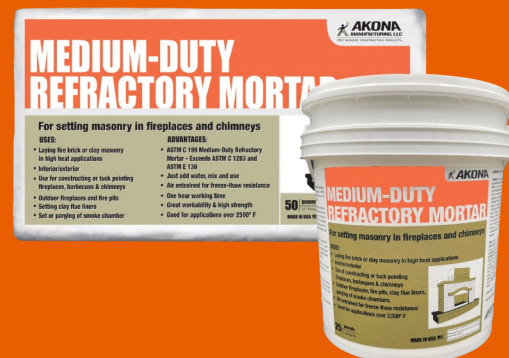




# AKONA® MEDIUM-DUTY REFRACTORY MORTAR



## What is refractory mortar?

Hydraulic refractory mortar is a specially-engineered blend of specific cements and aggregates that gives the mortar unique heat-resistance and thermal characteristics for use in high-temperature applications such as chimneys, fire pits, barbecues, and pizza ovens. This mortar is used to bond fire brick or clay flues to each other. Ordinary mortars can be destroyed or deteriorate under such high-heat conditions.

## How is Akona® Medium-Duty Refractory Mortar different from other refractory mortars?

Akona Medium-Duty Refractory Mortar is a hydraulic refractory mortar which contains minerals high in aluminum and special aggregates that allow it to withstand elevated temperatures up to 2,550°F. Not all brands of refractory mortars reach the same specifications.

## What is a “medium-duty” refractory mortar?

To be called a medium-duty refractory mortar, the product must pass the ASTM C-199 (American Society for Testing and Materials) testing standards for mortar temperature limits. Regular mortars can generally reach temperatures up to 600°F while a medium-duty refractory mortar has been lab tested to resist 2,550°F for a minimum of 6 hours without melting out of the joints of a firebrick and refractory mortar assembly. Medium-duty refractory mortars are required by most building codes for the installation of firebrick and flues in chimneys, masonry fireplaces, and similar applications.

## What does it mean to be a “hydraulic” setting mortar?

Hydraulic setting mortars are mortars which set up and cure like Portland cement based mortars and have similar workability properties. However, once cured, hydraulic mortars become water insoluble and acid resistant.

## When do I need a refractory mortar?

Akona Medium-Duty Refractory Mortar should be used when installing firebrick or clay flue liners in masonry fireplaces (indoor & outdoor), fire pits, brick pizza ovens, masonry bread ovens, or when tuck-pointing damaged mortar joints between fireplace bricks or chimney flues. Refractory mortar may also be used when parging a smoke chimney chamber. Local and national building codes commonly require the use of a medium-duty refractory mortar for use in these areas.

## What is parging a smoke chimney chamber?

Parging is a type of stuccoing often done to the inside the funnel-shaped section of a brick fireplace where the smoke is directed from the firebox into the flue (smoke chimney chamber) to reduce the turbulence in the flow of the combustion gases. Parging creates a smooth uniform surface that lessens the chances of gaps forming where smoke could leak when bricks and mortar have different rates of expansion and contraction from heat and can help prevent formation of creosote (a flammable residue).

## What is the maximum temperature for Akona Medium-Duty Refractory Mortar?

This product works in applications reaching up to 2,550°F.

## How long do I need to wait for Akona Medium-Duty Refractory Mortar to cure before heat is applied?

The mortar needs to dry out completely prior to exposure to fire. If not cured completely, the material will crack due to the pressure caused by water evaporating within in the mortar. Allow a minimum of 7 to 10 days before heat is applied. Full curing times will vary with individual job conditions, sunlight, temperatures, and humidity.

## Refractory mortar is more expensive than regular mortar, do I need to use it for the entire application?

It can be used for the entire project, but is most critical to use in areas exposed to high heat, such as the inside of the fire pit ring, the inside of the fireplace box, or setting the clay flue tiles in a fireplace. Consult and follow your local building codes.

**Akona Medium-Duty Refractory Mortar is air-entrained, what does that mean?**

A mortar that is air-entrained contains special additives that provide better freeze-thaw resistance and increases the durability of the hardened concrete mortar.

**Can I make “bricks” or a slab for the hearth or bottom of my fireplace with Akona Medium-Duty Refractory Mortar?**

No, this product is a mortar to be used for setting or tuck pointing blocks or fire brick and cannot be used as a casting cement.

**What is the maximum size for patching repairs with Akona Medium-Duty Refractory Mortar?**

It is recommended the smallest dimension (width, length and thickness) should not exceed 1 inch.

**Are there any special mixing requirements for Akona Medium-Duty Refractory Mortar?**

Mix Akona Medium-Duty Refractory Mortar with clean water only, no bonding agent is needed. If mortar becomes unworkable, dispose of the unused product; do not retemper. This mortar can be mixed manually in a mortar tub with a shovel or hoe, in a mechanical mixer, or in a five-gallon bucket with a mixing drill attachment. Avoid high-speed mechanical mixing which can entrap air into the mixture. Specific mixing instructions can be found on the bag or on the [product data sheet](#).

**What is the working time for Akona Medium-Duty Refractory Mortar?**

The working time for Akona Medium-Duty Refractory Mortar is approximately one hour. Warm temperatures will accelerate the set-up of any mortar mix, so use cold water on hot days for mixing the mortar to slow it down and extend the working time.

**My refractory mortar project is outdoors, how long must I protect it from rain?**

The area should be protected from rain for 24 hours after application.

**Can I apply Akona Medium-Duty Refractory Mortar to a painted surface?**

No, all paint must be removed to ensure proper adhesion to the substrate.

**Does refractory mortar provide insulation?**

No, fire-safe bricks or block are required for high-temperature areas for building code compliance. The mortar will not provide additional insulation.

**What size should my mortar joints be when applying refractory mortar?**

When using fire or clay brick, a 1/8" to 3/8" joint thickness is common. For clay flue tile, a 1/8" joint thickness is common. Always check with brick manufacturer for their thickness recommendations and installation guidelines since this may vary depending on what product is used.

**What is the coverage or yield for a bag of Akona Medium-Duty Refractory Mortar?**

Each 50 lb. bag will yield approximately 1/2 cubic foot of wet mortar. This will lay approximately 80 to 100 standard fire bricks at 1/8" joint thickness.

**Can I build or repair with refractory mortar in cold weather?**

For best results, do not apply when temperatures will drop below 40°F within 48 hours of application. Do not apply in direct sunlight on hot and windy days or when rain is forecasted within 24 hours. Do not apply to frozen or frost-filled surfaces.