

# ELITE DENTAL STONES

Solid foundations for concrete results.



**Zhermack**   
Dental

**Solid foundations  
on which to build  
reliable restorations.**

**Stone is a key tool in the dental technician's laboratory: the starting point for a state-of-the-art prosthesis.**

It is used to make models for mounting in an articulator, as well as to make dies for flasking <sup>[1]</sup> among other things.

**Elite Dental Stones is the Zhermack range of type 3 and 4 stones for dental technicians who use either traditional or analogue/digital techniques.** A broad choice of colours and packaging types, together with the special and distinctive features of each product, make the Elite Dental Stones range **ideal for satisfying all the needs of a laboratory** working on both fixed and removable prostheses.



**What makes the  
Elite Dental Stones  
range special?**



**Low expansion,  
even after 48 hours.**

**Fundamental stability** to ensure that models are reliable and preserve the details captured in the patient's mouth.

[1] John M. Powers, John C. Wataha, "Dental materials: foundations and applications," 2017, p. 120.



### Wide range of products.

The Elite Dental Stones range has been created to offer **technically different products** that satisfy the specific needs of laboratories, from mounting in an articulator to producing the base for a model. The range also includes **a broad choice of colours and packaging types** to satisfy all needs.



### Zhermack in-house production.

The range is formulated and produced at Zhermack's advanced production facilities. The **oversight of production processes, from selection of the raw materials through to creation of the finished products, combined with many years of experience** in formulating stones, guarantee high quality standards.

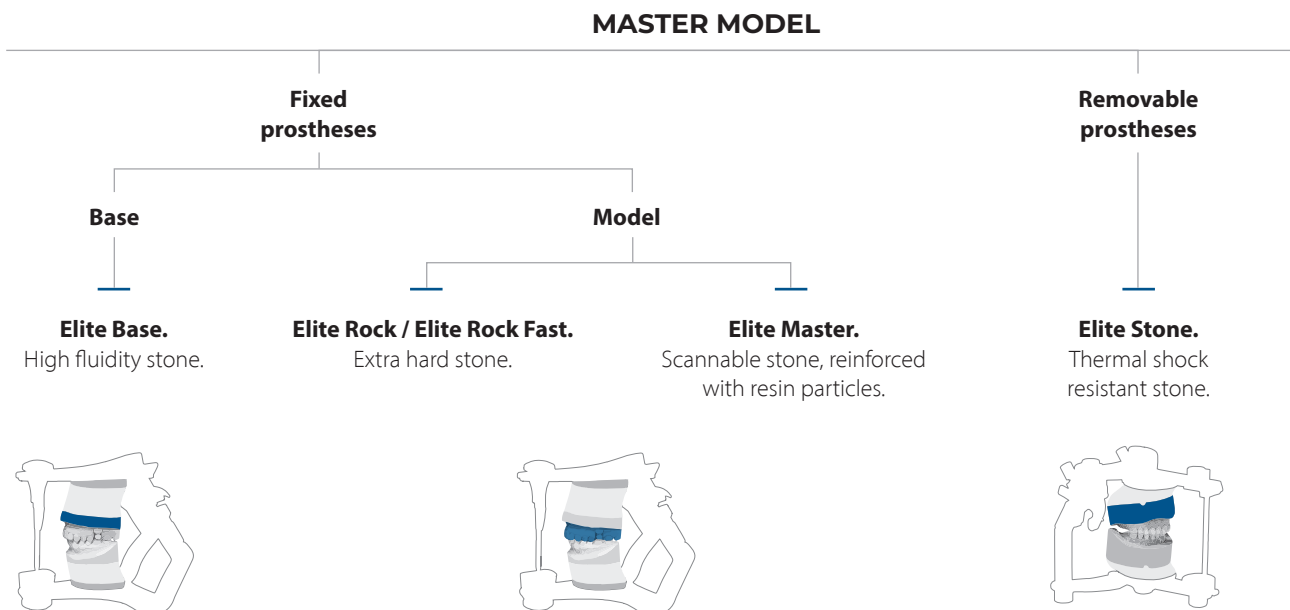
### Our stones.

The products in the Elite Dental Stones range are divided into hard stones and extra hard stones and are compatible with the various impression materials on the market, including polyethers and hydrocolloids. They are formulated to deliver their best performance in combination with Zhermack impression materials.

### STONES Extra hard type

4

Stones are defined as extra hard if they have high resistance to compression and abrasion <sup>[2]</sup>. They are primarily used to prepare abutments and models for fixed and removable prostheses.



[2] S. Recchia, A. De Benedetto, "Scienze dei materiali dentali e laboratorio", 2013, p. 203.



## EXTRA HARD TYPE 4

Abutments for:

- Fixed prostheses
- Removable prostheses
- Making bases

4

## HARD TYPE 3

- Antagonist models  
- Study models  
- Articulators  
- Flasks

3

## STONES Hard type

3

Stones are defined as hard if they have good resistance to compression and abrasion <sup>[1]</sup>. They are used for antagonist models, diagnostic models, mounting in an articulator and flasking.

### ANTAGONIST

#### Elite Model / Elite Model Fast.

Low expansion  
type 3 stone.



### ARTICULATOR

#### Elite Arti / Elite Arti Fast.

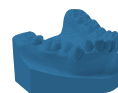
Low expansion  
thixotropic stone.



### ORTHODONTICS

#### Elite Ortho.

Glossy  
white stone.



# Elite Dental Stone

## **TYPE 4 STONES**

**For master models and bases**

### **IN FIXED PROSTHESES**

Elite Master

Elite Rock

Elite Base

### **IN REMOVABLE PROSTHESES**

Elite Stone

## **TYPE 3 STONES**

**FOR ANTAGONIST MODELS**

Elite Model

### **FOR ARTICULATOR**

Elite Arti

### **FOR ORTHODONTIC MODELS**

Elite Ortho

## TYPE 4 STONES

For master models for FIXED prostheses

### Elite Master

Scannable stone, reinforced with resin particles.



#### Colours



SANDY BROWN



DESERT SAND



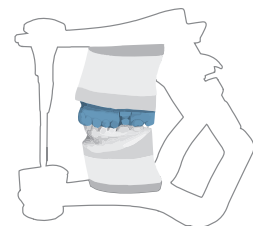
#### Advantages

- **Scannable without the use of scan sprays.**  
This makes things easier for dental technicians using the digital workflow, by reducing the model digitalisation problems typically caused by uneven spray applications and varying spray thicknesses.
- **Greater resistance to stone chipping.**  
This makes the stone easier to work with, facilitating the work of the dental technician during milling.



#### Technical data

Water/powder ratio	21 ml/100 g
Setting expansion at 2 hours (and 48 hours)	0.08% - 0.19%
Compressive strenght at 1 hour (and 48 hours)	50 MPa (55 MPa)
<b>Times</b>	
- manual (and vacuum*) mixing	1' (30")
- working	12'
- setting (Vicat)	14'
- removal of impression from the model	45'



\*240 rpm



## TYPE 4 STONES

For master models for FIXED prostheses

# Elite Rock and Elite Rock Fast

Extra hard stone.



### Colours



SANDY BROWN



SILVER GREY\*



CREAM  
(Elite Rock Fast)



WHITE  
(Elite Rock)



### Advantages

- Resistant to abrasion, delivers the optimal balance of thixotropy and fluidity.**
  - A removable die model requires greater resistance, due to continuous handling by the dental technician.
  - Fluid and thixotropic, so it flows easily within the impression, without altering its structure.



### Elite Rock Fast

**25'**: quicker removal times compared to the brand line\*\*, with a consequent reduction of laboratory times.



### Technical data

Water/powder ratio	20 ml/100 g
Setting expansion at 2 hours (and 48 hours)	0.08% - 0.19%
Compressive strenght at 1 hour (and 48 hours)	52 MPa (75 MPa)

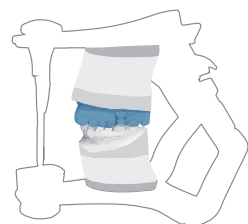
#### Times

- manual (and vacuum\*) mixing

1' (30")

- working  
- setting (Vicat)  
- removal of impression from the model

Elite Rock	Elite Rock Fast
12'	5'
14'	9'
45'	25'



\* Scannable without the use of scan sprays.

\*\* Refers to the Zhermack range of stones.



## TYPE 4 STONES

For master models for FIXED prostheses

### Elite Base

High fluidity stone.



#### Colours



TERRACOTTA  
RED



ROYAL  
BLUE



GREY



#### Advantages

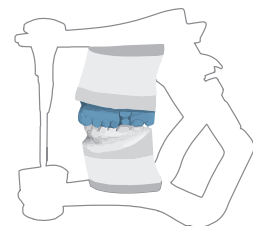
- **Easy casting.**

Allows the stone to flow freely between the master model pins, even without applying vibration. That is why it is recommended for creating fixed prosthesis bases.



#### Technical data

Water/powder ratio	23 ml/100 g
Setting expansion at 2 hours (and 48 hours)	0.05% - (0.10%)
Compressive strenght at 1 hour (and 48 hours)	40 MPa (65 MPa)
<b>Times</b>	
- manual (and vacuum*) mixing	1' (30")
- working	5'
- setting (Vicat)	18'
- removal of impression from the model	45'



\*240 rpm

## TYPE 4 STONES

For master models for REMOVABLE prostheses

### Elite Stone

Thermal shock resistant stone.



#### Colours



PINK



NAVY  
BLUE



BROWN



AQUA  
GREEN



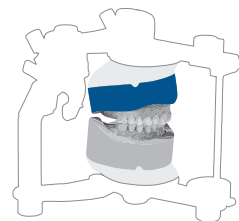
#### Advantages

- **Does not deteriorate when exposed to high temperatures.**  
Recommended for making complete removable prostheses using traditional techniques, with hot-curing resins in a flask.



#### Technical data

Water/powder ratio	25 ml/100 g
Setting expansion at 2 hours (and 48 hours)	0.08% - (0.09%)
Compressive strenght at 1 hour (and 48 hours)	42 MPa (50 MPa)
<b>Times</b>	
- manual (and vacuum*) mixing	1' (30")
- working	8'
- setting (Vicat)	14'
- removal of impression from the model	45'



\*240 rpm

## TYPE 3 STONES

### For antagonist models

# Elite Model - Elite Model Fast

## Low expansion stone.



### Colours



STEEL BLUE  
(Elite Model)



IVORY  
(Elite Model)



SKY BLUE  
(Elite Model Fast)



LIGHT CREAM  
(Elite Model Fast)



WHITE  
(Elite Model Fast)



### Advantages

- Elite Model has a very low expansion value, similar to a type 4 stone.**  
 Perfect for producing antagonist models in combination with type 4 stones for master models, because the low expansion allows the accuracy of the antagonist and occlusal reference points is maintained.



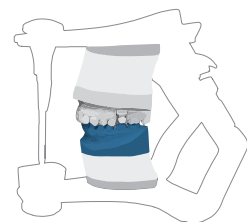
### Elite Model Fast

**15'**: quicker removal times compared to the brand line means the occlusal registration and therefore the model overall position in the articulator are not compromised.



### Technical data

	Elite Model	Elite Model Fast
Water/powder ratio	30 ml/100 g	
Setting expansion at 2 hours (and 48 hours)	0.04% - (0.08%)	0.10% - (0.10%)
Compressive strenght at 1 hour (and 48 hours)	31 MPa (50 MPa)	33 MPa (50 MPa)
<b>Times</b>		
- manual (and vacuum*) mixing	1' (30")	1' (30")
- working	7'	4'
- setting (Vicat)	12'	8'
- removal of impression from the model	45"	15"



\*240 rpm

## TYPE 3 STONES

For easy articulator mounting.

### Elite Arti - Elite Arti Fast

Low expansion thixotropic stone.



#### Colours



WHITE



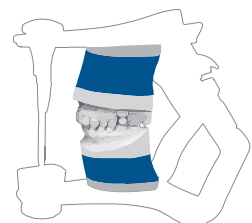
#### Advantages

- **Easy use and working.**  
Allows the model in the articulator to be positioned without burrs: the stone does not run, making mounting easier for the dental technician.
- **Very little change to dimensional stability over time.**  
Its low expansion means that the occlusal registration and therefore the model's overall position in the articulator are not compromised.



#### Technical data

Water/powder ratio	30 ml/100 g	
Setting expansion at 2 hours (and 48 hours)	0.02% - (0.09%)	
Compressive strenght at 1 hour (and 48 hours)	26 MPa (50 MPa)	
<b>Times</b>	<b>Elite Arti</b>	<b>Elite Arti Fast</b>
- manual mixing	1'	45"
- working	3'	2'
- setting (Vicat)	5'	3'





## TYPE 3 STONES

For orthodontic and diagnostic models.

### Elite Ortho

Glossy white stone.



#### Colours



WHITE



#### Advantages

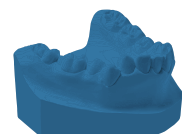
- **Brightness of the model.**

For the production of diagnostic and orthodontic models that allow the dentist to engage effectively with the patient. This is because the colour and brightness really enhance their appeal.



#### Technical data

Water/powder ratio	24 ml/100 g
Setting expansion at 2 hours (and 48 hours)	0.04% - (0.15%)
Compressive strenght at 1 hour (and 48 hours)	32 MPa - (45 MPa)
<b>Times</b>	
- manual (and vacuum*) mixing	1' (30")
- working	7'
- setting (Vicat)	14'
- removal of impression from the model	45''



\*240 rpm

# Do the essentials.

The Zhermack product line for the Laboratory has been designed to make dental technicians' everyday work easier.

It is a complete system of solutions that can satisfy the multiple needs of the various laboratory processes and that enables the essential steps of complex procedures to be performed properly and consistently.

This is our daily commitment to dental technicians.

## Light-curing resins for custom impression trays

Elite LC Tray



## Bis-acrylic self-curing resin for temporary restorations

Acrytemp



## Silicones for gingival reproduction

Gingifast

## Investments

Elite Vest

# Right.

## **Stones for fixed and removable prostheses**

Elite Master	Elite Model
Elite Rock	Elite Arti
Elite Base	Elite Ortho
Elite Stone	



## **Duplication silicones**

Elite Double



## **Silicones for masks**

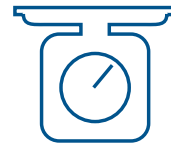
Zetalabor  
Titanium  
Platinum  
Elite Transparent



## ELITE DENTAL STONES

Stones for developing models.

### How to mix the stone<sup>[3]</sup>



MEASURE

1



POUR

2

### Tips for success

#### MIXING

**Why does the stone mixing process leave bubbles?**

Bubbles are the result of air becoming trapped when the stone is mixed. That is why vacuum mixing is strongly recommended.

#### MIXING

**Why should I use water at ambient temperature to mix the stone?**

When water and stone powder are mixed together, the resultant chemical reaction causes the stone to set. To avoid speeding up or slowing down this process, it is always advisable to use demineralised water at ambient temperature.

[3] De Benedetto A, Galli L. Laboratorio odontotecnico. 2018; 100.



## ELITE DENTAL STONES

Stones for developing models.



MIX

3



POUR

4



WAIT

5



REMOVE

6

### MODEL REMOVAL

**Why does the model break when removed from the impression?**

This can happen if the model/impression removal time specified in the manufacturer's instructions is not respected. Though the stone may feel hard to the touch, you should always wait for the time specified by the manufacturer to be sure that the product really has set (i.e. has hardened and, after initial heating, has returned to ambient temperature).

### A SUCCESSFUL PROTOCOL

**How can I get the best possible stone quality?**

A few simple measures can help the dental technician in this phase.

- Before proceeding to make a new stone mix, ensure that the mixers are clean and dry. Old stone residue on the spatula, in the glass or on the vibration device could negatively affect the setting and expansion time of the new mix.
- Where possible, all stones should be mixed under vacuum conditions and using the proper powder-water ratio. Approximations can lead to major variations in the technical data.
- Add the powder to the water and not the other way around, mixing the stone.
- Water and stone must be at ambient temperature (23°C).
- Demineralised water should preferably be used to mix the stone (this is the type of water used when performing all ISO tests).
- It is best to mix the stone using a vacuum mixer that reduces the amount of air trapped in the mix, thus producing a more uniform stone.
- Do not remove the impression from the model until the full setting time has passed <sup>[1]</sup>.

# ELITE DENTAL STONES

Stones for developing models.

## Packaging



			200 g	1 kg	3 kg	25 kg carton	25 kg drum
Elite Master	● Desert Sand		C410400	-	C410402	C410403	C410404
	● Sandy Brown		-	-	C410410	C410411	C410412
Elite Rock	● Sandy Brown		-	C410032	C410030	C410200	C410334
	● Cream		-	-	C410020	C410201	C410332
	● Silver Grey		-	-	C410010	C410202	C410330
	○ White		-	-	C410000	C410204	C410336
Elite Rock Fast	● Sandy Brown		C410152	C410151	C410150	C410205	-
	● Cream		-	-	C410160	C410207	-
Elite Base	● Terracotta Red		-	-	C410448	C410446	C410447
	● Royal Blue		-	-	C410437	C410435	C410436
	● Grey		-	-	-	-	C410439
Elite Stone	● Pink		-	-	C410048	C410214	C410315
	● Navy Blue		-	-	-	-	C410310
	● Brown		-	-	C410040	C410211	C410312
	● Aqua Green		-	-	-	-	C410313
Elite Model	● Steel Blue		-	-	C410070	C410221	-
	● Ivory		-	-	C410080	C410220	C410304
Elite Model Fast	● Sky Blue		-	-	C410065	C410224	C410306
	● Light Cream		C410069	-	C410067	C410226	C410308
	○ White		-	-	C410063	C410228	C410309
Elite Arti	○ White		-	-	C410100	C410240	C410350
Elite Arti Fast	○ White		C410107	-	C410105	C410241	C410351
Elite Ortho	○ White		-	-	C410090	C410230	C410320

## ELITE DENTAL STONES

Stones for developing models.

### Accessories



C300992	C300991	XR0250840	C400441
Rubber mixing bowl	Green spatula (1 piece)	Water bottle with graduated measuring cup	Gypstray - 3 l container

## Zhermack synergic solutions



The stones in the Elite Dental Stones range are compatible with the most commonly-used impression materials on the market, and are formulated to deliver their best performance in combination with all Zhermack impression materials.

Disinfection of the impression is an essential step, in order to limit the risk of cross-contamination between the dental practice and the dental laboratory.

#### **Zeta Spray**

Ready-to-use disinfectant spray for rapid impression disinfection.

#### **Zeta 7 Solution**

Concentrated disinfectant for impression disinfection.

#### **Gipstray**

Ready-to-use solution for removing stone residues from impression trays, spatulas and other instruments.

# Fulfilling your needs