

MasterSeal[®] NP 473U

Single component, moisture curing polyurethane, multi-use elastomeric joint sealant for horizontal & vertical applications

DESCRIPTION

MasterSeal NP 473U is a high performance, one component, moisture curing, polyurethane construction sealant. It has been formulated with an optimum range of physical properties such as high elasticity and movement accommodation, non-sag, Shore A hardness, tensile / tear strength and modulus to make it perfectly suited for sealing dynamically moving joints in a wide range of internal and external, horizontal and vertical applications, making it almost the perfect “Universal” joint sealant.

TYPICAL APPLICATIONS

- Expansion and movement joints in floors and walls
- Dynamically moving joints in concrete and masonry substrates
- Precast concrete joints
- Jersey barriers and similar
- Shopping malls and other pedestrian areas
- Warehouses and light industrial factories
- Schools, universities, galleries, office buildings, hospitals, clinics etc.
- Irrigation channels and water tanks (when used with suitable primer)

ADVANTAGES

- Primer-free on dry concrete in non-submerged conditions
- Single component, easy to apply
- Non-shrink, non-sag, gun grade for vertical use
- Durable, resilient seal
- Can be over painted after curing when applied on concrete or blockwork substrates.
- Forms a smooth blister free surface when applied onto dry substrates
- Good resistance to dilute acids and alkalis
- Different colours available

PACKAGING AND COLORS

MasterSeal NP 473U is supplied in 600ml sausage.

20 sausages / box and 60 boxes/pallet.

MasterSeal NP 473U is available:

Concrete Grey (RAL 7004), Off White (RAL 1015) and White (RAL 9010)

Note: The colours mentioned are closest match to the RAL Nos.

STANDARDS

Conforms to:

- ASTM C920 Type S, Grade NS, Class 25, Use T, NT, A, G, M, O and I
- ISO 11600 Classification F 25 LM

TYPICAL PROPERTIES*

Skin formation time (23°C, 50% RH)	<70 minutes
Rate of cure in mm 24 hours (23°C, 50% RH)	2-3mm
Resistance to flow 23°C ISO 7390 50°C ISO 7390	≤ 3mm < 3mm
Shrinkage (ISO 10563)	≤ 10%
Temperature of application	+5°C to +40°C
Specific gravity	1.25
Shore A hardness ASTM C661	31-34
Tear strength (23°C / 50% RH)	6N/mm
E-Modulus at 100% (23° C / 50% RH)	0.4N/mm ²
Elongation at break (23° C / 50% RH)	>500%
Elastic recovery (23° C / 50% RH)	>70%
Vertical slump ASTM C639	Nil
Movement capability ASTM C719	±25%
Service temperature	-40°C to +70°C
Effects of accelerated Weathering ASTM C793-05 250 hours UV	No cracking and loss of adhesion

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APPLICATION GUIDELINES

SURFACE PREPARATION

To ensure excellent adhesion the joint profile including the arises should be clean, sound, dry and free from any loosely adherent material which could prevent adequate bond to the substrate. Closed cell cylindrical backer rods with a surface skin of correct size to control sealant depth should be used. Diameter of backer rod should be 25% more than joint width to ensure it is fitted tight in the gap. Bond breaker tape is recommended to prevent sealant from adhering to rigid, inflexible substrates at the back of the joint where space is insufficient to install closed cell backer rods. Joint sizes are designed to suit movement capacity of sealants. Recommended maximum joint size for horizontal is 30mm and for vertical 35mm. Depth of joint sealant should be half of width in joints greater than 15mm. Please Consult Master Builders Solutions Technical services for further clarification if required.

PLACING / APPLICATION

MasterSeal NP 473U 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. Ensure sealant is applied in a uniform, continuous ribbon, without gaps or air pockets. For vertical joints, it is recommended to apply the sealant from bottom to top for avoiding air pockets. Following the application, the sealant should be tooled into place to create a neat, slightly concave to ensure adequate adhesion with the joint profile is achieved.

CHEMICAL RESISTANCE

MasterSeal NP 473U has resistance to:

Dilute acids and alkalis
 Saline solutions

Medium
 Excellent

CLEANING

It is recommended that **MasterSeal NP 473U** be removed immediately from tools etc. using a solvent (toluene or xylene) before curing takes place. Cured material can only be removed by mechanical means.

COVERAGE / YIELD

Applicable joint length with a 600ml cartridge (in meters)

Joint depth (mm)	Joint width (mm) approx.				
	4	6	8	12	20
4	37.5	25	18.7	12.5	7.5
6	-	16.6	12.5	8.3	5.0
8	-	-	9.3	6.2	3.7
10	-	-	-	5.0	3.0

WATCHPOINTS

Any spillage over the joints should be immediately cleaned using solvent before the material is cured to eliminate staining of adjacent finishes. For horizontal trafficable joints, it is recommended to apply the sealant to a level at least 1.5 -3mm below the adjoining surfaces to avoid the wheels of the vehicles picking the sealant. For all applications ensure sealant is adhered only to the 2 sides of the joint and prevent 3-sided bonding.

Long term UV exposure may cause **MasterSeal NP 473U** to discolor. This does not affect the **MasterSeal NP 473U** performance.

STORAGE AND SHELF LIFE

MasterSeal NP 473U has a shelf life of 9 months from production date when stored in its original packaging at temperatures between 5°C and 25°C.

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HEALTH AND SAFETY

Contains isocyanates, contact with the skin or eyes should be avoided, if ingested, DO NOT induce vomiting. Seek medical attention immediately. Refer to product MSDS.

QUALITY AND CARE

All products originating from Master Builders Solutions Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001 and ISO 14001.

* Properties listed are based on laboratory controlled tests.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

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