



Mizzou Castable Plus Instructions

How to discern how much area the castable will cover:

- Divide the amount of (material in pounds/ by the density of the material in pounds per cubic feet). This will give you the amount of material in the bag/pail in units of cubic feet.
- To find the amount in cubic inches, just multiply a factor of 1728 cubic inches/cubic foot.

Material	Density (lbs/cubic ft)	Amount (lbs)	Amount in Cubic Ft	Amount in Cubic "
Mizzou	141	55 (Bag)	0.3901	674.04
	141	14.5 (1 Gallon Pail)	0.1028	177.70
	141	29.0 (2 Gallon Pail)	0.2057	355.40

In the application of homemade forges where you are pouring a layer of (2''- 4'') limited thickness, you can typically start out by just letting it air dry. This can range anywhere from a few days up to a week at ambient room temperature.

You can then start the process of bringing the forge up to temp very slowly. The standard is to intermittently run the burner for increased periods of time until the forge reaches full temperature. The key is to go slow to allow proper drying/curing all the way through.

If you are pouring a hard floor into your forge over a layer of Inswool, dry times can be a bit more flexible.

***** slow and steady is key to a proper set *****

Application Instructions for MIZZOU CASTABLE

STORAGE:

Castable material should ALWAYS be stored in a dry place. Most manufacturers say the expiry date is a year from the manufacture date. However, the common consensus is that if it's been stored properly and the material is still loose (not solidified), it is still usable.

FORMS OR CASTS:

If you are using casts/forms made of porous material (wood), ensure they are waterproofed prior. Watertight casts prevent the absorption of water, which can result in a reduction of flow. Mizzou is specifically designed to be mixed with water and then applied/poured/hand cast into place.

MIXING REQUIREMENTS:

- Material should be maintained at 50-70°F for best results prior to casting.
- Approx. water ratio = 55 lbs of castable to 5 pints of water. Only use clean drinkable water with a temp of 50-70°F for best results.
- Mix well for at least three minutes to ensure proper distribution.
- The 'wet mix' temperature should be maintained at 60-75°F for best results.
- You can slightly adjust your water ratio to achieve desired flow.
- DO NOT exceed 11.0% water or the mixture WILL NOT set properly.

INSTALLATION INSTRUCTIONS:

- Once properly mixed, promptly pour/place the material (do not trowel to slick finish).
- The mixture will air cure at temperatures above 60°F. Best results at temps close to 90-110°F.
- Keep the surfaces damp and/or covered for around 16-24 hours, or until a hard set has developed.

Note

- Lower temps while air curing will increase the time required for a hard set to develop.
- The material should not be allowed to freeze while air curing until a dry out can be initiated.

- Freezing prior to water removal can cause expansion and therefore structural damage.

MIZZOU CASTABLE PLUS - HEAT UP SCHEDULE: typical single layer up to 9" thick.

1)	Ambient (room temp) up to 250°F at a rate of 75°F per hour. (hold at 250°F for 1/2 hour per inch thickness).
2)	250°F up to 500°F at a rate of 75°F per hour. (hold at 500°F for 1/2 hour per inch thickness).
3)	500°F up to 1000°F at a rate of 75°F per hour. (hold at 1000°F for 1/2 hour per inch thickness).
4)	1000°F up to forging temperature at a rate of 75°F per hour.

It is important to NEVER enclose any castable in a vapor-tight encasement, a steam explosion may result.

