

PURPOSE

CM 2000 primary use is for the rapid repair of hairline cracks in horizontal concrete. CM 2000 can be used as a rapid set concrete repair mortar when mixed with clean silica sand and for rapid permanent repair of divots, spalls and damaged controlled joint nosings. CM 2000 penetrates into concrete and cracks creating a permanent bond and chemical resistant sealer.

Typical areas of use include warehouse floors, cold storage and freezers, manufacturing facilities, industrial facilities, parking decks, bridge decks, water and waste water facilities, and in cold water applications where time and temperature are of prime concern.

DESCRIPTION

CM 2000 is an ultra-low viscosity, two-component, rapid-curing and chemical-resistant polyurea for the repair of hairline cracks or deteriorated and spalled concrete. CM 2000 can be installed at temperatures as low as -40°F (-4°C).

PACKAGING

CM 2000 is packaged in 10 gallon (37.9 L), 2 gallon (7.6 L) and 21 ounce (300 ml) cartridge (12/case) units.

ADVANTAGES

- ◆ Cures at temperatures as low as -40°F (4°C)
- ◆ Open to traffic in 15 minutes
- ◆ Ultra-low viscosity; excellent penetration
- ◆ Chemical resistant
- ◆ Self-leveling
- ◆ Excellent load transfer
- ◆ 1:1 mix ratio

SPECIFICATIONS

- ◆ Solids content – 100%
- ◆ Viscosity: 20 cps
- ◆ V.O.C., A & B combined: 5.5 g/L
- ◆ Shrinkage: none
- ◆ Pot Life: 5 minutes @ 72°F (22°C)
- ◆ Tack Free: 15 minutes @ 72°F (22°C)
- ◆ Final Cure: 22 minutes @ 72°F (22°C)

PROPERTIES

Compressive Yield Strength (ASTM-D-695)

3,800 psi (26.2 MPa) neat

4,610 psi (31.7 MPa) w/ sand

Shore A Hardness (ASTM-D-2240)

70

Tensile Strength (ASTM-D-412)

4,500 psi (31.0 MPa)

Elongation (ASTM-D-412)

6%

APPLICATION

Installation of CM 2000 should not be performed until concrete is a minimum 14 days old. All concrete must be dry for at least 5 days prior to the installation of CM2000. Wet or moist concrete will cause outgassing, swelling and bubbling to occur. Damp areas must be primed with CM2000 to react with and drive out any moisture. Damp areas for repair must be made dry as possible, then primed with neat (no sand) CM2000 and given 10 minutes to cure prior to the overall installation of CM2000. CM2000 should not be used to fill contraction / control or expansion joints. The cured color of CM2000 will be affected by the color of the sand used.

Storage: Store unopened product in a dry environment at temperatures between 55°-90°F (12.8°-32.2°C). Once opened, material must be used immediately or discarded. Recapping cartridges for later use is not recommended.

Surface Preparation: All concrete to be repaired must be mechanically cleaned and roughened to ensure proper bonding. All loose, deteriorated concrete, dust, debris and contaminants must be completely removed prior to the installation of CM2000.

Mixing: Small amounts (1 pint or less, 473 ml) of CM 2000 in bulk form can be hand mixed. Thoroughly mix both part A and B separately before combining. Mix both Part A and Part B together for 30 seconds, making sure the mixed color is uniform and free of streaking. Mix quickly and use immediately.

Cartridges should be shaken vigorously for 2 minutes before use. Be careful not to misplace or lose the small black back flow restrictor packed with the cartridges. This must be fitted into the cartridge neck before placing the retaining nut and static mixing nozzle.

Spall and divot concrete repair using CM2000 as a polymer mortar should be performed using bulk mixing. To make a mortar mix using CM2000, use from 1.5 to 2 parts by volume of clean, dry quartz sand depending on the situation and flow requirements for the particular repair. Pre-mix part A & B and then add either part A or B of the CM2000 to the sand, then mix making sure all sand is completely wet. After sand has been mixed and wet out, add the other part of CM2000 and mix quickly for 30 seconds. Mortar mixers must be used within 4 minutes.

Installation: To repair spalls and divots in concrete, prepare a mortar mix as instructed above. Remove all deteriorated concrete and square up edges. Clean out all dust, loose concrete and debris. Prime the work surface with neat CM2000.

Chase cracks using a diamond blade, making sure that the edges are square. Vacuum out crack with crevice tool or blow out with clean, dry, oil-free air, then prime with CM2000. Immediately fill the crack to grade with clean 4010 grade quartz sand. Flood the sand with CM2000 until entire crack

is saturated, then broadcast additional sand on top to fill in the low spots. Finish with a trowel across top, to achieve a flush surface. Do not overwork. Overworking will make the surface appear rough.

Cartridges are to be mixed per above instructions prior to use. For dispensing CM2000 using cartridges, first remove the plastic cap and D rings from cartridge neck. Place the back flow restrictor into the neck carefully aligning the small hole openings. Attach the static mixer nozzle over the back flow restrictor and to the cartridge with the retaining nut, and finger tighten. Load a cartridge into a dispensing gun, keeping cartridges in an upright position. Remove air from cartridges by slightly squeezing the gun handle while slowly rocking cartridges side-to-side until all visible air is displaced. Displace an amount of CM2000 into a waste pail until the color is uniform with no streaks, then proceed to fill cracks.

Coverage: One part of sand (by volume) per gallon of CM 2000 yields 1.6 gallons of blended material. Two parts of sand (by volume) per gallon of CM 2000 yields 2.2 gallons of blended material.

Approximate coverage ft²

Depth	1:1 mix	2:1 mix
¼"(.6 cm)	10.24 (0.95 m ²)	14.08 (1.30 m ²)
½"(1.3 cm)	5.12 (0.48 m ²)	7.04 (0.65 m ²)
¾"(1.9 cm)	3.41 (0.32 m ²)	4.69 (0.44 m ²)
1"(2.5 cm)	2.57 (0.24 m ²)	3.52 (0.33 m ²)
2"(5.1 cm)	1.29 (0.12 m ²)	1.76 (0.16 m ²)

WARRANTY

Symons warrants, for 12 months from the date of manufacture, or for the duration of the published product shelf life, whichever is less, that at the time of shipment by Symons, the product is free of manufacturing defects and conforms to Symons' published specifications in force on the date of acceptance by Symons of the order. Symons shall only be liable under this warranty if the material has been applied, used, and stored in accordance with Symons instructions in this technical data sheet.

The purchaser must examine the product when received and promptly notify Symons in writing of any nonconformity before the product is used, or no later than 30 days after such nonconformity is first discovered. If Symons, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the nonconforming product, refund the purchase price or issue a credit. This is the sole and exclusive remedy for breach of this warranty.

Only a Symons officer is authorized to modify this warranty. The sales information on the Symons website and received by the customer during the sales process does not supersede this warranty and the specifications of the product in force on the date of sale. **THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.**

LIMITATIONS

Do not use on exterior cracks or repairs where deck or slab movement is expected to exceed 6%. Do not use or install in wet or damp joints or where the immediate work area is not dry. Do not thin with any solvents or thinners. Limit the installation to level or near level grades. High temperatures will accelerate setting time, and cool temperatures will slow down setting time.

CLEAN-UP

Clean tools and equipment with xylene or acetone before CM 2000 sets up.

SHELF LIFE

Shelf life in properly stored bulk containers is one year and cartridges is six months.

PRECAUTIONS

It is mandatory to take the following precautions to protect workers and the public:

1. KEEP OUT OF THE REACH OF CHILDREN.
2. Product is a strong sensitizer. Protective clothing and rubber gloves are recommended.
3. Avoid breathing product vapors. Ensure adequate ventilation.
4. Avoid contact with skin. Wash immediately and seek medical help.
5. Avoid contact with eyes. Wash immediately and seek medical help.
6. Avoid ingestion of material. If ingestion occurs, contact a poison center or physician.

Additional precautions, safety information and first aid treatments are contained in the Material Safety Data Sheet.

LIMITATION OF LIABILITY

Symons shall not be liable, in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodily injuries), or economic losses of any kind; or for any special, incidental, indirect, consequential, special, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, this Agreement, even if Symons could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this agreement, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose.

MANUFACTURER

Symons
2400 Arthur Avenue
Elk Grove Village, IL 60007

www.symons.com
info@symons.com

General: 847-298-3200
FAX: 847-635-9287

Technical: 877-854-0643
Fax: 913-279-4806

© 2007