

MasterSeal® 475

Pitch-free polyurethane sealant for chemical and industrial environments and concrete paving joints

DESCRIPTION

A two-component cold applied PU sealant for use in horizontal applications exposed to jet fuel, oils and chemical attack. Available in gun grade as well as pourable grade. Different color available for internal applications. Black and Grey color for external applications.

FEATURES

- Long-term performance
- Withstands chemical attack
- Tolerates joint movement
- Easy to apply
- Pitch modified version available

PRIMARY USES

- Concrete
- Airport runways
- Highways and bridges
- Industrial floors
- Driveways and loading docks
- Stadiums
- Chemical plants

BENEFITS

- Weather resistant
- Jet-fuel resistant
- Good elongation
- Pitch free
- Cold applied

PACKAGING

MasterSeal 475 is available in 4 liter units.

MasterSeal P 175 (for steel and concrete only) is available in 0.5 liter units.

COLOUR OF APPLIED SEALANT

Black & Grey.

STANDARDS

BS 5212 Type FB

TYPICAL PROPERTIES

Form	Two part compound Base Compound: viscous liquid Curing agent: liquid
Color	Black, Grey
Movement Accommodation Factor (BS 6093)	± 25%
Physical or chemical cure	Chemical cure
Setting time	After 10 to 16 hours @ 35°C MasterSeal 475 will be tack free and can accept traffic
Application temperature	To avoid unacceptably prolonged cure times, do not apply at temperatures below 5°C
Hardness shore 'A' at 25°C	15±3
Solids content	~100%
Mixed density	1.33 ± 0.03kg/liter
Full cure	7 days @ 25°C

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

HOW TO APPLY MASTERSEAL 475 JOINT PREPARATION

1. The number of joints and the joint width should be designed for a maximum of ±25% movement.
2. The width to depth ratio of the sealant should be 1:1 to 1.5:1 subject to a minimum 10mm depth.
3. In deep joints use closed cell backer-rod or soft backer-rod. Where the joint depth does not permit the use of backer-rod, a bond breaker (polyethylene strip) must be used to prevent three-point bonding.
4. To maintain the recommended sealant depth, compress and roll backer-rod into the joint channel without stretching it lengthwise. Backer-Rod should be about 3mm larger in diameter than the width of the joint. Soft backer-rod should be approximately 25% larger in diameter than the joint width. Do not prime or puncture Backer-Rod.

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SURFACE PREPARATION:

1. Joint faces must be structurally sound, clean, dry, and free of all loose aggregate, paint, oil, grease, wax, mastic compounds, waterproofing compounds, form release agents and other contamination.
2. New concrete: Remove all loose material by wire brushing. Sandblast surfaces that have been in contact with form release agents. Fresh concrete must be fully cured at least 28 days. Laitance must be removed by abrading.
3. Old concrete previously caulked: Remove old joint sealing material by mechanical means. If joint sides have absorbed oils, cut away sufficient concrete to ensure a clean surface.

PRIMING:

1. Concrete surfaces to receive **MasterSeal 475** should be primed with **MasterSeal P 175**.
2. Prime steel in contact with **MasterSeal 475** with **MasterSeal P 175** after cleaning to bright metal.
3. Apply primer in a thin, uniform film; avoid build-up of excess primer.
4. Allow approximately 30 to 120 minutes drying time; before applying sealant.
5. Where **MasterSeal 475** is to be used in contact with asphalt please contact Master Builders Solutions Technical Department for advice regarding the use of **MasterEmaco P 102** as primer.

APPLICATION:

1. **MasterSeal 475** can be poured from a can or applied by gun. Fill joint from bottom to prevent formation of air voids.
2. Avoid application at extremely low temperatures to prevent moisture condensation and excessive thickening of the sealant.

CLEAN UP

Immediately after use, wash tools with MasterTop Thinner No. 2. (Observe all precautions when handling solvents).

FOR BEST PERFORMANCE

- Protect **MasterSeal 475** from traffic until fully cured.
- Do not use on surfaces having a high crown or marked degree of slope.
- Do not paint **MasterSeal 475**.
- Do not apply over asphalt damp-proofing or asphalt-impregnated joint fillers.
- Do not apply sealant if bed beneath deck or substrate has become saturated with water.
- Do not allow **MasterSeal 475** to come in contact with alcohol-based material or solvents.
- Make certain the most current version of this data guide is being used.
- Proper storage and application is the responsibility of the user.

ESTIMATING SUPPLY

MasterSeal 475:	4 & 18 liter packs
MasterSeal P 175:	500 ml packs
MasterEmaco P 102:	1 liter packs

(Primer for asphalt surfaces)

Guide to **MasterSeal 475** quantities
Joint size Liter per Meter per

mm(w:d)	Meter	4 liters	18 liters
10 x 10	0.100	50.00	180
13 x 13	0.169	29.59	106.5
15 x 15	0.225	22.22	80
20 x 15	0.300	16.67	60
25 x 15	0.375	13.33	48

0.5 liter of **MasterSeal P 175** will be sufficient for 10 liters of **MasterSeal 475**, independent of joint size.

1.0 liter of **MasterEmaco P 102** (asphalt primer) will be sufficient for 20 liters of **MasterSeal 475**, independent of joint size. These are theoretical yields. No allowance has been made for variations in joint dimensions or wastage.

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SHELF LIFE

Shelf life is 6 months when stored in unopened containers under normal conditions. Storing in elevated temperatures will reduce shelf life.

PRECAUTIONS

KEEP OUT OF THE REACH OF CHILDREN. KEEP AWAY FROM HEAT, FLAME AND SOURCES OF IGNITION.

Use only with adequate ventilation. Keep container closed. Prevent contact with skin, eyes, and clothing. Wash thoroughly after handling. Avoid breathing vapors. Use impervious gloves, goggles and if the TLV is exceeded or if use is performed in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable federal, state, and local regulations.

DO NOT cut or weld on or near empty container Empty container may contain explosive vapors or hazardous residues. All label warnings must be observed until container is commercially cleaned or reconditioned.

FIRST AID

In case of eye contact, flush thoroughly with water for at least 15 minutes SEEK IMMEDIATELY MEDICAL ATTENTION. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. If inhalation causes physical discomfort or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION. See Material Safety Data Sheet (MSDS) for further information.

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 methods.

QUALITY AND CARE

All Master Builders Solutions Products are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health and safety standards of ISO 9001 and Master Builders Solutions ESHQ recommendations.

* Properties listed are based on laboratory controlled tests.

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CONTACT

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Disclaimer:

In view of widely varying site conditions and fields of application of our products, this technical data sheet is meant to provide general application guidelines only. This information is based on our present knowledge and experience. The customer is not released from the obligation to conduct careful testing of suitability and possible application for the intended use. The customer is obliged to contact the technical help-line for fields of application not expressly stated in the technical data sheet under "Fields of Application". Use of the product beyond the fields of application as stated in the technical data sheet without previous consultation with Master Builders Solutions and possible resulting damages are in the sole responsibility of the customer.

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