

MasterFinish[®] HV

A high abrasion-resistant form retarder for producing exposed-aggregate finishes under difficult casting conditions

Description

MasterFinish HV is a chemical retarder specifically designed to produce uniform exposed-aggregate finishes on architectural or ornamental precast and cast-in-place concrete vertical walls. Its extremely high abrasion resistance makes MasterFinish HV retarder ideal to produce exposed aggregate concrete under a wide variety of conditions.

Applications

Recommended for use in:

- Architectural precast/prestressed concrete
- Cast stone
- Cast-in-place concrete

Location

- Vertical and horizontal

Substrate

Applied to forms previously treated with MasterFinish QD 200 transfer agent.

- Steel forms
- Fiberglass forms
- Concrete forms
- Wood forms

Features

- Highly abrasion resistant
- Controlled penetration delays the set of surface only
- Wide range of etches available, including light etch
- Color-coded
- Can accommodate high-pressure water washing

Benefits

- Increased placement time
- Consistent water-washed, exposed aggregate surfaces
- Variety of exposed aggregate appearances
- Easy identification
- Ease and speed of production
- Saves time and labor when used as an alternative to sand blasting

Color

The material in every container of MasterFinish HV 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)
Gold (28)	Extra Light	1/8 to 1/4 (3 to 6)
Lilac (38)	Light	1/4 to 3/8 (6 to 10)
Pink (48)	Medium Light	3/8 to 1/2 (10 to 13)
Grey (78)	Deep	3/4 + (19 +)

*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:

PLANT USE

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.

CAST-IN-PLACE

MasterFinish HV retarder should be applied to forms that are nonporous. Use MasterFinish PT 100 protective coating to seal wood.

Mixing: Mixing this product increases the generation of flammable vapors. Mix product in an adequately ventilated area to ensure safe handling during this process. Stir the retarder well before using. Use a mechanical drill and Jiffy-type mixer (being sure to scrape the sides and bottom of the container) or pour back and forth between two containers to ensure that any settled materials will be thoroughly dispersed.

Application:

PLANT USE

1. A form release agent should be applied to all surfaces not receiving a retarder.
2. To eliminate cleaning of the form, apply MasterFinish QD 200 transfer agent to the form prior to applying the retarder.
3. Apply MasterFinish HV 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. Allow the first coat to dry for 10-20 minutes or until dry to touch before applying second coat.
4. The second coat should be applied perpendicular to the first coat with light roller pressure (a coating that is too thick is undesirable).
5. After the second coat is dry (approximately 10-20 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.
6. When the element is lifted or the forms are removed, the retarded surface concrete is easily removed by sandblasting, high pressure waterwashing or dry-brushing. The retarder film will remain on the mold if MasterFinish QD 200 transfer agent was not used.

CAST-IN-PLACE

1. Place concrete in accordance with good construction practices.
2. On vertical concrete over 5 feet (1.5 m), use an elephant trunk or jacket to reduce abrasion on the retarder film.
3. Concrete should be placed in lifts of approximately 2 to 3 feet (60 to 90 cm). Vibration should follow closely behind and penetrate into the previous lift. Keep vibrator away from retarded sides. Slow concrete placement will exaggerate lift lines.
4. Placement should be smooth and quick with minimal delay. Once the section is vibrated, it should not be disturbed. Contact your local sales representative for more specific details.

Clean Up: Clean all tools and equipment with a commercial solvent. Clean hands and skin with soap or industrial hand cleaner, not solvents.

For Best Performance

- Etches lighter than exposure of the tips of the coarse aggregate may be difficult to control due to changing conditions in day-to-day production. Consult your local sales representative prior to beginning jobs of this nature.
- Surfaces coated with MasterFinish HV retarder must be protected from water (rain, condensation, etc).
- Maintain consistent production schedules (stripping, washing, etc).
- Recommended maximum concrete temperature is 110 °F (43 °C).
- It is not recommended to leave concrete in the form for more than 48 hours.
- Do not use MasterFinish HV retarder on styrofoam.
- 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 a Master Builders Solutions representative.

Storage and Handling

Storage Temperature: Store in unopened container in a cool, clean, dry area between 40 and 90 °F (4 and 32 °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) steel pails

VOC Content

474 – 631 g/L or 3.95 – 5.26 lb/gal, less water and exempt solvents.

Related Documents

Safety Data Sheets: MasterFinish HV retarder

Additional Information

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