

Safety and Health

Review the Safety Data Sheet (SDS) before using this product. The SDS contains important information concerning potential health hazards and protective measures for these hazards. Contact your supervisor or safety director to obtain a copy.

Storage Requirements

- For best performance, store the product in a dry location at temperatures between 60°F and 80°F.
- Storage above 80°F can reduce the shelf life of mortars.
- Avoid storing these products below 32°F. The product can be stored below this temperature for limited periods of time; however, care must be taken to bring the product temperature within range (60°F and 80°F) prior to installation.
- HWI packages its wet mortars in plastic pails protected with plastic wrap to ensure safe product delivery. This packaging is not intended for outdoor storage. If no dry storage is available, contact your HWI sales and technical representative for alternate solutions.
- Avoid storage in direct sunlight or near heat; this will shorten product shelf life.
- Ensure that your inventory is rotated on a regular basis. Wet mortars have an average shelf life of 3 to 6 months. Refer to the product data sheet for specific shelf life recommendations. If product usability is questionable due to age, consult your HWI sales and technical representative.

Mixer Requirements

- This product may require remixing before use.
- Wet mortars can separate during storage. Never discard liquid that has pooled on top of the mortar. Mix this liquid back into the mortar before use.
- HWI recommends remixing in the pail with a conventional high shear mixer mounted on an electric or air drill.
- Clean all mixing and handling equipment prior to use. Residual material on the mixer may affect the set of the product.

Environmental Conditions

- For best results, ensure that the temperature of the product is between 60°F and 80°F prior to mixing. Temperature extremes affect working time, final set time, and final product quality.
- Sodium silicate mortars will have thinner consistency at temperatures below 50°F. Mortars that have frozen may have a thicker consistency after thawing to room temperature.
- For cold weather installations, protect the installed product from freezing to prevent structural damage.
- Never install mortar containing ice crystals. This practice can result in voids in the joints and lead to joint failure.

Water Quality

If required, use drinkable water with a pH of 6 to 7.5 and a temperature of 60°F to 80°F for best results.

Water Addition

- HWI supplies wet mortars intended to be ready-to-use without adding water.
- It is acceptable to add small amounts of water to a wet mortar in order to achieve a thinner consistency or to compensate for dryout and aging. Thoroughly mix the product after each addition of water.
- Do not add more water than necessary for the installation. Thinner mortar consistency results in lower mortar strength and increased shrinkage.

Installation Methods

- Mortars are designed to be installed by thick patching, troweling, or dipping.
- Mortar is always the weakest link in refractory brick installation. Mortar joints should be full and as thin as possible with no voids.
- Troweled mortar joints always offer improved performance over dipped mortar joints.
- If a delay occurs during installation, always cover the mortar with plastic to prevent dryout.
- Tightly reseal plastic pails to protect unused mortar.

Curing

- There is no cure or set time needed for this product.

No. 36 - Refractory Mortar - Ready to Use (wet) (M-1)

- Sodium silicate and phosphate bonded mortars must be heated to at least 650°F to become insoluble to moisture. Below this temperature, they can be susceptible to softening from contact with moisture (i.e. humidity or water spray)

Dryout

IMPORTANT: During dry out of a castable lining, only some water escapes via the hot face while most of the water is driven through to the cold face. If material is cast directly against a steel shell or other impermeable material without the use of weep holes, the water remaining in the lining will have no path to escape, and as the dry out schedule proceeds, internal steam pressure will rapidly increase resulting in probable lining damage and/or steam spalling. Dry out schedules issued by HWI assume that an unobstructed path exists through the cold face so that water can easily escape through the vessel/furnace shell. In most cases, weep holes are required to facilitate the removal of water/steam. Where weep holes are not allowed or a path to the weep holes is lengthy or not direct (such as a furnace hearth) some type of wicking should be used to create a path toward the weep holes or to the outside of the furnace.

For most brick and mortar installations, dryout and heatup are governed by the brick requirements, typically 100°F per hour.

Tips

- Never use additives such as set extenders or accelerators without first consulting your HWI sales and technical representative.
- If a paddle or other mortar type mixer is used, it is important to discharge the entire contents of the pail into the mixer. Improper mixing may affect product performance.
- Some applications may require only a small amount of mortar. HWI offers a select group of wet mortars in 10 lb pails and 16 and 24 oz caulking tubes. See your HWI sales and technical representative for details.
- HWI supplies wet ready-to-use mortars in a number of consistencies, from thick patching to dipping. Your HWI sales and technical representative can help you select the product with the proper consistency for your application.

