

# USG™ Accelerators



### For shortening the setting time of plasters and setting-type joint Compounds

- Three products provide for a variety of accelerated setting requirements.
- Products are safe and easy to use.
- USG™ Standard Strength Gypsum Plaster Accelerator provides slight adjustments to set for veneer and conventional plasters.
- USG™ High Strength Gypsum Accelerator provides substantial adjustment to set times for conventional plasters and may be used to reduce set times for setting-type joint compounds.
- USG™ Accelerator—Alum Catalyst corrects dry-out conditions, treats sunfaded IMPERIAL® Brand Gypsum Base and is used in machine applications of IMPERIAL® Brand Basecoat MA (Machine Application) Plaster.

### Description

USG™ Accelerators are additives that shorten the setting time of gypsum plaster or setting-type joint compound. Adding an accelerator to the mix causes gypsum crystals to form at a much faster rate; and the formation of these crystals is the setting process. USG Standard Strength Gypsum Plaster Accelerator is intended to provide a slight adjustment (10 to 30 minutes) to the setting time for veneer and conventional plasters. USG High Strength Gypsum Accelerator provides a more substantial adjustment to set times for conventional plasters (30 minutes to 2 hours) and may also be used to reduce set times for setting-type joint compounds (10 to 40 minutes, depending on the product).

USG Accelerator—Alum Catalyst provides a means to correct plaster dry-out conditions. It may also be used to treat sun-faded IMPERIAL Brand Gypsum Base when a lime-containing plaster is to be applied to it. USG Accelerator—Alum Catalyst is also used with the IMPERIAL Brand Basecoat MA (Machine Application) Plaster to adjust the setting time in machine applications of plaster.

### Directions

### Application

An accelerator is an essential tool for applicators. There is nothing wrong in using such an additive when it is essential 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.

### Application—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.

### Application—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.

**Application—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.

**Application—USG Accelerator—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—USG Accelerator—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 then 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 and Storage**

Clean mixing containers and tools with water immediately after use. Partially used containers should be closed as tightly as possible. Store material in a cool, dry place. Avoid direct sunlight. Maintain temperature above 40 °F (4 °C).

**Product Data**

**Shelf Life:** Up to 12 months under protected storage conditions. Rotate stock.

**Availability and Cost:** USG Accelerators are distributed throughout the United States. Contact a United States Gypsum Company sales office or sales person for additional information.

**Packaging:** USG Accelerators are available in 1.5-lb. containers.

**Set Time Chart For the Addition of USG™ High Strength Gypsum Accelerator To Setting-Type Joint Compounds**

Accelerator Amounts		Approximate Set Time (minutes)		
Tbbs. per Bag	Tbbs. per Bread Pan	EASY SAND™ / DURABOND® 90 Joint Compound	EASY SAND™ / DURABOND® 45 Joint Compound	EASY SAND™ / DURABOND® 20 Joint Compound
1.0	0.22	40	20	10
2.0	0.44	30	10	—
6.0	1.33	20	—	—

**Submittal Approvals:**

<b>Job Name</b>		
<b>Contractor</b>		<b>Date</b>

**Trademarks**  
The following trademarks used herein are owned by United States Gypsum or a related company: IMPERIAL, EASY SAND, DURABOND, USG.

**Note**  
Products described here may not be available in all geographic markets. Consult your U.S. Gypsum Company sales office or representative for information.

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**Safety First!**  
Follow good safety and industrial hygiene practices during handling and installing products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read material safety data sheets and related literature on products before specification and/or installation.