RESCO®
PRODUCTS, INC.

Technical Information

RESCOBOND AA-22S
Best Practices for Ramming/Handpacking Applications

A. GENERAL:

1. This Guideline represents the best practices for installing Rescobond AA-22S by ramming or handpacking. Deviating from these best practices could impact performance. Deviations from this guide should be discussed with your Resco Products representative.

B. STORAGE:

1. Material compacted during shipment will break apart during mixing. Physical properties will not be affected. Do not use bags that contain refractory that has taken a hard set.
2. Rescobond AA-22S is packaged in moisture resistant bags; however, it should be stored in a dry place free from excess dampness with the pallet wrapping in place. Storage on dry concrete, asphalt or other impervious surface will prevent moisture from the ground condensing under the plastic pallet cover and wetting the bags of material, which may result in loss of strength.

C. PREPARATION:

1. Use clean tools and equipment. Contamination can affect setting and strength of AA-22S.
2. Application surfaces must be clean and free of foreign matter (loose material, oil, rust, etc.).
3. Use only clean water suitable for drinking. The pH of potable water should be between 6.5 and 8.5.
4. Use water at a temperature of 45-75°F (7 -24°C) for mixing.
5. Use dry Rescobond AA-22S at a temperature of 60-75°F (15-24°C). Pallets of material can take several days to reach temperature if stored in extremely hot or cold environments. Be sure to allow enough time for material to reach recommended temperature before beginning installation.
6. Use a planetary, Hobart-type mixer. The "B" flat agitator and mixing bowl must be made of stainless steel. The maximum gap between the blade and the bowl at the bottom and sides should be about 0.25 inch (6 mm). Mixing efficiency and product quality may be reduced if the clearances are greater and if the mixing bowl is more than or less than 1/3 full.
7. Install Rescobond AA-22S at an ambient temperature of 60-80°F (15-27^{o}C).

D. MIXING:

1. Mix only as much material as can be placed in 20 minutes. Material left in pails or other containers may develop a “false” set, making it difficult to properly place. Discard stiff material; do not remix.
2. Place the required amount of material into the mixing bowl. If required, add stainless steel fibers while dry mixing at 70 to 110 RPM. This is Speed 1 (low) on a Hobart A300 and Globe SP30P mixer. For other mixers reference the manufacture’s specification to determine the correct mixer speed setting to achieve the proper mixing RPM.

3. With the mixer running at a speed of 70 to 110 RPM add 5.0% water (based on the dry material weight). The entire 5.0% water addition should be added at once during the first 10-20 seconds of mixing. Continue mixing for 5-6 minutes until fully mixed and a proper consistency is obtained. Mixing for less than the recommended time can adversely affect properties.
4. Proper mix consistency is dough or putty like. Insufficient or excessive water additions will adversely affect the properties of AA-22S.
5. Clean mixing equipment regularly during installation. Partially set material left in the mixer can result in decreased working time of sequential batches. Cleaning of the bowl and paddle is recommended after every batch.

E. PLACING

1. Pack the material into the area being lined, working it as needed to fill all holes and eliminate trapped air. Wood or rubber mallets, hammers, air rammers and trowels are commonly used for this step.
2. Trim excess material. Be careful not to cut too deeply into the lining or pull the material away from the anchor metal. Smooth the surface using a trowel, hardwood, or Teflon block, or the palm of the hand.
3. **DO NOT** use the palm of the hand when the mix contains stainless steel needles.
4. **DO NOT** apply water to smooth the surface.

F. SETTING

1. Do not disturb until the lining is firm to the touch. Do not subject the material to heat conditions until the AA-22S has set hard.
2. Do not spray with water or use a curing compound.
3. Cure at a temperature of 60-80^{o}F (16-27^{o}C). This temperature should be maintained during the initial 24 hours after installation. Lower curing temperatures can result in decreased performance.
4. Heating is not always required. The linings have sufficient air-set strength to resist damage during normal handling and shipment. Contact RESCO for further details.
5. Protect the lining from the weather if it will be stored for an extended period before use.

G. HEATUP:

1. RESCOBOND AA-22S is an air setting, chemically bonded, erosion resistant refractory monolith that **does not require drying or heating prior to initial startup of the unit or vessel except under the following special conditions:**
   - The unit will be used in a wet operating environment
   - The unit will be subjected to a hydrostatic test
   - The AA-22S is installed greater than 2 inches thick.
2. Heatup procedures for RESCOBOND AA-22S can be obtained by visiting our website at www.rescoproducts.com or calling your local RESCO representative.