



# WATANI CERAMIC

## PREMIUM CASTING GYPSUM POWDER

Together, We Build Gypsum Excellence

### DESCRIPTION

WATANI CERAMIC is a high-purity, ultra-white gypsum plaster formulated for **ceramic and art casting** where precision, smooth finish, and dimensional stability are essential. It ensures **consistent setting, excellent mold reproduction, and high mechanical strength**, delivering superior surface hardness and balanced setting time for both **manual and machine casting**.

### KEY FEATURES

- Excellent Mold-Making Properties.
- Porosity and Water Absorption.
- Workability and Cost-Effectiveness.
- Reproducibility and Consistency.
- Compatibility with Ceramic Slip.

### PRIMARY USES

- Ceramic mold and sanitary ware casting.
- Fine art and sculptural mold production.
- Decorative plaster and architectural components.
- Industrial and laboratory casting applications.

### APPEARANCE

Supplied in 25 kg PP bags.

### STANDARDS

ASTM C59 / C59M

BS EN 13279-1

ISO 9001:2015 Quality Management System



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# PRODUCT SPECIFICATION

SPECS	VALUE	ASTM STANDARD C472/471	BS EN STANDARD 13279
CHEMICAL COMPOSITION	$\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$	—	—
INSOLUBLE RESIDUE ON SIEVES 60MM	< 1 %	—	—
FINESSE ON 150 MM	0%		1-0.3
RESISTANCE TO COMPRESSION	$\geq 130 \text{ KG/ CM}^2$	>12	>6
RESISTANCE TO BENDING	$\geq 40 \text{ KG/CM}^2$	—	>1
BULK DENSITY	800 - 1000 KG/M <sup>3</sup>	—	—
WATER/GYPSUM RATIO	68 -70 %	—	METHOD (4.3.2)
INITIAL SETTING TIME	12-18 MINUTES	—	KNIFE METHOD (4.4.1)
FINAL SETTING TIME	25-32 MINUTES	—	KNIFE METHOD (4.4.1)
FLUIDITY	200 - 220 CM	—	BY DISPERSAL METHOD (4-3-2)
WATER ABSORPTION	—		30 - 40 %

## MIXING GUIDELINES

### 1. Mixing Ratio

The gypsum-to-water ratio must strictly follow the values indicated in the Technical Data Sheet (TDS). Any deviation will significantly influence the mold's physical and functional properties such as porosity, absorption rate, mechanical strength, and setting time .

### 2. Water Specifications

Use only clean, potable water. The presence of organic impurities, dissolved salts, or elevated sulfate concentration accelerates setting reactions and negatively impacts the consistency and durability of the mold.

### 3. Soaking / Slurry Preparation:

After charging gypsum into the pre-measured water, allow a soaking time of 1-2 minutes. This promotes proper wetting of particles, reduces entrapped air, and ensures efficient dissolution and hydration prior to agitation.

### 4. Mixing Process:

- Employ a mechanical mixer operating at low rotational speed ( $\leq 400 \text{ rpm}$ ).
- Avoid high shear or turbulent mixing, as it induces air entrapment and non-uniform crystal growth, resulting in heterogeneous microstructure and lower mold performance.
- Minimum mixing duration: 1 minute to obtain a homogenous slurry with optimal rheological behavior.



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## SAFETY INFORMATION

Non-toxic and non-flammable under normal handling conditions.

Avoid inhalation of dust; use appropriate **PPE** (mask, gloves, goggles).

Refer to the Material Safety Data Sheet (MSDS) for detailed safety and first-aid guidance

## STORAGE INSTRUCTIONS

**Packaging:** WATANI C must be stored in its original, sealed packaging to maintain its integrity and prevent contamination.

- **Ground Contact:** Avoid direct contact with the floor; use pallets or elevated platforms to protect the product from moisture and dampness.
- **Environmental Conditions:** Store in a dry, well-ventilated area, away from sources of humidity, water, or direct sunlight

## SHELF LIFE

The product retains its **optimal properties** for up to **12 months** from the **production date** indicated on the packaging.



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