

MasterFinish[®] EA

Water-based, top surface retarder for exposed-aggregate concrete

Description

MasterFinish EA retarder is a top surface chemical retarder which provides a simple, economical method of exposing aggregates for freshly placed concrete flat work. MasterFinish EA retarder allows for a range of textures and colorful surfaces for sidewalks, terraces, promenades and steps. MasterFinish EA retarder can also be used to create construction joints.

Applications

Recommended for use in:

- Sidewalks
- Driveways
- Terraces
- Promenades
- Steps
- Construction joints
- Face-up exposed-aggregate applications

Location

- Horizontal

Substrate

- Fresh concrete

Features

- Etch retention in temperatures up to 110 °F (43 °C)
- Ease of application
- Color-coded
- Two strengths available (Regular and Deep)
- Water-based

Benefits

- Suitable for a wide variety of environments
- Excellent top surface results
- Easy identification
- Suitable for various surface profiles
- No solvent, no odor; no fume or flammability issues

Color

The material in every container of MasterFinish EA 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

Type of Retarder	Color	Depth of Etch	Aggregate Size* in. (mm)
MasterFinish EA 38 Regular	Blue	Light	1/4 – 3/8 (6 – 9.5)
MasterFinish EA 48 Deep	Red	Deep	> 1/2 (> 12.5)

* Recommended aggregate size.

For lighter, deeper or etches in-between the above, please consult your local sales representative.

Guidelines for Use

Yield: 100 – 150 ft²/gal (2.5 – 3.7 m²/L).

Placing the Concrete:

1. Prepare a concrete mix design that will satisfy the structural and architectural requirements. This may include an integral color and a special aggregate.
2. Place the concrete and screed, float or trowel level. Do not tamp or overwork the top surface as this drives the aggregate 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, restricting the penetration of the chemical retarder.
4. Additional aggregate may be sprinkled on the top surface and should be carefully worked in, making sure that the aggregate is completely surrounded by cement paste. (Use of a roller jitterbug is very helpful in this operation).

Mixing the Retarder: Turn the MasterFinish EA retarder pail upside down and shake well.

Application:

1. Spray MasterFinish EA retarder as soon as the surface water has disappeared (usually in approximately 30 minutes, depending on weather conditions).
2. MasterFinish EA retarder is sprayed on the top surface of the concrete with an ordinary low pressure garden sprayer at the rate of 100 - 150 ft²/gal (2.5 – 3.7 m²/L).
3. Protect areas adjacent to the job from over spray, as MasterFinish EA retarder may stain these areas.

Same Day Water Washing: In some cases, the retarded matrix can be washed off the same day the concrete is poured. However, timing is critical and many factors, such as the ones detailed below, have to be considered in order to guarantee an acceptable finish.

Note: Anything which will affect the set of the concrete such as ambient temperature, wind - whether the concrete is in full sun or shade, or whether the surface is flat or on a slope - must be taken into consideration. In determining when to wash off the retarded matrix, with so many variables affecting the set of the concrete, it is impossible to give a time frame.

As soon as the concrete has hardened sufficiently (the concrete has set and is strong enough to support the weight of a person), wash off a small area to check the depth of etch. If the etch is too deep, wait for an hour and test it again. When the etch is sufficient, hose off the top surface with water and use a stiff broom or brush to remove the retarded matrix, thereby exposing the aggregate. High pressure water is more efficient and should be used when available.

Covering and Washing:

1. Immediately after applying MasterFinish EA retarder, cover the concrete with plastic sheeting, securing around the edges to prevent ballooning. The plastic sheeting should be in direct contact with the top surface of the freshly poured concrete.
2. After the concrete has hardened sufficiently, generally overnight, remove the plastic sheeting in sections, checking a small area to determine if the proper depth has been achieved. If the depth appears to be too deep, wait for a few hours and check again.
3. Hose the top surface of the concrete with water and use a stiff broom or brush to remove the retarded matrix, thereby exposing the aggregate. (High pressure water is more efficient and should be used when available). Concrete sprayed with MasterFinish EA retarder must be washed with water the next morning.

Note: In hot or windy conditions, the retarded matrix may have to be removed the same day whether it was covered with plastic or not.

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

For Best Performance

- MasterFinish EA retarder will freeze at low temperatures.
- MasterFinish EA retarder must be applied immediately after surface or bleed water disappears. Delay in application will affect depth of etch.
- Do not store in metal spray equipment more than 2-3 hours.
- Recommended maximum concrete temperature is 110 °F (43 °C).
- Since retarded concrete will eventually harden, the surface should be checked periodically to determine the depth of etch. When the temperature is high, or if high-early strength cement is used, check the surface earlier and more frequently.
- 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, and 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). Protect from freezing.

Shelf Life: 2 years when properly stored.

Keep containers tightly sealed after opening to maintain shelf life freshness.

Packaging

5 gal (18.9 L) plastic pails

55 gal (208 L) plastic drums

VOC Content

Regular: 0 g/L or 0 lb/gal, less water and exempt solvents.

Deep: 138 g/L or 1.15 lb/gal, less water and exempt solvents.

Related Documents

Safety Data Sheets: MasterFinish EA retarder

Additional Information

For suggested specification information or for additional product data on MasterFinish EA 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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