TDS - Technical Data Sheet

Product Name: Resin Casting Powder (Gypsum Plaster)

Brand: OSBANG

Model No.: OBS-01

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Product Overview: OSBANG OBS-01 Casting Gypsum is a high-whiteness, ultra-fine alpha gypsum powder specially developed for craft and resin art molding. Featuring a 2000-mesh ultra-fine particle size, smooth surface finish, moderate expansion rate, and reliable strength, it is widely used for art craft casting, prototype making, and decorative pieces.

1. Product Identification & Manufacturer Information

Item	Details
Product Name	Resin Casting Powder (Gypsum Plaster)
Brand Name	OSBANG
Model Number	OBS-01
Manufacturer Address	Meichang Wood Industry Park, Zone E, Building No.1, Nanlang Town, Zhongshan City, Guangdong Province, China
Chemical Composition	Calcium Sulfate (Main)
Appearance	White fine powder
Whiteness	95 Degrees

Package Specification	1kg small bag / 25kg woven bag
Shelf Life	12 months (sealed and dry storage)
Certifications	MSDS, CNAS
Application	Plaster casting, mold making, decorative crafts, sculptures, handmade prototypes

2. Physical & Chemical Technical Specifications

Test Item	Standard Specification	Test Condition
Particle Size	2000 Mesh (Ultra-fine)	Sieve Analysis
Recommended Water/Powder Ratio	3:1 (Water : Powder)	Weight Ratio
Initial Setting Time	6 - 8 Minutes	Normal Temperature
Final Setting Time	30 Minutes	Normal Temperature
24h Compressive Strength (Fully Dried)	10 - 15 MPa	Complete Curing & Drying
Dry Flexural Strength	3.0 - 6.0 MPa	Fully Dried State
Surface Hardness	8.5 MPa	Dry Curing State
Linear Expansion Rate	0.15% - 0.30%	Standard Curing
Moisture Content (After Drying)	≤1.0% - 2.0%	Loss on Drying Test
Slurry pH Value	7.0 - 8.0 (Neutral & Weak Alkaline)	Aqueous Slurry
Solubility in Water	Slightly Soluble	Normal Temperature

3. Mixing & Operation Instructions

1. Proportioning: Strictly follow the recommended water-powder ratio of 3:1. Pour clean room-temperature water first, then slowly add OSBANG OBS-01 resin casting gypsum powder to avoid agglomeration.

2. Stirring: Stir evenly for 60-90 seconds until the slurry is smooth and bubble-free. For high-precision molds, vacuum defoaming is recommended to eliminate tiny bubbles and ensure smooth casting surface.

3. Working Time: The available operating time is 6-8 minutes (consistent with initial setting time). Complete pouring and shaping within the valid working period.

4. Demolding & Curing: Demold after final setting (30 minutes). Place the mold in a dry and ventilated environment for full drying and curing. Complete drying is required before resin pouring to prevent mold moisture from causing resin surface defects.

4. Storage Conditions

Store the product in a cool, dry, dust-free and well-ventilated indoor warehouse. Keep the package tightly sealed to prevent moisture absorption and agglomeration. Avoid long-term exposure to direct sunlight, rain and high humidity environment. Do not store together with acidic and corrosive materials. After opening the package, seal and use up as soon as possible to ensure stable product performance. The valid shelf life is 12 months under standard sealed storage conditions.

5. Safety Handling & Protection

Inhalation Protection: Avoid inhaling dust during handling. Wear a professional dust mask in dusty operation environments.

Eye Contact: In case of accidental contact with eyes, rinse continuously with plenty of clean water for more than 15 minutes. Seek medical treatment immediately if persistent irritation occurs.

Skin Contact: Clean the contacted skin with soap and clean water in time, no special irritation under normal use.

Ingestion Warning: Non-edible product. Keep away from children and pets to avoid accidental ingestion.

Fire Safety: This product is non-flammable, non-explosive, with no fire and explosion hazard.

6. Application Scope & Limitations

Suitable For: Casting decorative trays, aromatherapy stone diffusers, candle vessels, architectural ornaments, figurines, reliefs, and educational art projects (compatible with silicone, plastic, and acrylic molds).

Not Suitable For: Outdoor long-term wet/submerged environments, high-load structural parts, food contact/preparation, or medical applications.

7. Disclaimer

All technical data listed in this TDS are factory typical test values under standard laboratory conditions, for customer reference and product selection only. Actual product performance is affected by mixing ratio, construction temperature, humidity, curing and drying conditions. Customers are requested to conduct pre-production verification and testing according to actual usage scenarios. The manufacturer reserves the right to update and revise the TDS without prior notice.