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Technical Data Guide



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Joint
Sealants

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MasterSeal[®] CR 100

Fast-setting two-component polyurea control-joint filler

FORMERLY SONOLASTIC TF-100

PACKAGING

- 10 gallon (37.9 L) kits, containing:
 - 5 gallons (18.9 L) of Part A
 - 5 gallons (18.9 L) of Part B
- 300 by 300 ml biaxial cartridges

COLOR

Gray

YIELD

See page 2 for charts

STORAGE

Store in unopened containers in a clean, dry area at 60 to 90 °F (16 to 32 °C) and 50% relative humidity

SHELF LIFE

CARTRIDGES:
10 GALLON PAILS:
2 years when properly stored

VOC CONTENT

0 g/L, for components A and B less water and exempt solvents, when mixed and applied per manufacturer's instructions

DESCRIPTION

MasterSeal CR 100 is a two-component self-leveling 100% solids polyurea control joint filler designed to protect joints in industrial concrete floors that are subject to hard wheels and heavy loads. MasterSeal CR 100 provides excellent resistance to spalling, abrasion, chemical attack and corrosion. It is also ideal for filling random cracks.

PRODUCT HIGHLIGHTS

- Chemical resistance makes MasterSeal CR 100 suitable for many industrial environments
- Stiff yet resilient to help absorb floor vibration and wheel impact; reinforces joint edges to prevent spalling in heavy-duty areas
- 100% solids to fill joints completely and reinforces side walls without shrinkage

APPLICATIONS

- Horizontal
- Interior or exterior
- Concrete
- Control joints in concrete
- Retail, warehouse and industrial floors
- Random crack filling

HOW TO APPLY

JOINT PREPARATION

1. Install MasterSeal CR 100 at full joint depth to allow for proper load transfer. Do not use sand or backing materials simply to reduce volume. Clean, dry silica sand may be used to seal cracks in the base of the joint if approved by the specifier; however, Master Builders Solutions recommends that the minimum application be $\frac{2}{3}$ the depth of the joint or 1", whichever is greater.
2. Do not install over backer rod in sawcut control joints. Compressible rod may be used at depths greater than 1 1/2" in formed construction joints.

SURFACE PREPARATION

1. Concrete must be fully cured (28 days). Following ACI 302 recommendation, apply joint fillers as late as possible after construction (ideally 90–120 days to minimize additional slab shrinkage).
2. Joint surfaces must be sound, dry, clean, free of dirt, moisture, loose particles, oil, grease, asphalt, tar, paint, wax, rust, waterproofing and curing or parting compounds, membranes, and other foreign matter.
3. Clean concrete where necessary by grinding, sandblasting or wire brushing. Expose a sound surface free of contamination and laitance.

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Technical Data**Composition**

MasterSeal CR 100 is a two-component 100% solids polyurea.

Compliances

- CFI accepted

Typical Properties

PROPERTY	VALUE
Application temperature, °F (°C)	
Substrate*	40–110 (4–43)
Material	60–100 (16–38)
Service temperature, °F (°C)	–40 to 350 (–40 to 177)
Gel time, sec	60–70
Trim time, hrs	1–3
Tensile strength, psi (MPa) (ASTM D 412)	1400 (9.6)
Elongation, %	200–250
Hardness, Shore A	90
Return to service, hrs (dependent on temp)	1–3
Movement capability, % (ASTM C719)	+/-12.5%

*At substrate temperatures below 40 °F (4 °C), the substrate must be free of frost or condensation before application of MasterSeal CR 100.

Test results are averages obtained under laboratory conditions. Expect reasonable variations.

Yield

LINEAR FEET PER GALLON (METERS PER LITER)*

JOINT WIDTH, IN (MM)	JOINT DEPTH 1" (25 MM)	JOINT DEPTH 1.5" (38 MM)	JOINT DEPTH 2" (51 MM)	JOINT DEPTH 2.5" (63 MM)
3/16 (4.8)	102 (7.0)	68 (4.7)	51 (3.5)	41 (2.8)
1/4 (6.4)	77 (5.3)	51 (5.5)	38 (2.6)	30 (2.1)
3/8 (9.5)	51 (4.7)	34 (2.3)	25 (1.7)	20 (1.4)

*One gallon yields 231 in³ (0.001 m³/L).

PRIMING

1. For most applications, priming is not required.
2. Where joints will be subject to continuous or protracted periods of water immersion, they must have their joint faces primed with MasterSeal P 173. Conduct a test application to verify adhesion.
3. When joint surfaces have been cleaned as described above, apply MasterSeal P 173 in a thin, uniform film (typically 1–2 mils). Avoid buildup of excess film thickness and application of primer beyond joint faces.
4. Allow approximately 15–30 minutes drying time; primer should be tack-free before application of sealant.

MIXING**CARTRIDGES**

Mix cartridges until material is homogeneous. Use a 30 element 10 mm diameter static mixer with a pneumatic or manual side-by-side gun.

BULK UNITS

Use an AST or GMP Series plural-component metering system, or equivalent, at a 1 to 1 ratio. Thoroughly premix Part B with a drill and paddle to redistribute any settled material. Contact your Master Builders Solutions representative for additional information on pumping equipment.

APPLICATION

1. MasterSeal CR 100 can be pumped from pails using the equipment described above or dispensed from cartridges with a side-by-side manual or pneumatic gun. A 30-element nozzle with a 10 mm diameter is required to achieve a sufficient mix. The prepackaged restrictor plate is required for manual dispensing. When using cartridges, dispense enough material to ensure proper mixing before placing nozzle in the joint.
2. Use a 1 to 1 manual or pneumatic dispenser (maximum of 80 psi).
3. Remove the retaining nut and caps from the cartridge.
4. Keep the cartridge upright during assembly.
5. Check alignment of plungers inside cartridge; level if necessary.
6. Place restrictor disk over cartridge openings.
7. Place mixing nozzle over restrictor disk and hand tighten nut.
8. Point cartridge upward and load into applicator gun.

9. While pointing cartridge upward, trigger handle to remove any air trapped in cartridges.
10. Point cartridge over waste container and dispense initial material (3–4 squeezes).
11. Fill the joint from the bottom up. Completely fill joint in one pass, overfilling it slightly. In cases where slab elevations are different, fill to the lower slab height.
12. Trim excess fill after 1–3 hours (depending on temperature) with a stiff, sharp razor blade (0.032" thick) attached to a heavy floor scraper (Crane 375).
Note: Application of any MasterSeal CR 100 cartridge must be performed continuously. Stopping before the cartridge is completely dispensed will result in the material setting up in the mixing nozzle.

CLEANUP

Wash tools with MasterSeal 990 or xylene immediately after use. Observe all precautions when handling these solvents. Cured material must be removed mechanically.

FOR BEST PERFORMANCE

- Use only in joints where shrinkage and movement will be less than 10% of joint width.
- Not recommended for joints greater than 1/2" (12.5 mm) wide.
- Precondition materials to 70 °F (21 °C) when applying at temperatures below 60 °F (16 °C).
- Material may discolor in direct sunlight or high intensity UV light.
- Proper application is the responsibility of the user. Field visits by Master Builders Solutions personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

HEALTH, SAFETY AND ENVIRONMENTAL

Read, understand and follow all Safety Data Sheets and product label information for this product prior to use. The SDS can be obtained by visiting www.master-builders-solutions.com/en-us, e-mailing your request to mbsbscst@mbcc-group.com or calling 1(800)433-9517. Use only as directed.

IN CASE OF EMERGENCY: Call CHEMTEL +1 (800) 255-3924 or if outside the US or Canada, +1 (813) 248-0585.

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