

**MASTER®  
BUILDERS**  
SOLUTIONS



## Joint Sealants

Solution for Durability & Movement

A brand of  
**MBCC** GROUP



## About us



We offer advanced chemical solutions for new construction, maintenance, repair or renovation of structures. Our employees form a global community of construction chemicals experts that are passionate about solving our customers' specific challenges at all stages of construction as well as throughout the lifecycle of the structure.

Under the MBCC Group, Master Builders Solutions combines its technological know-how and comprehensive product portfolio to provide the right solutions, based on our experience gained in countless construction projects worldwide.





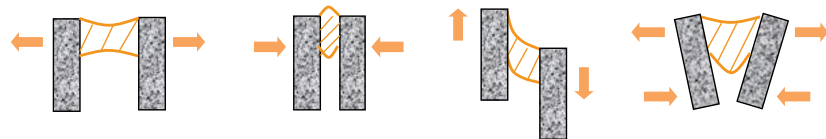
## Joint Sealant Solutions

The integrity of a structure is often only as good as the sealants used wherever two surfaces are joined together. Formulated with high performance elastomers, joint sealants ensure outstanding weatherproofing and protection against the most aggressive conditions. From self-leveling, non-sag, chemical, and water-resistant, to color-matching.

*“The right sealants will stand the test of time – beautifully.”*

### Joint sealants need to perform four basic functions:

- 1 Prevent the passage of air, water and other environmental elements in or out of a structure
- 2 Accommodate movement of structures
- 3 Adhere to a wide variety of substrate materials to which they are applied.
- 4 Prevent the intrusion of solid materials which could block the joint space and prevent movement



Extension/ Stretching

Compression

Shear

Complex/ Eccentric

### Applications

- » High Rise Expansion Joints
- » Control Joints
- » Pick Resistance Joints
- » Factory Floor Seams
- » Parking Garage, Expansion Joints



#### Commercial

- High & Mid Rise
- Retail
- Parking Structure



#### Industrial

- Warehouse
- Factories
- Clean-Room



#### Infrastructure

- Road
- Bridges
- Runways & Apron







## MasterSeal Application

- A. Joint sealing in runway, apron & terminal building
- B. Static & dynamic joints in buildings (control, expansion/ isolation & construction joints)
- C. Warehouse & floor joints
- D. For corner bead joints on window and door frames
- E. External & internal joints in pre-cast structure
- F. Pavement & parking area joints



» Fast &amp; Easy Construction



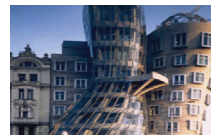
» Systems



» Green Building



» Energy Efficiency



» Design &amp; Style



» Comfort &amp; Health



## MasterSeal for Building Joint

**Building without joint is not possible, joints help and ensure flexibility in design and integrity of the structure.** Sealant selection for such joint sealing is critical and must be picked thoughtfully considering preventing air & water passage, accommodate movement and adhesion to different substrates.

**Key application areas:** *Interior & exterior façade, connection & expansion joint, panel wall & pre-cast units, door & window frames, joints immersed in water.*



### MasterSeal NP 1 High Performance Polyurethane Sealant

**MasterSeal NP 1** is gun-grade elastomeric polyurethane sealant typically requires no priming. Trust MasterSeal NP 1 for your critical applications, from wall joints and window perimeters to roof-seals and fire-rated joints.

#### Features:

- Movement capability,  $\pm 35\%$
- Tensile strength, 2.4 MPa
- Elongation at break, 800%
- CFI accepted
- Chalking & cracking resistance
- Can be painted

#### Substrates:

- Concrete
- Masonry
- Aluminium
- Wood
- Stucco
- Clay & roof tile

**Conforms to ASTM C920 Type S, Grade NS, Class 35, Use NT, M, A, T & I.**  
**Conforms to ISO 11600 Class F25LM**

### MasterSeal NP 472 Elastomeric Joint Sealant

**MasterSeal NP 472** is one component, moisture curing, polyurethane construction sealant. In properly designed and constructed joint the product has been formulated to offer a non-slump elastomeric seal, which exhibits good skin formation time and fast cure.

#### Features:

- UV, weathering & aging resistance
- Forms blister-free surface
- Movement accommodation,  $\pm 50\%$
- Elastic recovery,  $> 90\%$
- Tear strength,  $\sim 6.5$  N/mm
- Service temperature  $-40^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$

#### Substrates:

- Concrete
- Anodized aluminium
- Wood
- Bricks
- Masonry

**Conforms to ASTM C920 Type S, Grade NS, Class 50, Use NT, T2, A & M.**  
**Conforms to ISO 11600 Class F25LM**





## MasterSeal for Floor Joint

The main function of sealant is to improve thermal, absorption of the vibrations and prevent unwanted matter collected in the joints. MasterSeal range of sealants are designed to be durable and resilient that can accommodate repeated contraction and expansions as the joint opens and closes constantly while exposed to traffic and harsh external conditions including chemical resistance.

**Key application areas:** horizontal & vertical expansion joints, warehouse & production areas, water reservoir & irrigation channels, pedestrian & traffic area, medium chemical exposures.



### MasterSeal CR 125

#### Self-leveling Polyurethane Sealant

**MasterSeal CR 125** is a ready-to-use self-leveling polyurethane sealant for horizontal joints in chemical and industrial environments. It is weather, chemical, and jet fuel resistant and has exceptional elongation integrity.

#### Features:

- Movement capability,  $\pm 25\%$
- Ultimate elongation, 1200%
- Tensile strength, 1.7
- Hardness, Shore A 28
- Jet fuel resistance

#### Application:

- Airport, run way
- Highways & bridges
- Industrial floor
- Driveways & loading docks

Conforms to ASTM C 920, Type S, Grade P, Use T, M, NT, Class 25  
Conforms to Federal Specification TT-S-00230C, Type I, Class A

### MasterSeal NP 474

#### Resilient, Durable Primeless Sealant and Adhesive

**MasterSeal NP 474** is a single component polyurethane-based sealant for floor joints, wall joints because of excellent resilience and pick resistance. It cures under the influence of atmospheric humidity and forms a chemical, good mechanical resistant and elastic joint sealant.

#### Features:

- Skin time, 70 min
- Hardness, `Shore A 40
- Movement,  $\pm 25\%$
- Elongation at break, 600%
- Water immersion stable

#### Application:

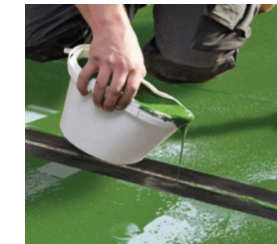
- Floor connection & expansion
- Pedestrian & traffic area
- Warehouse floor
- Joints in water management
- Mild chemical exposure

Conforms to ASTM C 920, Type S, Grade NS, Use NT, T1, A and M,  
Conforms to ISO 11600 Class F25 HM



## MasterSeal 2-Component

Joint sealing jobs which are subjected to harsh and adverse conditions along with heavy traffic movement and exposure to chemical attack. Two - component sealing system is good to consider for such application, MasterSeal offers different chemistries in 2-C sealing system that add values and compliment the job site expectations. MasterSeal 2-C sealants are time tested with lot of project reference from across the globe.



### MasterSeal CR 460

#### Chemical Resistance Joint Sealant

**MasterSeal CR 460** is a two-component polyurethane joint sealant. It is pourable, self-levelling and exhibits good chemical resistance across a wide range of chemicals.

MasterSeal CR 460 is used together with MasterSeal P 460, a two-component clear polyurethane primer.

#### Chemical Resistance:

- Dilute mineral acids: chromic, hydrochloric, sulphuric etc
- Dilute alkalis and organic acids
- Mineral oils, most hydrocarbon, fuels, alcohols & salts
- Cleaning agents and detergents

#### Features:

- Weather resistance
- Wear resistance
- Hygienic & safe
- Low - emission
- Compliment the UCRETE range of flooring system

MasterSeal CR460 is available in eight standard colors:

● Red ● Yellow ● Green ● Orange ● Grey ● Cream ● Blue ● Brown

### MasterSeal 470

#### High Performance Elastomeric Joint Sealant

**MasterSeal 470** is a high grade, polysulfide-based sealant possessing outstanding resistance to deterioration due to weathering, ozone, ultra-violet light and attack by chemicals present in industrial atmospheres.

It is ideal for use in expansion joints in reinforced concrete structures such as bridges, reservoirs, water treatment works, sea walls and roads, etc.

#### Features:

- Solid Content, >95%
- Hardness, Shore A 25
- Movement,  $\pm 25\%$
- Tack free, 24 hrs
- Resistance to UV & weathering

#### Application:

- Residential & Commercial buildings joints
- Floor joint in factories & warehouse
- Rigid pavement & airport
- Dams, reservoirs and water treatment plant

MasterSeal 470 is available in two grades, PG (Pour Grade) & GG (Gun Grade) which can be used for both vertical & horizontal applications  
MasterSeal P 101 primer is must on porous surfaces (eg: concrete and masonry) & Non-porous surfaces (eg: metals, glass & glazed surfaces).





# MasterSeal Application...

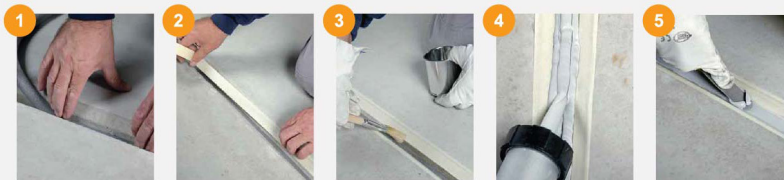
## Sealant Installation

Cleaning is the most important aspect of joint sealing. Performance of sealant is predicated on preparation & cleaning procedure. No dust, dirt or visible traces of foreign material should not remain on the joint face after cleaning. Use of wire brush, air-blower/ vacuum pump is recommended.



When working with sealants, the most common cause of "**call backs**" is sealant failure due to improper surface preparation and sealant application. Master Builders Solutions defines five basic steps for proper joint preparation and sealant application. **Care must be taken during each of these steps to ensure sealant success.**

- STEP 1** **Backer Rod:** Install backer rod after cleaning and before sealant application. Backer - rod diameter must be min 25% greater than the joint width. This can be installed easily with a double – wheeled, roller that will force it uniformly to the recommended depth.
- STEP 2** **Masking:** Apply masking tapes on both the sides of the joints for clean finish (this is optional and depends on sealant rheology and workmanship).
- STEP 3** **Priming:** Prime joint faces if recommended by Master Builders Solutions technical expert or refer to product technical data sheet. Wait for 30 min (flash-off time) before sealant application
- STEP 4** **Sealant:** Cut the nozzle of the cartridge or sealant gun at 45° and just few millimetres less than the joint width to pump the sealant. Enough sealant must be applied to fill the joint.
- STEP 5** **Tooling:** After sealant pumping, push in the sealant with a tool. This forces the sealant into contact with sidewalls and product a desired concave shape (recess of 2-3 mm from top). Tooling is necessary within about 10 minutes of installation before the sealant begins curing & form a skin.



# Master Builders Solutions for the Construction Industry

**MasterAir**  
Complete solutions for air entrained concrete

**MasterBrace**  
Solutions for strengthening and structural adhesives

**MasterCast**  
Solutions for the manufactured concrete product industry

**MasterCell**  
Density reducing admixtures

**MasterCem**  
Solutions for cement manufacture

**MasterEase**  
Solutions for low viscosity concrete

**MasterEmaco**  
Solutions for concrete repair

**MasterFiber**  
Comprehensive solutions for fiber reinforced concrete

**MasterFinish**  
Solutions for formwork treatment

**MasterFlow**  
Solutions for precision grouting

**MasterGlenium**  
Hyperplasticizer formulated from state-of-the-art polymers for ultimate performance

**MasterInject**  
Solutions for concrete injection

**MasterKure**  
Solutions for concrete curing

**MasterLife**  
Solutions for enhanced durability

**MasterMatrix**  
Advanced rheology control solutions

**MasterPel**  
Solutions for water tight concrete

**MasterPolyheed**  
High-performance superplasticizer

**MasterPozzolith**  
Solutions for water-reduced concrete

**MasterProtect**  
Solutions for concrete protection

**MasterRheobuild**  
Superplasticizer for concrete

**MasterRoc**  
Solutions for underground construction

**MasterSeal**  
Solutions for waterproofing and sealing

**MasterSet**  
Solutions for set control

**MasterSure**  
Solutions for workability control

**MasterTile**  
Solutions for tiling systems

**MasterTop**  
Solutions for industrial and commercial floors

**MasterWeld**  
Adhesive solutions for construction

**MasterX-Seed**  
Advanced accelerator solutions for concrete

**Ucrete**  
Flooring solutions for harsh environments

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