

# MasterSeal® GG 470

High performance, elastomeric joint sealant, (Gun Grade)

## DESCRIPTION

**MasterSeal GG 470** is a high grade, polysulphide based sealant possessing outstanding resistance to deterioration due to weathering, ozone, ultra-violet light and attack by chemicals present in industrial atmospheres. It has the ability to withstand repeated cycles of compression and extension over a wide temperature range, and has excellent adhesion properties to all materials commonly employed in building and construction work.

**MasterSeal GG 470** is supplied in 2 packs, a total of 3 litre sealed units for sealing horizontal and vertical joints where pronounced cyclical movement is expected and where the service conditions would be harsh for most common sealants. It is ideal for use in expansion joints in reinforced concrete structures such as bridges, reservoirs, water treatment works, sea walls and roads, etc. It can also be used in floor joints subject to heavy usage where a high resistance to damage is required.

## TYPICAL PROPERTIES\*

|                         |  |
|-------------------------|--|
| Colour                  | Grey   |
| Solid content           | 97%  |
| Viscosity               | Thixotropic paste  |
| Tack free at 25°C       | 24 hours   |
| Staining                | Generally non-staining                                       |
| Slump Gun Grade         | Nil  |
| Shore A Hardness        | 20-25  |
| Application temperature | 5°C to 40°C  |
| Recommended movement    | Transverse $\pm 25\%$ M.A.F. (Movement Accommodation Factor) |

## PACKAGING

Gun Grade: 2 pack units, a total of 3 litres

## STANDARDS

|                         |                    |
|-------------------------|--------------------|
| ASTM C 920-02           | Type M, Class 25   |
| BS 5212 : Part 1 : 1990 | Compliance         |
| BS EN ISO 11600         | Type F, Class 25LM |
| TT-S-00227E             | General compliance |

## ESTIMATED SET AND CURE TIMES

| Property    | 25°C    | 40°C   |
|-------------|---------|--------|
| Pot life    | 2 hrs   | 45 min |
| Initial set | 24 hrs  | 5 hrs  |
| Full cure   | 2 weeks | 7 days |

## JOINT SIZE

Joint size may range from a minimum of 5mm to a maximum of 50mm wide. Joints with cyclic movements should have a width:depth ratio 2:1 and designed so total movement does not exceed the 25% M.A.F. related to the joint width. Sealant depth shall not exceed joint width except joints subject to total immersion where joint profile should be 1:1.

Minimum sealant depth recommended:

- 5mm for metals, glass and other impervious surfaces.
- 10mm for all porous surfaces.
- 20mm for joints exposed to hydrostatic pressures.
- 5mm below flush for joints exposed to traffic.

## APPLICATION PROCEDURE

### JOINT PREPARATION SURFACE TREATMENT

|                            |   |
|----------------------------|---|
| Concrete & Masonry         | Surfaces must be clean and dry. Wire brush thoroughly and remove dust and all contaminants.   |
| Metals                     | Remove any corrosion or millscale by grit or shotblast, wirebrush, grinder or chemical remover. Degrease the surfaces with clean cloths soaked in oil-free cleansing solvent. |
| Wood (bare)                | Wood surfaces must be clean and dry, cut back or abrade where necessary to sound timber.  |
| Glass and glazed materials | Thoroughly clean the surfaces with clean cloths soaked in oil-free cleansing solvent.   |
| Coating surfaces           | Coating should be removed and the surfaces treated as above.  |

Where required, a bond breaking tape should be applied before priming.

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## PRIMING

The correct primer must always be used.

## SURFACE APPLICATION

### MasterSeal P 101

Porous surfaces (such as concrete and masonry)  
Non-porous surfaces (such as metals, glass and glazed surfaces).

- Application of primer should not be carried out below 4°C.
- A single coat of primer should be applied by brush in accordance with the instructions on the primer tins. The primer must be allowed to dry to a tack free state before applying **MasterSeal GG 470**.
- **MasterSeal GG 470** should be applied within 3 hours of primer, otherwise repriming will be necessary.

## APPLICATION TEMPERATURE

**MasterSeal GG 470** should be applied when the ambient temperature is between 4°C and 50°C. When the temperature is below 10°C storage at room temperature for several hours will ease mixing and application.

## APPLICATION TEMPERATURE

## MIXING:

- Mix and use one complete unit at a time. Do not sub-divide.
- Gun grade is supplied in base & catalyst in separate units.
- Mix for 5 - 10 minutes using a suitable paddle fitted to a 500 rpm electric drill moving the paddle completely through the mass of the material.
- Add the complete contents of the catalyst from its container and mix thoroughly, into the base using a palette knife.
- Failure to completely disperse catalyst throughout the base compound will result in uncured sealant. Once mixed **MasterSeal GG 470** should be used immediately.

## APPLICATION

- **MasterSeal GG 470** is formulated to be applied using a sealant gun but may be applied by trowel if required.
- Sealant guns are fitted with conical nozzles which can be cut to suit the joint width.
- The sealant should be gunned into the joint using an even trigger pressure, cleaning the nozzle occasionally to avoid contamination. Deep joints should be filled in two or more runs, to prevent air entrapment.
- Once the sealant has been applied, a small timber spatula, soaked in soapy water, should be used to compact the sealant into the joints and to achieve a smooth polished finish. Any masking tape which has been applied should be removed before the sealant cures.

Mixing and application equipment should be cleaned immediately.

## COVERAGE

**MasterSeal GG 470** (length of joint in metres filled per 1 litre of material)

| Depth of joint mm | Width of joint mm |      |      |      |      |
|-------------------|-------------------|------|------|------|------|
|                   | 10                | 15   | 20   | 25   | 30   |
| 10                | 10                | 6.7  | 5    | 4    | 3.33 |
| 15                |                   | 4.45 | 3.33 | 2.67 | 2.23 |
| 20                |                   |      | 2.5  | 2    | 1.67 |
| 25                |                   |      |      | 1.6  | 1.33 |

## STORAGE

Store under cover out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air conditioned environment. Shelf life is at least 12 months when stored between 5°C and 35°C.

## SAFETY PRECAUTIONS

The components and mixed sealant should not be left in contact with skin for prolonged periods. Gloves should be worn and the use of a barrier cream is strongly recommended. Solvent must not be used for cleaning the hands. Use an industrial cleaner and wash with soap and water. For further information including disposal instructions refer to the Material Safety Data Sheet.

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## NOTE

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

MBCC reserves the right to have the true cause of any difficulty determined by accepted test methods.

## QUALITY AND CARE

All products originating from MBCC's 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, ISO 14001 and OHSAS 18001.

\* Properties listed are based on laboratory controlled tests.

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## STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this MBCC 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

Field service where provided does not constitute supervisory responsibility. Suggestions made by MBCC either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not MBCC, are responsible for carrying out procedures appropriate to a specific application.