

DENTSTONE KD SA

Dental and personal care



PRODUCT DESCRIPTION

Dentstone KD is a formulated hemihydrate plaster ($\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$) produced from naturally occurring gypsum mineral. It is buff tinted in colour. It is used primarily in the dental industry for prosthetics, orthodontics, crown and bridge work, producing a very detailed, extra hard model. Can also be used for making small giftware items.

PRODUCT BENEFITS

- + High strength dental plaster
- + Controlled expansion
- + 12 months shelf life

APPLICATIONS

Dental

TECHNICAL INFORMATION

Plaster to Water Ratio	
Plaster to Water Ratio (by weight)	3.33:1
Water to plaster ratio (by weight)	30%
Chemical Properties	
Chemical Composition	$\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$
Colour	Buff
Chemical Name	Calcium Sulphate Hemihydrate
Setting Parameters	
Initial setting time (minutes)	10
Final setting time (minutes)	13
Linear Expansion (%)	0.22
Mechanical Properties	
Brinell Hardness (MPa)	200
Wet Compressive strength (Mpa)	27
Physical Properties	
Particle Size Distribution (mesh size and % weight retained)	1% at 150 μm 4% at 90 μm 7% at 63 μm 22% at 32 μm
Loose bulk density (kg/m^3)	940
Compacted bulk density (kg/m^3)	1140

The technical data outlined represents typical figures only. For further details, please contact Saint-Gobain Formula directly.

INSTRUCTIONS FOR USE

Mixing utensils should always be clean and free of set plaster. Use clean water only. For consistent results, attention must be given to the correct proportioning and mixing of the plaster and water. Add the weighed quantity of plaster slowly into the measured volume of water and allow to soak from 30 seconds to 60 seconds. Stir vigorously with a spatula for 30 seconds to 60 seconds to obtain a uniform mix. If mechanical mixing is used with or without vacuum, the mixing time will be much less than that for hand mixing. The time will be dependent on the type of mixer paddle and speed. To obtain very fine detail and to exclude air bubbles, the plaster

should be vibrated into the impression. The fluidity of the mix can be increased by increasing the proportion of water, however this will result in reduced strength and hardness. Do not mix fresh plaster with that which has been mixed for some time previously.

PACKAGING AND SHELF LIFE

	Packaging Available	Shelf Life (Month)
Bag	25 kg	12

When stored under dry conditions and in its original packaging, the product will have a specified shelf life that commences from the date of manufacture that is displayed on each sack. Shelf life depends on the packaging type. For those products where a defined ‘best before’ date is applicable, BBE (Best Before End) followed by the date will be displayed on each sack.

STORAGE

Plaster based products are not recommended for conditions where they are likely to be located externally or in any way subjected to weathering or excessive dampness.

Absorption of moisture can result in changes to physical properties, including a reduction in the set strength of plasters and also a lengthening of setting time.

Gypsum minerals can be affected by absorption of moisture and may change physical properties.

To help protect the product during use, open or part used bags should be carefully folded and closed. Each bag is date stamped and stocks should be rotated so that the oldest material is used first.

ENVIRONMENT, HEALTH AND SAFETY

Material Safety Data Sheets of Saint-Gobain Formula plasters and gypsum minerals are available for all products and may be obtained directly on our website in the [product](#) and [documentation](#) sections. No liability is accepted by Saint-Gobain Formula for injury to any person or loss or damage to property by improper use of the product.

NOTIFICATION

The plaster to water ratios quoted are those used in Saint-Gobain Formula’s standard test methods and are not necessarily those used in practice. The precise consistency to use will need to be adjusted to suit the individual application. Changes to plaster to water ratio will influence product performance, particularly setting time and strength.

Unless otherwise stated, Saint-Gobain Formula’s standard test methods apply. To obtain a copy of the test method, please contact Saint-Gobain Formula directly. This literature cancels and replaces any previous document. All information given is provided in good faith and may be subject to change. It’s advisable to contact Saint-Gobain Formula in case of any doubt arising from the content of such information.

CONTACT

For any information, please visit our website
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