

CASTING/CASTING ADDITIVE

HIGH STRENGTH POURABLE CASTING MIX

QUICK FACTS

PRODUCT NAME	CASTING/CASTING ADDITIVE
PACKAGING	50 lb (22.7 kg) bag
MIXING RATIO	1 gal (3.8 L) CASTING ADDITIVE to 1 – 50 lb (22.7 kg) bag of CASTING MIX + up to 16 oz. (0.5 L) water
DENSITY	126.1 lb/ft ³ (2018 kg/m ³)
COVERAGE	1 - 50 lb (22.7 kg) bag of = approx. 9.8 ft ² @ ½" (0.9 m ² @ 12.7 mm) 7.2 ft ² @ ¾" (0.64m ² @ 19mm) OR 0.43 ft ³ (0.01m ³)
SHELF LIFE	Under normal conditions: Casting bag mix and Casting Additive when the container and packaging are kept dry and moisture free, out of direct sunlight, the shelf life of an unopened product is (12) months from the date of purchase. Additionally Casting Additive should be protected from freezing. Storage for both products must be under roof and off the floor. Rotate inventory to maintain product that is within limits
MANUFACTURER PART #	SKU #

DESCRIPTION

CASTING/CASTING ADDITIVE is a dual component precast concrete bag mix that greatly reduces the materials and labor required to construct traditional precast concrete. No reinforcement steel is required, thinner precast pieces are routine, and quicker production times are accomplished. A stronger, denser, and more flexible cementitious composite is created by combining cutting-edge technology with modern fiber advancements. With a wide range of coloring and texture selections along with the addition of optional aggregate loading (up to 10 lbs. per bag) design considerations are nearly limitless. Casting produces concrete countertops, fireplace mantles and facades, shower surrounds, wall panels, furniture, and many other architectural elements. Casting is the perfect medium for residential, commercial, and industrial applications.

TEMPERATURE/DRY/CURE

Fabrication of Casting/Casting Additive should be inside a shop. Casting should take place when shop temperatures and all materials are maintained between 50°F (10°C) and 90°F (32°C) throughout all

fabrication and curing. Product will dry and cure slower at cool temperatures and conversely, faster at warm temperatures. Full cure is reached at approximately 30 days like concrete. Although rare, at high altitudes and dry climates, some



pieces may require covering with plastic to slow the cure and avoid curling.

MIXING

SINGLE BAG BATCHES

1. Utilize a handheld concrete mixer with a helical (spiral) mixer blade, such as an Eibenstock model #EHR 20R or similar.
2. Thoroughly mix CASTING ADDITIVE.
3. Add 1 gal (3.8 L) CASTING ADDITIVE to a clean 5 gal (18.9 L) pail or similar mixing vessel
4. Add color pack to CASTING MIX (if desired) and mix.
5. While mixing add approximately $\frac{3}{4}$ of the CASTING MIX
6. Continue mixing until a loose, flowable consistency is achieved.
7. Scrape sides of pail with margin trowel to prevent dry fiber pockets from forming.
8. Add remaining CASTING MIX and continue to mix for 2 – 3 minutes.
9. Up to an additional 16 oz. (0.5 L) water may be added for a more fluid mix.
10. With multiple single bag mixes, where color match is of concern, box multiple pails.

MULTIPLE BAG BATCHES

1. Utilize a mortar mixer (preferred with a horizontal helical [spiral] shaft) or a concrete mixer of sufficient size to allow the free vertical fall of product while mixing.
2. Maintain the ratio of 1 gal (3.8 L) Casting Additive to 1 - 50 lb (22.7 kg) bag Casting Mix
3. Thoroughly mix Casting Additive
4. Place total amount of Casting Additive for the entire mix into the mixer.
5. Add all Color Pack to the additive (if desired) and start mixer.
6. Slowly add one CASTING MIX bag at a time to the mixer to pre-vent material from forming dry fiber pockets.
7. Additional water may be added, not to exceed 16 oz. (0.5 L) per bag of CASTING MIX.
8. After last bag is added, allow all material to thoroughly mix for 2 – 3 minutes. Visually inspect entire load to ensure that all fiber is blended.

APPLICATION

Although not limited to it, the most common method of placement simply involves pouring Casting Mix directly from the pail or mixing vessel into the form or mold.

DEMOLD

In warm weather 4-6 hours may be appropriate to de-mold. Cool temperature or pieces with extreme texture will require overnight drying. Casting mix should not be left in the mold past a 24-hour period, as curling of the piece is likely. A freshly de-molded sample should be handled similar to granite or natural stone and should be well supported above the work surface to allow the free flow of air around the piece.

CLEANING

All Casting mix samples require cleaning, except those that are to be polished. SP 3-N-1 diluted with water 3:1 (3 parts water to 1 part SP 3-N-1) is recommended.

For specific directions on SP 3-N-1 refer to its TDS.

GRIND/POLISH

If additional decorative aggregate was added to the CASTING MIX or if the desired appearance demands it, the product may successfully be polished.

1. Grind casting sample as soon as practical. Allow a minimum of 8 hours cure time.
2. When decorative aggregate is added, begin wet grinding with 50 grit diamond pad to expose aggregate. This step may be skipped if no decorative aggregate was added.
3. Proceed to wet grind with 100 grit diamond pad.
4. Lithium Densifier may be utilized with wet 100 grit grind to densify and fill pinholes with resultant color match slurry.

5. Allow Lithium Densifier and slurry to dry. Proceed with 200 grit and if any pinholes are still present add more Lithium Densifier and continue grinding.
6. Remove any excess dried slurry with the 200 grit.
7. Proceed through 400 grit polish. If stain and / or sealer is to be used do not polish past 400 grit, as a measure of profile must be maintained for stain penetration and sealer adhesion.
8. If desired and sealer is not used, one can continue polishing through 800 grit and beyond, however, such a piece is subject to staining.

SEAMING/ADHESION

100% silicone caulk provides an excellent seaming and adhesive fastening material, as it allows for movement of the precast piece. Casting mix like any other concrete will undergo slight dimensional variations based upon its environment (e.g. shrinkage or expansion). Do not use caulking or adhesive that could “bleed” through the finished surface, such as petroleum based products. Large pieces and undermount sinks will require mechanical fastening.

CLEAN-UP

Before Casting dries; spills and tools can be cleaned up with water.

DISPOSAL

Contact your local government household hazardous waste coordinator for information on disposal of unused product.

LIMITATIONS

For use by trained professionals that have read the complete SDS.

WARNING

KEEP OUT OF REACH OF CHILDREN. Inhalation: Avoid prolonged breathing of airborne dust, particularly present during mixing. Use NIOSH approved respirator for nuisance if threshold limit values are unsafe. Skin Contact: Skin contact may cause irritation. Remove contaminated clothing and wash affected skin with soap and water. Launder clothing before reuse. If symptoms persist, seek medical attention. Eyes: Wear safety eye protection when applying. Contact with eyes may cause irritation. Flush eyes with water for 15 minutes. If symptoms persist, seek medical attention.

WARRANTY

Warranty of this product, when used according to the directions, is limited to refund of purchase price or replacement of product (if defective), at manufacturers’ or seller’s option. Concrete Genetics shall not be liable for the cost of labor or direct and/or incidental consequential damages.