

MasterFinish[®] XR

Water-based retarder for exposed-aggregate concrete

Formerly MBT X-Poz-R*

Description

MasterFinish XR is a water-based top surface and/or form retarder used to produce uniform exposed-aggregate finishes on architectural or ornamental concrete.

Applications

Recommended for use in:

- Architectural concrete
- Ornamental concrete
- Face-up exposed-aggregate applications
- Steps
- Construction joints

Location

- Horizontal

Substrate

- Steel forms
- Fiberglass forms
- Concrete forms
- Wood forms
- Styrofoam forms
- Urethane form liners
- Fresh concrete

Features

- Versatile
- Excellent for use on Styrofoam or urethane form liners
- Ease of application
- Economical
- Wide range of etches available
- No need to wash off top surface on the same day
- Water-based

Benefits

- Can be used on a wide variety of form materials on small applications
- Extends the life of the forms
- Excellent top surface results
- No mold release needed
- Variety of exposed aggregate appearances
- Easy for scheduling labor
- No solvent, no odor; no fume or flammability problems

Color

The material in every container of MasterFinish XR retarder is color-coded to show specific degrees of penetration. Each container bears the name of the color on the label. The lid is also colored to match the material inside.

Color Coding Information

Color (Code)	Depth of Etch	Aggregate Size* in. (mm)
Lilac (38)	Light	1/4 – 3/8 (6 – 10)
Pink (48)	Medium Light	3/8 – 1/2 (10 – 13)

*The depth of the etch approximately corresponds to the recommended size of the aggregate



Guidelines for Use

Yield: 150 - 200 ft²/gal (3.7 - 4.9 m²/L).

Surface Preparation: Forms must be clean, dry and non-porous. Seal porous forms of wood or concrete with MasterFinish PT 100 protective coating, specially formulated to use under a retarder. Once MasterFinish XR retarder has been applied to the form or formliner, it must be protected against rain, condensation, accidental contact with water, etc.

Mixing: Mix thoroughly before use with a mechanical mixer. The retarder can also be mixed by pouring back and forth between buckets.

Application:

1. Apply MasterFinish XR retarder in a thin uniform coat by spray, brush or roller at a rate of 150 - 200 ft²/gal (3.7 - 4.9 m²/L) (8 mils (0.2 mm) on wet film thickness gauge). This coverage should be achieved by applying two light coats with a short (3/8 in. (10 mm)) nap roller.
2. Allow the first coat to dry for 30-60 minutes or until dry to touch before applying second coat.
3. The second coat should be applied perpendicular to the first coat with light roller pressure (too thick a coating is undesirable).
4. After the second coat is dry (approximately 30-60 minutes), the concrete or face mix may be placed. If the placing of concrete is delayed any unusual length of time, protect the retarder surface from rain or water.
5. When the element is lifted or the forms are removed, the retarded surface concrete is easily removed by sandblasting, high pressure water-washing or dry-brushing.

Top Surface Application:

1. Paint sprayer must be used. MasterFinish XR retarder may be thinned with water up to 20% to accommodate spraying, but must be mixed thoroughly.
2. Place the concrete and screed, float or trowel level. Do not tamp or overwork the top surface as this drives the aggregate down away from the top surface and thereby diminishes the depth and uniformity of exposure.
3. Use a wood float or bull float to work the top surface. Do not overwork the surface with a steel trowel as this tends to seal the top surface thereby restricting the penetration of the chemical retarder, thus restricting the penetration of the MasterFinish XR retarder.
4. As soon as surface water has disappeared (normally no more than 30 minutes), spray until the color of the retarder just "hides" the area to be exposed. Protect areas adjacent to the job from overspray which may stain these areas. Apply at the rate of 150- 200 ft²/gal (3.7 – 4.9 m²/L) (8 mils (0.2 mm) on wet film thickness gauge.)

To Expose Aggregate:

1. Under normal conditions, after the concrete has set overnight, direct a jet of water from a garden hose over the surface of the slab while scrubbing with a coarse floor brush to remove the retarded concrete paste.
2. The concrete not in contact with MasterFinish XR retarder will set firmly to resist erosion; the embedded exposed aggregates will hold securely when the concrete has fully cured.
3. Since retarded concrete will eventually harden, the surface should be checked periodically to determine degree of etch by washing a small area. When the temperature is high, or high early cement is used, check the surface earlier.
4. If the depth is excessive, wait a couple of hours and check the etch again.

Clean Up: Clean all tools and spray equipment with soap and water immediately after use.

For Best Performance

- Not suitable for large panels (larger than 4 ft by 4 ft (1.2 m by 1.2 m)).
- MasterFinish XR retarder will freeze at low temperatures. Allow to thaw and mechanically mix to bring back to original consistency.
- In conditions of high ambient temperatures or wind, concrete should be covered with black plastic sheeting.
- Recommended maximum concrete temperature is 110 °F (43 °C).
- Do not store in metal spray equipment more than 2-3 hours or in direct sunlight.
- Make certain the most current versions of product data sheet and safety data sheet are being used; call your local sales representative to verify the most current versions.

Mock Up

- Skill and practice are necessary to produce any high quality architectural finish. Samples and mock-ups duplicating actual production conditions are essential to obtain a representative finish for approval prior to commencing production.
- Some important variables that should be controlled as close to actual cast conditions include: retarder coverage rate and method of application, mixture proportions and slump, admixtures, temperature of plastic and cured concrete, vibration, thickness of the element, length of time in form and method of cleaning. This is especially important with light etches which are particularly affected by changing conditions.
- Changes in mixture proportions (cement, sand, aggregate, water), admixture content, temperature and any other factor influencing

compressive strength development should be kept to a minimum. If white cement (Type III) is used in the face mix, consult your local sales representative.

Storage and Handling

Storage Temperature: Store in unopened container in a cool, clean, dry area between 40 and 110 °F (4 and 43 °C). Keep containers tightly sealed after opening to maintain shelf life freshness. **Protect from freezing.**

Shelf Life: 2 years when properly stored.

In case of spillage, clean and dispose of in accordance with local, state and federal applicable regulations.

Packaging

5 gal (18.9 L) pails

230 gal (870 L) totes

VOC Content

10 g/L or 0.08 lb/gal, less water and exempt solvents.

Related Documents

Safety Data Sheets: MasterFinish XR retarder

Additional Information

For suggested specification information or for additional product data on MasterFinish XR retarder, contact your local sales representative.

Master Builders Solutions creates technologies for the construction industry inspiring people to build better. We are active in ~40 countries and operate 35 production sites with over 1,600 employees. We develop, produce, and market high-quality chemical admixtures, as well as adjacent core technologies, to master the challenges of today and support a decarbonized future. Our people are pivotal and pair leading technologies and a strong brand heritage to surpass our customers' expectations and drive continuous value creation.

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