

MasterJoint™ 440

Polyurethane Based, One Component, Low Modulus Joint Sealant

Material Description

MasterJoint™ 440 polyurethane based, single part, UV and weathering resistant elastomeric joint sealant.

EQ Credit 4.1: Adhesive and Sealants (VOC)
A+French VOC

Areas of Application

- Indoor and outdoor areas for vertical and horizontal applications
- Above grade joints of structures
- Restoration of joints in old and new buildings
- Parapet corners on roof and terraces
- Joints of prefabricated parts
- Moving joints up to 25%
- Connection joints between wood window, doorframes and walls

- Expansion joints between many different construction materials, especially concrete movement
- Between precast wall panels
- Precast rain gutter, roof drain pipes and parapet joints
- Joints and termination details of siding like PVC and aluminum
- To prevent leakage in aluminum, metal, PVC and woodworks and in termination details

Characteristics and Benefits

- Single part, ready and easy to use
- No sagging, thixotropic
- No surface tackiness after full cure, dirt repellent surface
- Can be applied easily with hand gun
- Paintable *
- Cures with the humidity in the air
- Excellent elongation and elastic recovery
- Highly flexible

Technical Properties

Structure of the Material	Polyurethane Based
Color	White, Off White, Limestone, Aluminum Grey, Grey, Black, Redwood, Tan, Brown
Density	1,20 ± 0,03 g/ml
Shore A Hardness	25-30
Elongation at Breaks (ISO 8339)	≥%120
Elongation at Breaks (ASTM D412)	≥%700
Tensile Strength (ASTM D412)	1,0 – 1,5 N/mm ²
Elasticity Modulus (ISO 8339)	23°C -20°C 0,30 – 0,40 N/mm ² ≥0,60 N/mm ²
Application Temperature	+5°C - +40°C
Service Temperature	-40°C - +70°C
Cured	24 hours 7 days 2,5 mm Fully Cured
Paintable	Yes*

Typical values are obtained from the test results of 4x4x16 mortar prism in 23°C and 50% relative humidity conditions. High temperatures shortens the curing and working time, lower temperatures extends the durations.

*Considering the diversity of paint base and quality, compatibility tests should be done before application.

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- No primer required on most substrates
 - Weathering resistant and do not change its physical properties during service life
 - Enables perfect bonding to concrete, stone, metal, wood, PVC and other construction materials
 - Resistant to aggressive chemicals
- *Before painting, field mock – up should be done to ensure best end result.

Processing Method

Joint Design

In joints where **MasterJoint™ 440** will be used, width must be between 10 mm to 35 mm, and depth 8 mm to 15 mm. Please refer to coverage table for joint depths (Approx: depth/ width=1/2). Movements in joints must not be over $\pm 25\%$ of joint width.

(A) Preparation of Substrate

Concrete and Stone Surfaces

Joints must be dry, sound and free from dust and other contamination. Remove oil stains and grease from the substrate with the universal thinner. Irregularities on the surface must be repaired with **MasterStrength™ ER 1406**. Apply masking tape on the outer sides of the joint to prevent staining.

Metal Surfaces

Remove rust on the metal substrate. Remove oil stains and grease from the substrate with a suitable oil remover. Do not allow flash rusting of the surface. Fill deep joints with closed cell polyethylene backer rod which must not be damaged during the application. Do not use backer rods containing bitumen or tar.

Woodworks

MasterJoint™ 440 can be applied on most old and new painted woods. However, old woodworks have to be cleaned from swelled old paints and sandpapered until a smooth surface is obtained.

(B) Processing

Primer Application

MasterJoint™ 440 can be applied on many surfaces without primer. However, under special circumstances during the application, **MasterJoint™ P 640** (on absorbent surfaces) and **MasterCoat™ P 684** (on non-absorbent surfaces) can be used as primer.

Sealant Application

Place **MasterJoint™ 440** sausage in a suitable sausage gun. Cut the top of the sausage. Fix the nozzle hoop and cut the nozzle as desired. Apply **MasterJoint™ 440** starting from the bottom to the top. Avoid air antrapping. Smooth the surface with a suitable jointing tool remove masking tape from the surface. Place **MasterJoint™ 440** cartridge in a suitable gun. Cut the nozzle as desired.

Apply **MasterJoint™ 440** starting from the bottom to the top. Avoid air antrapping. Smooth the surface with a suitable jointing tool remove masking tape from the surface.

Consumption

Theoretical joint sealing length with **MasterJoint™ 440** sausage (600 ml):

Joint Width	15 mm	20 mm	25 mm	30 mm	35 mm
Joint Depth	8 mm	10 mm	12 mm	15 mm	15 mm
Joint Length/ 600 ml	5 m	3 m	2 m	1,3 m	1,1 m

Point to Consider

- Do not apply **MasterJoint™ 440** on substrates below +5°C and above +40°C.
- Application must be protected from rain or water contact within the first 24 hours.

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- Working and reaction periods of polyurethane based systems are affected from the ambient, substrate temperatures and the relative humidity in the air. Low temperatures slow down the chemical reaction and increase the working time. High temperatures accelerate the chemical reaction and reduce the working time.
- During the curing of the material, ambient and substrate temperature must be within the intended values.
- Avoid contact with bitumen.

Cleaning of Tools

All the tools and equipments must be cleaned by water after the application. After **MasterJoint™ 440** is hardened, it can only be removed from the surface mechanically.

Packaging

600 ml sausage
(There are 20 pieces in box)

Shelf Life

15 months after production date under appropriate storage conditions.

Storage

Must be stored in closed package in a cool and dry warehouse protected from freezing and sunlight.

Health and Safety

It is dangerous to approach the application sites. During the application, a protective apparel, protective gloves, goggles and masks which comply with the Occupational Health and Safety Rules should be used. Due to the irritation effect of the uncured materials, the mixture should not come into contact with skin and eyes; in case of a contact, the affected area should be washed with plenty of water and soap; in case of swallowing, a physician should be consulted immediately. No food or beverages should be brought to the application area. The product should be stored and kept out of reach of

children. For detailed information please consult the Material Safety Data Sheet.

Disclaimer

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