

MASTERFLEX[®] 460

(Formerly sold as Selbalastic PU)

Polyurethane Joint Sealant

Description of Product

MASTERFLEX[®] 460 is a two component polyurethane joint sealant. It is pourable and self-levelling.

MASTERFLEX[®] 460 is used together with MASTERFLEX[®] 460 PRIMER, a two component clear polyurethane.

Fields of Application

Designed to complement the BASF range of polyurethane and epoxy resin flooring systems. MASTERFLEX[®] 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.

Features and Benefits

- | Long-life
 - good chemical resistance
 - wear resistant
 - weather resistant
- | Hygienic and safe
 - solvent-free
 - non-tainting
- | Easy to apply

MASTERFLEX[®] 460 is available in six colours matching the UCRETE[®] colour range:

Cream Green Grey
Orange Red Yellow

Other colours may be available to meet special requirements but will be subject to minimum order quantities and may require extended lead times.

Technical Data/Typical Properties^(a)

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

^(a) all tests carried out at 20°C; samples cured for 28 days at 20°C

Chemical resistance

MASTERFLEX[®] 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[®] 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 the Industrial Flooring Sales Office on **+44 (0) 1527 505100**.

Application Procedure

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® 460.

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 material or insert. These are normally closed-cell expanded polyethylene rods.

Mixing

MASTERFLEX® 460 PRIMER

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

MASTERFLEX® 460

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® 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® 460 PRIMER is still tacky (30 minutes to 2 hours depending on the temperature) pour in the mixed MASTERFLEX® 460 to fill the joint flush to the surface. Use a spatula to remove trapped air.

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

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

Coverage

MASTERFLEX® 460 PRIMER, linear metre/unit 50 – 80
MASTERFLEX® 460

The following table may be used as a guide.

| Joint (width x depth) mm | Coverage | |
|-----------------------------|----------------|-------------------|
| | 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 |

Curing

The following table should be used as a guide at 15 to 25°C.

| | MASTERFLEX 460 PRIMER | MASTERFLEX 460 |
|----------------------|-----------------------|----------------|
| Pot life, minutes | 50 – 60 | 100 – 120 |
| Light traffic, hours | - | 24 |
| Full traffic, hours | - | 48 |

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.



The Chemical Company

Maintenance

Regular cleaning and prompt clean up of chemical spillages will prolong the life of all resin floors.

Specialised floor cleaning equipment and chemicals are ideally available and the suppliers are able to offer advice on appropriate cleaning regimes. Consult them or the Industrial Flooring Sales Office on **+44 (0) 1527 505100**.

Packaging

MASTERFLEX® 460 PRIMER

Part 1: can 0.297 kg net weight

Part 2: can 0.178 kg net weight

MASTERFLEX® 460

Part 1: pail 2.822 kg net weight

Part 2: can 0.178 kg net weight

Storage

MASTERFLEX® 460 and MASTERFLEX® 460 PRIMER should be stored under cover and clear of 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.

Watchpoints

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® 460 PRIMER and MASTERFLEX® 460 .

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Health and Safety

*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Solvent Based Products

Use in well ventilated areas; avoid inhaling. Suitable respiratory equipment may be needed, eg when spraying. Can cause skin, eye irritation. Wear protective eye shields and gloves during use. Do not smoke or allow sparks or naked lights when stored or in use.

Powder Products

Should be handled to minimise dust formation; use light mask if excessive dust unavoidable. Cement powders when wet or moistened can cause burns to skin and eyes which should be protected during use.

Resin Products

Can cause irritation, dermatitis or allergic reaction. Use protective equipment particularly for skin and eyes. Use only in well ventilated areas.

Spillage

Chemical products can cause damage; clean spillage immediately.

Disclaimer:

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.

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