USG™ Accelerators

Application

An accelerator is an essential tool for applicators when it is necessary to speed up the set of plaster or setting-type joint compound to meet specific job conditions. If required, use accelerators in dry form to shorten gypsum setting times, or alum catalyst solution to overcome "dry-out" of gypsum plastering, or in treating gypsum base which has become faded due to excessive exposure to ultraviolet light conditions, before the application of lime-containing plasters.

Manufacturers add accelerator to plaster to stabilize the setting time so that it stays within the manufactured range when subjected to normal job conditions. These conditions may vary due to plaster exposure to moisture prior to mixing; contaminated or poorly graded aggregate; dirty mixing water; length of mixing time; varying climatic conditions; and improper ventilation after application. However, the primary use for accelerator on the job is to quicken the setting time when the journeyman encounters a slower set than required.

USG Standard Strength Gypsum Plaster Accelerator

Four ounces (4 oz.) of USG Accelerator (STD) reduces the set time by 30 minutes per bag of veneer plaster product. Never add USG Standard Strength Gypsum Plaster Accelerator directly to the water or mix it with water to form a solution before adding it to the plaster mix. When used in this manner, its ability to accelerate is significantly reduced. Instead, the accelerator should be sprinkled in dry form into the mixer after plaster has been added. For hand-mixing, dry accelerator can be added either to the dry mix or the plaster slurry.

USG High Strength Gypsum Accelerator

Two ounces (2 oz.) of USG Accelerator (HS) reduces the setting time by 1-1/2 to 2 hrs. per bag of various conventional basecoat plaster products. The table below shows the set times for various additions of gypsum accelerator with three setting-type joint compounds. Never add USG High-Strength Gypsum Accelerator directly to the water or mix it with water to form a solution before adding it to the plaster mix. When used in this manner, its ability to accelerate is significantly reduced. Instead, the accelerator should be sprinkled in dry form into the mixer after plaster has been added. For hand-mixing, dry accelerator can be added either to the dry mix or the plaster slurry.

USG Accelerator

Alum Catalyst to correct "dry-out" conditions Dry-out conditions can be corrected by either of the following methods: (1) Fog-spraying the plaster with water: Spray with a garden hose until beads of moisture remain on the surface and the plaster is totally saturated. (If dry-out shrinkage fissures have developed in the plaster, fill them by floating the surface with a wooden float after spraying.) (2) Spraying the damp plaster surface with the prepared solution of alum (aluminum sulfate) and water using a hand-held pressure-type garden sprayer (3 to 5 gal. size): The application of alum solution used in combination with rewetting the affected areas will quicken the setting reaction and assist in preventing a recurrence of the dry-out condition.

Mix approximately 1/2 to 1 pound of powdered USG Accelerator—Alum Catalyst to 3 gallons of water. This solution is adequate to correct all surface dry-out conditions.

Alum Catalyst to treat sunfaded gypsum base When used with lime-containing plaster, such as DIAMOND® Brand Interior Finish Plaster, sunfaded IMPERIAL Brand Gypsum Base face paper should be treated with USG Accelerator—Alum Catalyst or USG™ Plaster Bonder. This precaution is unnecessary when applying products that do not contain lime (IMPERIAL® Brand Finish Plaster, IMPERIAL® Brand Basecoat Plaster and DIAMOND® Brand Veneer Basecoat Plaster).

For alum catalyst solution treatment, pour 3 pounds of alum catalyst slowly into one gallon of water and mix thoroughly. Allow the solution to stand until any undissolved material has settled, then strain the solution into a tank-type sprayer (such as a garden sprayer). Spray the solution onto the faded IMPERIAL Brand Base face paper so that it is wet but not soaked. One gallon of solution should treat 750 sq. ft. of IMPERIAL Brand Gypsum Base. Begin finish plaster application before face paper treated with alum solution is completely dry. **Caution:** Alum treatment shortens the setting time of DIAMOND Brand Interior Finish Plaster.

Application
(continued)

Alum Catalyst in machine applications of veneer plaster Mix two to six 1.5-lb. containers of USG Accelerator—Alum Catalyst in 3 gallons of clean water in a plastic pail. The amount of catalyst used will be determined by the desired setting time. Stir until the material dissolves, let the residue settle and the pour the solution into the accelerator tank of the machine. Mix the plaster. Adjust the setting time by controlling the catalyst flow at the machine. Test the setting time by spraying plaster on a scrap of gypsum base.

Adjust the setting time to 30 minutes when spraying over joints and corner-bead flanges. This initial spraying is not required over setting-type joint compounds. Adjust the set for 20 to 30 minutes for the overall application of the IMPERIAL Brand Basecoat Plaster (MA, Machine Application).

Cleanup

Clean mixing containers and tools with water immediately after use.

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P850/2-04

Printed in U.S.A.