

# MASTERFLEX<sup>®</sup> 460

## Polyurethane joint sealant

### Description

MASTERFLEX<sup>®</sup> 460 is a two component polyurethane joint sealant. It is pourable and self-levelling. MASTERFLEX<sup>®</sup> 460 is used together with MASTERFLEX<sup>®</sup> 460 PRIMER, a two component clear polyurethane.

### Uses

Designed to complement the BASF range of polyurethane and epoxy resin flooring systems. MASTERFLEX<sup>®</sup> 460 can be used to seal induced and movement joints in resin floors where a combination of chemical resistance, heat resistance and the ability to withstand aggressive traffic conditions is required. Typical uses would include floors in the food processing, engineering, chemical, pharmaceutical and metal processing industries.

### Benefits

- Long life
  - Good chemical resistance.
  - Wear resistant.
  - Weather resistant.
- Hygienic and safe
  - Solvent-free.
  - Non-tainting.
- Easy to apply

### Packaging

#### MASTERFLEX<sup>®</sup> 460 PRIMER

Part 1: can 0.474 kg net weight

Part 2: can 0.178 kg net weight

#### MASTERFLEX<sup>®</sup> 460

Part 1: pail 2.822 kg net weight

Part 2: can 0.178 kg net weight

### Colours

MASTERFLEX<sup>®</sup> 460 is available in six standard colours (matching the Standard UCURETE colour range)

Cream, Green, Grey, Orange, Red, Yellow

### \*Typical physical properties

Density (DIN 53479)	1550-1600kg/m <sup>3</sup>
Tensile strength (ISO R527)	1.6-2.0N/mm <sup>2</sup>
Elongation at break (ISO R527)	20-23%
Hardness (DIN 53505) Shore A	ca. 80
Maximum elongation	
Joint dimensions (width x depth)	
7 x 5	1.4mm
10 x 6	1.8mm
15 x 10	2.2mm
20 x 10	2.5mm
30 x 15	3.0mm

All tests carried out at 20°C; samples cured for 28 days at 20°C

### Application

#### Substrate quality:

All substrates must be clean and free from dust and loose particles. Concrete and other cementitious substrates must be dry (maximum moisture content 4% by CM test method). All traces of contaminants, such as oils, fats, greases, paint residues, chemicals, algae and laitance, should be removed. Steel and iron substrates must be free of rust and mill scale.

#### Preparation of substrate:

As with all surface coatings, proper surface preparation is vital to ensure the successful application and performance of MASTERFLEX<sup>®</sup> 460.

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For practical reasons surface preparation methods will be limited to sand blasting or grinding. Wire brushing can be used but only where other methods are impracticable. Whatever method is used, it is vital to ensure that all surface contamination is removed.

Ensure free movement of the joint by installing a joint backing rod or debonding tape. These are normally closed-cell expanded polyethylene rods.

### Mixing:

#### MASTERFLEX<sup>®</sup> 460 PRIMER

Mix the two components as supplied using a slow speed stirrer (approximately 400rpm). Care should be taken to mix in any material sticking to the walls of the container.

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Use complete units only.

Using a slow speed stirrer (approximately 400rpm) mix the contents of the Part 1 pail for 30 seconds to re-disperse any separated material. Add the contents of the Part 2 can and mix for a further 1 to 2 minutes. Do not mix excessively as this traps air within the mix. Ensure that no undispersed Part 1 is left on the side of the pail.

### Application:

The application temperature must be 5°C or above but below 40°C. The substrate temperature should be at least 3°C above the dew point. Do not apply if condensation is likely to occur before full cure occurs. Failure to observe these conditions will result in failure or a poor quality job.

- Apply MASTERFLEX<sup>®</sup> 460 PRIMER to the substrate using a brush. A thin layer ( $\pm 100\mu\text{m}$ ) should be applied to the joint edges.

- While the MASTERFLEX<sup>®</sup> 460 PRIMER is still tacky pour in the mixed MASTERFLEX 460 to fill the joint flush to the surface. The MASTERFLEX 460 Primer has an open time of upto 45 minutes depending upon temperature (see below). Use a spatula to remove trapped air.

MASTERFLEX<sup>®</sup> 460 can be applied on angled surfaces up to 2% without slumping.

Note: If the MASTERFLEX<sup>®</sup> 460 PRIMER has become tack-free, a second coat should be applied, before pouring the MASTERFLEX<sup>®</sup> 460, to ensure proper bonding.

### Curing

The following table should be used as a guide

	MASTERFLEX <sup>®</sup> 460 PRIMER	MASTERFLEX <sup>®</sup> 460
Pot life	45 mins @ 20°C 30 mins @ 35°C	100 - 120 minutes
Light traffic	-	24 hours
Full traffic	-	48 hours

### Coverage

**MASTERFLEX<sup>®</sup> 460 PRIMER** 65-105 linear metre/unit

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The following table may be used as a guide:

Joint (width x depth)      Coverage

mm	g/linear/metre	linear metre/unit
7 x 5	55	55
10 x 6	100	30
15 x 10	235	13
20 x 10	320	9
30 x 15	720	4

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## Chemical resistance

MASTERFLEX<sup>®</sup> 460 will resist spillages of:

- dilute mineral acids: chromic, hydrochloric, nitric, phosphoric and sulphuric
- dilute alkalis
- most dilute organic acids
- fats, oils and sugars
- mineral oils, most hydrocarbons, fuels, alcohols and salts
- cleaning agents and detergents

MASTERFLEX<sup>®</sup> 460 has limited resistance to concentrated mineral and organic acids and alkalis. It is also attacked by aggressive organic solvents such as xylene and acetone but in practice many such solvents evaporate rapidly and cause little damage.

Detailed information on chemical resistance is available from your local BASF Office.

## Cleaning

Cleaning of plant and equipment should be undertaken well away from the application area. Xylene may be used to clean equipment, tools and spillages. In the case of spillages, excess material must first be absorbed onto sawdust or other disposable absorbent medium. Use correct handling procedures with solvents and take care to avoid any accidental spillage or splashes onto coated surfaces.

Part 2 containers may contain small amounts of unreacted diisocyanates (MDI). Therefore they must be decontaminated with a 5% solution of soda ash (sodium carbonate or washing soda) prior to disposal as building waste.

## Maintenance

Regular cleaning and prompt clean up chemical spillages will prolong the life of all joint sealants. Specialised floor cleaning equipment and chemicals are widely available and the suppliers are able to offer advice on appropriate cleaning regimes. Consult them or your local BASF office for details.

## Storage

MASTERFLEX<sup>®</sup> 460 and MASTERFLEX<sup>®</sup> 460 PRIMER should be stored under cover and clear off the ground. Storage conditions should be dry, above 5°C and below 30°C. Upon storage some sedimentation of the Part 1 component may occur; this will be readily dispersed during mixing and has no effect on the product's performance.

## Shelf life

Minimum 12 months when stored as recommended in unopened containers.

## Health and safety

Appropriate health and safety advice can be found in the Material Safety Data Sheets.

Users are advised to wear gloves and eye protection when mixing and applying MASTERFLEX<sup>®</sup> 460 PRIMER and MASTERFLEX<sup>®</sup> 460.



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## Safety precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until products is fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Reseal containers after use and dispose off empty containers correctly.

## Note

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

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

## Quality and care

All products originating from BASF'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.

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\* Properties listed are based on laboratory controlled tests.

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**As all BASF technical datasheets are updated on a regular basis it is the user's responsibility to obtain the most recent issue.**

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**BASF Construction Chemicals UAE LLC**

P.O. Box 37127, Dubai, UAE

Tel: +971 4 8090800

Fax: +971 4 8851002

www.basf-cc.ae

