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## CA-AT 1400 Powder

### Calcium Aluminate-Based Castable/Cement Dry Powder Mixture

CA-AT 1400 is a dry refractory powder blend which, on adding around 30 wt% water and stirring, can be poured/cast into silicone molds to form parts or can be used to cement/glue refractories together. After casting and drying, firing the cast part to 1300-1400 C results in over near-full-dense refractory.

#### Key Attributes

- Prepared as a slurry from dry mixture by just adding water
- Readily prepared into near full density parts by cast-and-sinter technique
- Very low drying shrinkage after casting
- Useful as a cement/glue or repair putty for other refractories
- Nearly 1400 C use temperature
- Contains no RCF (Refractory Ceramic Fiber)
- Water-based – easy cleanup

#### Ideal Use

- Casting your own specialty refractory shapes
- Repairing/patching of fissures, cracks, joints
- Cementing refractory parts

#### Use Notes

1. Mix well with water at 30-33% of the powder weight.
2. If casting, pour into silicone mold and preferably place on vibrating-table for a few minutes to allow bubbles to come to surface and dissipate.
3. Dry/set at room temperature overnight. Then further dry at 60 C overnight.
4. Remove part from silicone mold
5. Fire/sinter part at 1300-1400 C to near-full-density; "soak" time from ½ -1 hour.
6. If cementing parts, disregard #2-5, and apply to desired refractory substrate with putty knife, trowel, or fingers.
7. Allow to dry completely.
8. Heat to 1300-1400 C for ½ - 1 hr for completing the gluing/bonding.



#### Specifications

Active Ingredients	Calcium Aluminate cement; Alumina-Titania
Max Use Temperature with All Atmospheres	1400 C (2552 F)
Fired Composition	Phases of CaO-Al <sub>2</sub> O <sub>3</sub> , Al <sub>2</sub> O <sub>3</sub> -TiO <sub>2</sub> , Y <sub>2</sub> O <sub>3</sub>
pH with Water Addition	2-3
Color	White
Shelf Life (months)	Indefinite ... but avoid getting wet before use
H F R Ratings	1-0-0
Substrate Use	Refractory ceramics

#### Sizes and colors

CA-AT 1400 is white powder.  
Standard Sizes: 1 qt. or 8 oz epoxy-lined can

#### Safety Information

- Consult SDS before use.
- For industrial use only

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