

MD-CAST

300

Technical Data Sheet (TDS)

Alpha Gypsum



Mada Trade co.



Used for molding works,
mainly for ceramic
sanitary and tableware.

MD-CAST 300

Alpha Gypsum

MD-CAST 300 is a fine plaster consisting of high purity natural gypsum. $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$ is the main component of the MD-CAST 300 powder; it is used for molding works, mainly for ceramic sanitary and tableware.

FEATURES

- Multicasting plaster
- Excellent strength
- Controlled expansion
- Easy to use
- High hardness
- 60-90 cycles

Applications

- Molding and casting
- Sanitary-ware
- Status

SPECS	VALUE	ASTM STANDARD	BS EN STANDARD
		C472/471	13279
Chemical composition	$\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$		
Insoluble residue on sieves 60µm	< 0.5 %		
Finesse on 150 µm	0%	0-0.3	
Resistance to Compression	≥ 12.5 Mpa	>12	>6
Resistance to	≥ 12.5 MPa	>12	>6
Resistance to Bending	≥ 4.5 MPa	-	>1
Bulk density	680 - 720 kg/m ³	-	-
Water/Gypsum Ratio	70-100 %	VICAT METHOD	METHOD (4.3.2)
Initial setting time	12-17 minutes	-	KNIFE METHOD (4.4.1)
Final setting time	25-35 minutes	-	KNIFE METHOD (4.4.1)
Fluidity	16.5 - 20 cm	-	BY DISPERSAL METHOD (4-3-2)
Water absorption	30 - 40 %	-	-

STANDARDS

- ASTM C59/59 M
- BS EN 13279-1
- Iso 9001:2015



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MIXING

1. **Mixing Ratio:** Weigh the necessary quantities of gypsum and water as mentioned in the TDS. Any changes of quantities will affect the characteristics of the mold (Absorption capacity, hardness, setting time expansion).
2. **Water:** Use only clean water; the presence of organic substances or high concentration of sulfate will reduce the setting time and the quality of the mold.
3. **Spreading:** Spread the gypsum between 1 to 3 minutes on the entire surface of the water.
4. **Absorption:** Leave the mixture for 1-2 minutes before the mixing phase.
5. **Mixing:** use mechanical blending (three blade mixer, diameter of blade $\frac{1}{4}$ to $\frac{1}{3}$ x height of the mixing bucket), at a low speed (avoid high Speed, since mixing too quick will produce a heterogeneous mixture and low-quality mold). Mixing time should not be less than 1 minute.
6. Mixture is ready to use.
7. The MD-CAST 300 mold can be used around 70 times for casting.

STORAGE

MD-CAST 300 must be stored in its original pack.

- Avoid direct contact with the ground to protect it against humidity.
- Expiry date within 12 months from the production date indicated on the bag.
- Inappropriate storage or exceeding the expiry date may deteriorate the properties of the product.



MD-CAST 300

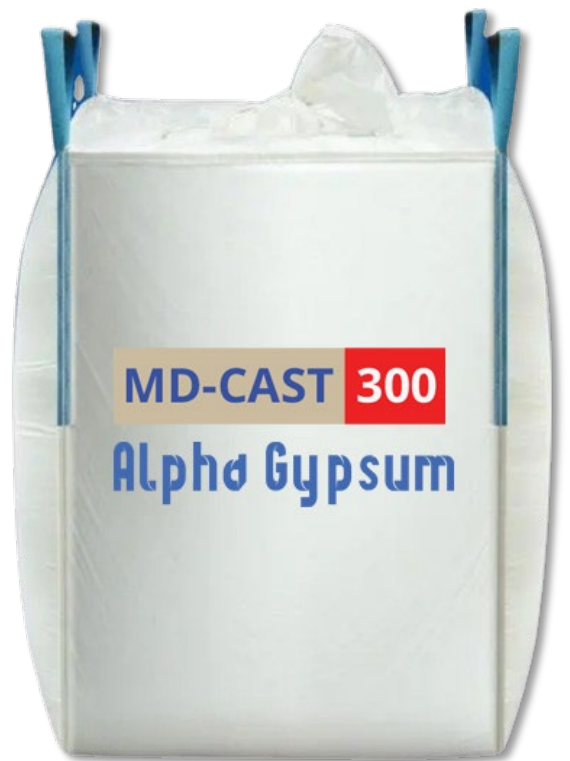
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SAFETY RECOMMENDATIONS

- Product is not classified as hazardous.
- It is recommended to use safety gloves, mask and glasses when apply the product to prevent the risk of inhalation, irritation of the skin and eyes.

Packaging

- 25 kg paper bags
- Big-Bags (1/1.25 MT)



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EL-THAGR COMPLEX – BUILDING NO. 2, APARTMENT
105, EL-NOZHA AIRPORT ROAD ,DHL BUILDING -
5431001 , ALEXANDRIA, EGYPT..

Tel: +20 3 3832405 , +20 3 3832406 Fax: +20 3 3808003

E-mail: sales@mada-trade.com

<https://www.mada-trade.com/>



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