

# FAST SET 20

RAPID-SETTING, CEMENT-BASED PATCHING MATERIAL

## PURPOSE

FAST SET 20 is a general purpose, patching material. It is easily mixed with water to provide a rapid-setting concrete repair.

FAST SET 20 is recommended for interior and exterior concrete surface repairs, including concrete pipe, floors, walls and walks.

FAST SET 20 can also be used for vertical and overhead repairs. The putty-like consistency can be molded to the patch and shaped with a trowel to complete the repair.

## DESCRIPTION

FAST SET 20 is a mixture of Portland cement, aggregates and proprietary admixtures for accelerated set time.

## PACKAGING

FAST SET 20 is available in 50 lb. (22.7 kg) bags or pails.

## PROPERTIES

FAST SET 20 meets or exceeds typical commercial and industrial specifications for repair materials.

### Compressive Strength (ASTM-C-109)

psi	Mpa	
3000	20.7	(at 1 day)
5100	35.2	(at 3 days)
6500	44.8	(at 28 days)

## YIELD

FAST SET 20 yields .5 ft<sup>3</sup> per 50 lbs. (.014 m<sup>3</sup> per 22.7 kg) of properly mixed material. Actual yield will vary slightly depending on the amount of water, type of mixing equipment and other field conditions.

## APPLICATION

**Storage:** Open bags should be used immediately or discarded. Material should be stored in a cool, dry place when not in use.

**Preparation:** Remove all dirt, grease, oil and surface coatings from the surfaces that will come into contact with the patching material. All loose concrete must be removed until firm substrate is exposed. On horizontal patches, best results will be obtained by saw cutting the area to be patched to provide uniform depth and firm bonding areas. For repairing hairline cracks, chisel a groove to enlarge it to at least 3/4" (1.9 cm) in width and depth.

All surfaces should be in a saturated, surface-dry (SSD) condition, with no standing water. A scrub coat of material or bonding agent, like Symons STRONG BOND, is recommended, particularly in cases where the patch would be less than 1" (2.5 cm) thick. The scrub coat or bonding agent should be thoroughly brushed into all the contact surfaces.

**Mixing:** Mix only as much material as can be placed within 10 minutes. Initial set is 15-20 minutes and final set is approximately 45 minutes. Generally, a wheelbarrow, large pan, or pail can be used for mixing.

Use mixing water at the rate of 5 quarts per 50 lbs. (4.7 L per 22.7 kg). Never use more than 6 quarts per lbs. (5.7 L per 22.7 kg). Always add material to the water, blending thoroughly for 2-3 minutes to a putty-like consistency. **DO NOT ADD WATER OR RETEMPER.**

Repairs greater than 2" (5 cm) in thickness will require extending the material with clean pea gravel (50% by weight).

**Placement:** Pack the material firmly into the repair area, ensuring contact with the bonding surface. Use slightly more material than is needed and roughly shape within the initial setting time. After initial set, when is surface hardened, shave the patch to the desired shape using a steel trowel (this is not possible when using an aggregate extension is used in the mix). After leveling, material can be rubbed with a wet sponge and textured if desired.

The less material is handled the better the performance. Application should always be finished by the time of initial set or stiffening. Never leave excess material lapping over edges of repair. Finished repair should be smooth and level with the surrounding concrete.

Maximum depth of neat repair mortar is 2" (5 cm) for each application. Additional applications can be placed after the previous placement has achieved final set. Previous applications should be left with a rough surface to improve bonding. The maximum layered applications is limited to three each day.

Strength and performance will be substandard without proper curing. A curing compound, like Symons RESI-CHEM CLEAR is always recommended.

For critical applications or improved performance, substitute 2-5 quarts (1.9-4.7 L) of Symons STRONG BOND for a portion of the mixing water.

Unusual applications or conditions may require the technical assistance of a Symons representative.

## LIMITATIONS

Do not retemper material after initial mixing.

Do not add other cements or additives to this product.

## CLEAN-UP

Material is fast-setting, so tools and mixing equipment should be cleaned with water as soon as possible.

## SHELF LIFE

Shelf life of properly stored material is one year.

## PRECAUTIONS

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

1. KEEP OUT OF THE REACH OF CHILDREN.
2. Contains free silica and may cause delayed lung injury (silicosis). Avoid inhalation of dust and ensure adequate ventilation.
3. Avoid contact with skin. Protective clothing is recommended. Contact areas should be thoroughly washed with soap and water.
4. Avoid contact with eyes. Protective goggles are recommended in case of splashing. Flush eyes with water if contact occurs.
5. Avoid ingestion of material. If ingestion occurs, contact poison center or physician.

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

## 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.

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