

MasterSeal® NP 477

One part elastomeric polyurethane based gun grade joint sealant

DESCRIPTION

MasterSeal NP 477 is a high performance one component, gun grade, moisture curing, polyurethane construction sealant. The material has been designed for a wide range of sealing and caulking applications in both interior and exterior joints. The MasterSeal NP 477 generally requires no primer, does not require mixing and bonds well to a variety of substrates including concrete and masonry.

TYPICAL USES

MasterSeal NP 477 has been developed specifically for sealing active joints such as expansion and control joints. MasterSeal NP 477 demonstrates excellent elasticity and recovery properties and therefore may be used to bond and seal most common building materials including concrete, glass, vinyl sidings, wood, stone, metal and anodized aluminum. In addition MasterSeal NP 477 has excellent tear resistance and weathering characteristics.

PRIMARY USES

Application

- Expansion joints
- Curtain wall construction
- Panel walls
- Precast units
- Aluminum and wood window frames
- Fascia
- Parapets
- Structural components
- Vinyl siding

Location

- Interior and exterior
- Above grade

Substrate

- Concrete
- Masonry
- Aluminum
- Wood

ADVANTAGES

- Durable resilient seal
- UV Resistant
- External & Internal use
- Non staining
- Generally no primer required
- Excellent adhesion properties to most materials.
- Functional within 3 days and fully cured in approximately 1 week.
- Demonstrates good resistance to dilute acids and alkalis
- Full range of colors available

STANDARDS

ASTM C920, Class 25 & ISO 11600-F-25 LM

TECHNICAL DATA

Service temperature range	-20°C to 82°C
Expected life	Upto 15 years
Shrinkage	None
Movement capability, % ASTM C719	±25
Tensile strength, N/mm ² ASTM D 412	>1.3
Ultimate elongation at break, % ASTM D412	>900
Rheological (sag in vertical displacement)	No sag
Extrudability, 3 seconds, ASTM C603	Passes
Hardness at std. conditions ASTM D2240	20±5
Weight loss, after heat ageing, % ASTM C792	<10%
Tack-free time, hrs., ASTM C679	maximum (72 hrs.)
Stain and colour change (no visible stain) ASTM C510	No visible stain
Bond durability on glass, aluminium, and concrete + 25% movement, ASTM C719	Passes
Artificial weathering (Xenon arc)	No elastomeric property change
Recoverability	>70%

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APPLICATION PROCEDURE PREPARATION

To ensure excellent adhesion the joint profile including the arises should be clean, sound, dry and free from any loosely adherent material which might subsequently cause failure of bond.

APPLICATION:

MasterSeal NP 477 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. The applied depth of the sealant should be half the width of the joint, the joint depth should be within the range of 6mm to 13mm.

All contact surfaces within the joint must be structurally sound, dry clean and free from dirt, moisture, loose particles, oil, grease, asphalt, tar, paint wax, waterproofing or any other contaminant that may adversely affect the bond of the **MasterSeal NP 477** within the joint.

Clean concrete, masonry or stone by grinding or mechanical wire brush to expose a sound surface free from contamination and laitance.

Check with Master Builders Solutions Technical department or conduct site trials if metal or aluminum substrate is involved. It is the users ultimate responsibility to check adhesion of the sealant in relation to the proposed substrate.

Soft-cell or closed cell backer rod, or alternatively bond breaking tape must be used to ensure that three-sided adhesion does not occur within the joint when the **MasterSeal NP 477** is applied.

Following the application, the applied sealant must be dry tooled into place to ensure adequate adhesion is achieved. Clean up should be made immediately using Cleaning Solvent No. 2 or Xylene. Use proper safety precautions when working with solvents.

EQUIPMENT CLEANING

It is recommended that **MasterSeal NP 477** 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.

CHEMICAL RESISTANCE

MasterSeal NP 477 has resistance to:

Dilute acids and alkalis	Medium
Ultra violet light	Good
Saline solutions	Excellent

COVERAGE

The below table is a guideline, however joint width can go up to 50mm

Metres per litre Joint width (mm)

Joint depth (mm)	6.4	9.5	12.7	15.9	19.0	22.2	25.4
6.4	24.8	16.5	12.4	9.8			
10				6.6	5.5	4.7	4.1
13					4.1	3.5	3.0

PACKAGING

MasterSeal NP 477 is supplied in 600ml sachets.

STORAGE AND SHELF LIFE

MasterSeal NP 477 has a shelf life of 12 months when stored in its original packaging at temperatures between 5°C and 25°C.

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..

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.

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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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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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