

MasterSeal® CR 460

Polyurethane joint sealant

DESCRIPTION

MasterSeal CR 460 is a two-component polyurethane joint sealant. It is pourable and self-levelling. **MasterSeal CR 460** is used together with **MasterSeal P 460**, a two-component clear polyurethane primer.

TYPICAL APPLICATIONS

Designed to complement the Master Builders Solutions range of polyurethane and epoxy resin flooring systems. **MasterSeal CR 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.

ADVANTAGES

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

PACKAGING AND COLORS

MasterSeal P 460

Part 1: can 0.474 kg net weight

Part 2: can 0.178 kg net weight

MasterSeal CR 460

Part 1: pail 2.822 kg net weight

Part 2: can 0.178 kg net weight

MasterSeal CR 460 is available in seven colours matching the UCRETE colour range:

Red, Yellow, Green, Orange,
Grey, Cream, Green/Brown

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

TYPICAL PROPERTIES*

Density (DIN 53479)	1550-1600 kg/m ³
Tensile strength (ISO R527)	1.6-2.0 N/mm ²
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 GUIDELINES

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

MasterSeal CR 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. Remove all dust by vacuum.

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

MIXING

MasterSeal P 460

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.

MasterSeal® CR 460

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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 between 5°C and 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 **MasterSeal P 460** to the substrate using a brush. A thin layer ($\pm 100\mu\text{m}$) should be applied to the joint edges.
- While the **MasterSeal P 460** is still tacky (30 minutes to 2 hours, depending on the temperature) pour in the mixed **MasterSeal CR 460** to fill the joint flush to the surface. Use a spatula to remove trapped air. **MasterSeal CR 460** can be applied on angled surfaces up to 2% without slumping.

If the **MasterSeal P 460** has become tack-free, a second coat should be applied before pouring the **MasterSeal CR 460** to ensure proper bonding.

CURING

The following table should be used as a guide

	MasterSeal P 460	MasterSeal CR 460
Pot life	50-60 mins	100 - 120 minutes
Light traffic	-	24 hours
Full traffic	-	48 hours

MasterSeal CR 460

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

CHEMICAL RESISTANCE

MasterSeal CR 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

MasterSeal CR 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.

Extensive chemical resistance tables are available on request. For detailed information please contact your local Master Builders Solutions Construction Chemicals office for guidance.

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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 Master Builders Solutions office for details.

COVERAGE / YIELD

MasterSeal P 460 65-105 linear metre/unit

STORAGE AND SHELF LIFE

MasterSeal CR 460 and **MasterSeal P 460** 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. The shelf life is 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 **MasterSeal P 460** and **MasterSeal CR 460**.

HEALTH AND SAFETY

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.

QUALITY AND CARE

All products originating from Master Builders Solutions 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 and ISO 14001.

* Properties listed are based on laboratory controlled tests.

® = Registered trademark of the MBCC Group in many countries.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions 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 Master Builders Solutions either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not Master Builders Solutions, are responsible for carrying out procedures appropriate to a specific application.

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