

MasterSeal® HY 495

Ultra-high performance, façade and structural sealant

DESCRIPTION

MasterSeal HY 495 is a high-grade, hybrid Silane-terminated polyurethane compound one component moisture curing, low-modulus sealant and adhesive.

RECOMMENDED USES

MasterSeal HY 495 is a hybrid sealant specially developed for sealing of all types of external or internal facade joints. Expansion joints, Construction joints, Joints in precast elements, External wall and cladding joints, Infill panel joints, Curtain wall, Window and door frame sealing. **MasterSeal HY 495** can be used in Bridge and balcony parapets, Retaining walls, Subways, Reservoirs and water retaining structures.

FEATURES & BENEFITS

- **Single Component** – Easy to use
- **Primer free** – Faster & Easier application
- **Odorless** – Can be used internally
- **Fungal growth Resistant** – Hygienic
- **UV & Weather Resistant** – Long term durability

TECHNICAL DATA

| | |
|---|-----------------------|
| Shore A hardness (ISO 868) | 25 |
| E-Modulus at 100% Elongation (ISO 8339) | 0.35N/mm ² |
| Elongation at Break (ISO 8339) | >350% |
| Movement Accomodation Factor | ±25% |
| Temperature Resistance | -30°C - +70°C |
| Resistance to vertical flow (ISO 7390) | <3mm |

PROPERTIES

| | |
|---|-------------|
| Cure mechanism | Evaporation |
| Density | 1.35 g/cc |
| Rate of Cure in mm / day (23°C 55% RH) | 2.5 |
| Application temperature | 5°C to 40°C |
| Application rate (3mm / 4 Bar pressure) | 150 g/min |

STANDARDS

MasterSeal HY 495 conforms to the following standards

- ISO 11600 F25 LM
- SNJF F 25 E
- DIN 18540 F
- DIN 4102-1 fire resistance
- FDA specification
- UBATC-BUTGB

APPLICATION

Preparation:

To ensure excellent adhesion the joint profile including the rises, should be clean, sound, dry and free from any loosely adherent material which could prevent adequate bond to the substrate.

Concrete, cementitious substrates (e.g. screeds, etc.)

Prepare the surface by grinding, sandblasting, or wire brushing. Remove remaining dust and particles by suitable measures such as the use of compressed air.

Repair damaged joint edges with appropriate **MasterEmaco** repair mortars

Metal

Remove scale, rust, coatings and any chemical residue or film from the metal.

Joint Design:

The calculation of the joint design depends upon the technical characteristics of the joint sealant, the adjacent building materials, exposure of the building and its method of construction. Therefore all joints must be properly designed by the architect and/or main contractor in line with the relevant standards.

Backer Rod:

Prevent any three point bonding and ensure the recommended sealant depth (see table) by using a closed-cell backer rod. For flat joints prevent three point bonding by the use of a bond breaking tape.

| Joint Width | Sealant Depth at midpoint |
|-------------|---------------------------|
| 4mm | 4mm |
| 6-13mm | 6mm |
| 13-19mm | 6-10mm |
| 19-25mm | 10-13mm |
| 25-38mm | 13mm |

MasterSeal[®] CR 460

Install the backer rod by compressing and rolling it into the joint channel without stretching it lengthwise. Avoid puncture of the backer rod during installation. To achieve a smooth, clearly defined joint, mask the joint edges with self-adhesive tape before caulking. Remove the tape immediately after the joint surface is smoothed.

Primer coat:

Depending on the local building regulations, **MasterSeal HY 495** can be applied on concrete without a primer.

However in case of very porous, cementitious substrates such as poorly compacted or cracked concrete a primer needs to be applied to provide a seal on the substrate surface to avoid air from the substrate escaping into the uncured sealant.

Priming is strongly recommended when joint is to be fully immersed, constantly wet or subject to heavy traffic.

Do not prime or puncture the backer-rod.

Note: Primers only help to improve adhesion. They are not a substitute for correct substrate preparation, nor will they increase the strength of substrates significantly.

Application:

MasterSeal HY 495 is supplied ready to use (no mixing required) and can be applied either with a manual or a pneumatic caulking gun.

MasterSeal HY 495 shall be applied using a conventional sealant application gun, ensuring enough sealant is applied to facilitate the correct width to depth ratio for the joint.

Sausage application:

Place entire sausage into a suitable caulking gun. Cut off the clip at the very end of the sausage.

Attach and cut nozzle to the desired joint diameter and apply the sealant.

Fill the joints from the deepest point to the surface with a properly shaped nozzle by applying the sealant material against the back of the joint. Assure full contact with the side of the joint and avoid entrapped air.

Following the application the sealant must be tooled into place to ensure adequate adhesion with the joint profile is achieved. Finally tool to a neat finish using a solution of soap and water onto a gloved finger or tooling stick.

WATCHPOINTS

- Avoid exposure to high levels of chlorine.
- Avoid contact with alcohol, curing silicone sealants and solvent cleaners during cure.

- Yellowing may occur in the product in particular circumstance.
- Among others not recommended for glazing and not for aquaria, PE, PP, Teflon and bituminous surfaces.

PACKAGING

MasterSeal HY 495 is supplied in boxes of 12 x 310ml cartridges and 12 x 600ml sausage.

COLOUR

MasterSeal HY 495 is available in Concrete Grey

EQUIPMENT CLEANING

Clean uncured material using soap and water. Cured material can only be cleaned mechanically.

APPLICATION TEMPERATURE RANGE

| | |
|---------|-------|
| Minimum | +5°C |
| Maximum | +40°C |

STORAGE AND SHELF LIFE

MasterSeal HY 495 has a shelf life of 12 months for cartridge & sausage from production date when stored in its original packaging at temperatures between 5°C and 25°C

HEALTH AND SAFETY

Avoid contact with the skin, eyes and clothing.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Wash affected eyes for several minutes under running water.

On ingestion:

Drink plenty of water. Do not induce vomiting unless told to by a poison control center or doctor.

No special measures necessary if stored and handled correctly. Handle in accordance with good building materials hygiene and safety practice. When using, do not eat, drink or smoke.

NOTE

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local Master Builders Solutions representative.

Master Builders Solutions reserves the right to have the true cause of any difficulty determined by accepted test method.

MasterSeal[®] HY 495

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NOTE

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