

PACKAGING

MAXFLEX® 100 W is supplied in 290 ml cartridges and 600 ml bags. It is available in grey colour. White, black and other colours are also available on request.

STORAGE

Twelve months in its original unopened and undamaged packaging. Store in a cool, dry place,

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protected from moisture, frost and direct sunlight, at temperatures above 5°C.

SAFETY AND HEALTH

MAXFLEX® 100 W is nontoxic, but eye and skin contact must be avoided. In case of eye contact, rinse immediately with clean water without rubbing. In case of skin contact, wash with abundant water and soap. If irritation persists, seek medical assistance. If ingested, seek immediate medical assistance. Do not induce vomiting.

For further information, Safety Data Sheet for ***MAXFLEX® 100 W*** is available by request. The final user must do disposal of the product and its empty containers according to official regulations.

CHEMICAL RESISTANCE

SUBSTANCE	CONCENTRATION	CHEMICAL RESISTANCE
Hydrochloric acid	10%	+
Nitric acid	10%	+/-
Sulphuric acid	25%	+
Citric acid	50%	+
Lactic acid	20%	+
Acetic acid	10%	+
Unleaded petrol	100%	-
Diesel fuel	100%	+
Aliphatic solvent	100%	+
Kerosene	100 %	+
Toluene	100%	-
Xylene	100%	-
Methanol	100%	-
Ethanol	100%	-
Glycerine	100%	+
Acetone	100%	-
Ethyl acetate	100%	-
Methyl ethyl ketone (MEK)	100%	-
Ethylene glycol	100%	+
Formaldehyde	40%	+/-
Sodium hydroxide	10%	+
Potassium hydroxide	20%	+
Calcium hydroxide	to saturation	+
Potassium carbonate	10 %	+
Ammonia	20%	+
Engine oil	100%	+
Sunflower oil	100%	+
Vegetable oil	100%	+/-
Hydrogen peroxide	35%	+/-
Sodium hypochlorite	12%	+/-
Distilled water	100%	+
Seawater	100%	+
Brine	to saturation	+
Potassium chloride	25%	+
Neutral soap	-	+
Sodium sulphate	to saturation	+
Ammonium chloride	10%	+

+: resistant to continuous contact +/-: resistant for short periods of time < 72 hours -: not resistant

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TECHNICAL DATA

Characteristics of the product	
CE Marking, EN 15651-1 Description: Sealants for non-structural use in joints in buildings and pedestrian areas. Sealants for façade elements. Intended uses: Sealant for façade elements of type F INT – EXT, class 25 LM	
Appearance and colour	Grey paste (other colours available on request)
Density (g/cm^3)	1,35 ± 0,10
Conditions for application and curing	
Maximum joint width (mm)	40
Width : depth joint ratio	2:1
Temperature for application and curing (°C)	From +5°C to +35°C
Skin over time at 23°C and 50 % R.H. (minutes)	60-120
Curing rate at 23°C and 50 % R.H. (mm per 24 hours)	2
Curing time for coating / water immersion at 20°C and 50 % R.H. (days)	3 / 10
Characteristics for the cured product	
Shore A hardness, ISO 868	22
Elastic modulus at 100 %, DIN EN ISO 8340 (MPa)	0,3
Tensile strength at 100 %, NF P 85506 – ISO 11600 (MPa)	0,5
Elongation at break, NF P 85506 – ISO 11600 (%)	> 250
Elastic recovery, NF P 85506 – ISO 11600 (%)	80
Sag, DIN EN ISO 7390 (mm)	0
Maximum joint movement capability, (%)	25
Service temperature range (°C)	From -30°C to +80°C
Suitability for contact with potable water European Directive 2020/2184 and Spanish RD 03/2023	Suitable
Consumption*	
Consumption cartridge 290 ml per 10x10 mm joint (linear meters of joint)	Approx. 2,9

(*) Consumption may vary depending on joint dimensions, surface texture, porosity and condition, as well as the application method. Carry out an on-site test to determine the actual consumption.

GUARANTEE

The information contained in 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 in the leaflet will not be the Company's responsibility unless confirmed in writing by the Company. We shall not accept responsibility exceeding the value of the purchased product. The data shown on consumption rates, dosages 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. To know the real data, a test on the jobsite must be done, and it will be conducted under the client responsibility. For any other doubt, consult our Technical Department. This version of bulletin replaces the previous one.

DRIZORO Construction Products

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