

algipedia



FIRST, THE IMPRESSION

Preliminary impression alginates



alginate

FIRST, THE IMPRESSION

The product information, hereinafter reported, relating to detail reproduction, dimensional stability, elasticity, tear resistance and time in mouth refer to the range of Zhermack alginates.

Matter, technology, science.

The origin of Zhermack solutions.

From the seaweed of Northern seas to the most widely-used alginates in the world of dentistry: a pathway that follows the specific values that have made Zhermack popular with sector professionals.

Creativity, accessibility, substance and dynamism to develop solutions able to perfectly satisfy user needs.

ESSENTIAL FOR CLINICAL PRACTICE.

Alginates have been used in clinical practice for over 50 years. These materials of plant origin, extracted from a seaweed, are particularly popular because they are well tolerated by patients, easy to use and elastic^[1,2,3]. These characteristics make alginates suitable for use in most types of dentistry^[4,5], including **for preliminary impressions**.

A COMPLETE RANGE, FOR ALL APPLICATIONS.

All Zhermack alginates undergo rigorous testing, both during production processes and in the choice of raw materials, in order to guarantee compliance with the most stringent quality standards.

A **vast range** of alginates is available, with specific characteristics that cater for all the diverse demands of daily clinical practice. All products can be disinfected, as well as being **gluten-** and **lactose-free**, demonstrating the great attention that Zhermack dedicates to both the work of practitioners and the health of patients.

From tradition to the future: Zhermack embraces technological **innovation** and the new frontiers of **digital work-flows** with the **scannability** of Hydrogum 5, its top-of-the-range product.

THE FULL RANGE

Zhermack product choice guide

HIGH-TECH,
HIGH PERFORMANCE
SOLUTIONS

extraPro

Hydrogum 5
Hydrocolor 5
Pinkalgin 5

SOLUTIONS FOR
SPECIFIC
APPLICATIONS

specialPro

Orthoprint
Neocolloid

VERSATILE
SOLUTIONS

multiPro

Tropicalgin
Hydrogum

ESSENTIAL
SOLUTIONS

easyPro

Zetalgin
Zetalgin Chromatic

[1] Gherlone E. L'impronta in protesi dentaria. 3rd edition. Edra; 2017

[2] Cervino G, Fiorillo L, Herford AS, et al. Alginate Materials and Dental Impression Technique: A Current State of the Art and Application to Dental Practice. Mar Drugs. 2018;17(1):18. Published 2018 Dec 29. doi:10.3390/md17010018

[3] Thirunavakarasu R, Nittla P.P. Alginate impression material - a review, Drug invention today. 2018; 10(4): 3556-3561. ISSN: 0975-7619

[4] Bortolini S, Consolo U, Rossi R. L'impronta in implantoprotesi. 2008; 25

[5] Bortolini S, Consolo U, Rossi R. L'impronta in implantoprotesi. 2008; 18

Patient safety, dentist satisfaction.

Nature is our strong point.

All the alginates in the range are **gluten- and lactose-free**, guaranteeing peace of mind and safety even when used on intolerant patients.

With Zhermack safety is twice as important.

Avoiding the risk of infection is always good practice.

To restrict the risk of cross-contamination, the impression must be thoroughly disinfected before being sent to the dental laboratory.

Alginates' hydrophilic nature makes them prone to absorbing water, with the risk of having a negative effect on the dimensional stability or precision of the impression^[1].



With Zhermack, disinfection is safe.

Zhermack alginates can be **disinfected without significant effects on the accuracy and dimensional stability of the impression.**

Tested with disinfectants containing quaternary ammonium salts and alcohol, such as the Zeta 7 Spray and Zeta 7 Solution products in the Zeta Hygiene range, they help to afford an accurate impression whilst guaranteeing the safety of both practitioner and patient.

Zeta Hygiene offers fast-acting, innovative solutions with a **broad spectrum of action** certified in compliance with the standards of the European Norms (EN).

[1] Nandini VV, Venkatesh KV, Nair KC. Alginate impressions: A practical perspective. J Conserv Dent. 2008;11(1):37-41. doi: 10.4103/0972-0707.43416



extraPro

High-tech, high-performance alginates.

Solutions for practitioners looking for high performance.
The high surface detail reproduction combined with 5 days' dimensional stability helps to deliver accurate and reliable impressions.

Hydrogum 5 | Hydrocolor 5 | Pinkalgin 5

Hydrogum 5

extraPro

High-performance scannable alginate with 5 µm detail reproduction and 5 days of dimensional stability.



PRODUCT BENEFITS

- **High precision:** 5 µm detail reproduction, 4 times greater than regulatory standards, helps to afford impression reliability
- **High dimensional stability:** the impression can be cast up to 5 days after it is taken, without undergoing significant dimensional changes
- **Scannability:** facilitates access to digital workflows and improves communications with the dental technician, who can directly obtain a digital model (without having to perform the casting phase)
- **High elasticity:** allows the material to optimally return to its original form
- **High tear resistance:** helps to reduce the risk of the impression tearing when it is removed from the patient's mouth



MANGOUSTAN



SCANNABLE

Hydrogum 5 can be scanned with structured light, structured blue light, blue laser and CBCT scanners without requiring the use of opacifier powders.*

Clinical times**

Working time (including mixing time)	1' 05"
Time in mouth	0' 45"
Setting time	1' 50"

* Tests conducted by 3D Fast

** Clinical use times are intended as from the start of mixing with deionised water at 23°C / 73°F.

Hydrocolor 5

extraPro

High-performance chromatic alginate with 5 days of dimensional stability.



PRODUCT BENEFITS

- **Chromatic:** provides the practitioner with a visual guide during material mixing, working and positioning in the oral cavity
- **High dimensional stability:** the impression can be cast up to 5 days after it is taken, without undergoing significant dimensional changes
- **High elasticity:** allows the material to optimally return to its original form
- **High tear resistance:** helps to reduce the risk of the impression tearing when it is removed from the patient's mouth



COOL BERRY

The chromatic variation provides the practitioner with a visual guide during the different phases:

- fucsia during mixing
- purple during the working phase
- light blue during positioning in the patient's mouth

Clinical times*

Working time (including mixing time)	1' 10"
Time in mouth	1' 00"
Setting time	2' 10"

* Clinical use times are intended as from the start of mixing with deionised water at 23°C / 73°F.

Pinkalgin 5

extraPro

Fluorescent pink, high-performance, extra-fast alginate with 5 µm detail reproduction and 5 days of dimensional stability.



TIME IN MOUTH



PRODUCT BENEFITS

- **Fluorescent pink colour:** excellent technical qualities and an attractive colour make it a popular choice among dental assistants
- **High precision:** 5 µm detail reproduction, 4 times greater than regulatory standards, helps to afford impression reliability
- **High dimensional stability:** the impression can be cast up to 5 days after it is taken, without undergoing significant dimensional changes
- **Short time in mouth:** the short time in mouth of just 45 seconds favours patient comfort



RASPBERRY

Clinical times*

Working time (including mixing time)	1' 05"
Time in mouth	45"
Setting time	1' 50"

* Clinical use times are intended as from the start of mixing with deionised water at 23°C / 73°F.



specialPro

Alginates for specific applications.

Solutions that combine precision and practicality to meet the needs of those working in situations that require special care in application, choosing faster or longer times for impression taking.

Orthoprint | Neocolloid

Orthoprint

specialPro

Extra-fast alginate with a vanilla scent, recommended for orthodontics.



TIME IN MOUTH



PRODUCT BENEFITS

- **Short time in mouth:** with a time in mouth of just 45 seconds, which makes it well tolerated by patients, Orthoprint is recommended for orthodontics by 97% of users*
- **Vanilla scent:** pleasant for paediatric patients**
- **High elasticity:** optimum return to its original form
- **High tear resistance:** helps to reduce the risk of the impression tearing when it is removed from the patient's mouth



VANILLA



RECOMMENDED FOR ORTHODONTICS

97% of users recommends Orthoprint for orthodontics*!

Further details on page 12.

Clinical times***

Working time (including mixing time)	1' 05"
Time in mouth	45"
Setting time	1' 50"

* Key-Stone Italia survey, 2019

** Zhermack Italy and Germany survey, 2019

*** Clinical use times are intended as from the start of mixing with deionised water at 23°C / 73°F.

Neocolloid

specialPro

Alginate with an extended time in mouth, recommended for removable prostheses.



PRODUCT BENEFITS

- **Extended time in mouth:** the time in mouth of 1 minute and 30 seconds is ideal for reproducing the soft tissues, making this the go-to product for removable prostheses*
- **Low viscosity:** to satisfy the needs of practitioners who prefer low-viscosity products
- **High elasticity:** optimum return to its original form



SPEARMINT



RECOMMENDED
FOR REMOVABLE
PROSTHESES

95% of users recommends Neocolloid for removable prostheses!*

Further details on page 12.

Clinical times**

Working time (including mixing time)	2' 00"
Time in mouth	1' 30"
Setting time	3' 30"

* Key-Stone Italia survey, 2019

** Clinical use times are intended as from the start of mixing with deionised water at 23°C / 73°F.

SURVEY



Orthoprint

97% of users recommends Orthoprint to other dentists in the orthodontics field

Practitioner interviews show that Orthoprint is most frequently used in the orthodontics field

WHY DO THEY CHOOSE ORTHOPRINT?

99% of users claims that the **45-second time in mouth** makes Orthoprint well tolerated by patients

9 out of 10 dentists say that the vanilla scent is pleasant for **younger patients**

Key-Stone Italia survey, 2019
Zhermack Italy and Germany survey, 2019



Neocolloid

95% of users recommend Neocolloid to other dentists for removable prostheses

Interviews have shown that 2 out of 3 Neocolloid users utilise it primarily for removable prostheses.

WHAT MAKES NEOCOLLOID IDEAL FOR REMOVABLE PROSTHESES?

9 out of 10 dentists agree that the **extended time in mouth** of 1 minute and 30 seconds makes it possible to obtain a better reproduction of the soft tissues

Key-Stone Italia survey, 2019



multiPro

Versatile alginates.

Solutions whose versatility is their strong point, studied to meet the diverse requirements of daily clinical practice.

Tropicalgin | Hydrogum

Tropicalgin

multiPro

Chromatic alginate for versatile use (Fast and Extra Fast).



PRODUCT BENEFITS

- **Chromatic:** provides the practitioner with a visual guide during material mixing, working and positioning in the oral cavity
- **Different setting times (Fast/Extra Fast)*:** to satisfy all dentists' requirements
- **Mango scent:** favours patient comfort



MANGO

The chromatic variation provides the practitioner with a visual guide during the different phases:

- red during mixing
- orange during the working phase
- yellow during positioning in the patient's mouth

Clinical times**

	Fast	Extra Fast
Working time (including mixing time)	1' 35"	1' 15"
Time in mouth	1' 00"	25"
Setting time	2' 35"	1' 40"

* Product not available on all markets

** Clinical use times are intended as from the start of mixing with deionised water at 23°C / 73°F.

Hydrogum

multiPro

Historical alginate for versatile use.



PRODUCT BENEFITS

- **High tear resistance:** helps to reduce the risk of the impression tearing when it is removed from the patient's mouth.
- **Elasticity:** optimum return to its original form



MINT

ONE OF OUR FIRST ALGINATES, ONE OF THE MOST POPULAR

Used in dental practices for over 20 years, Hydrogum was one of Zhermack's first alginates and is still one of the most popular in over 50 countries.

Clinical times**

Working time (including mixing time)	1' 10"
Time in mouth	1' 00"
Setting time	2' 10"

* Clinical use times are intended as from the start of mixing with deionised water at 23°C / 73°F.





easyPro

Essential alginates.

Simple, fast and efficacious impression-taking solutions.
Above all, satisfaction.

Zetalgin | Zetalgin Chromatic

Zetalgin

easyPro

Essential alginate with a mint scent.



PRODUCT BENEFITS

- **Guaranteed quality:** meets ISO standards*, it has essential characteristics but affords guaranteed quality
- **Mint scent:** favours patient comfort



MINT

Clinical times**

Working time (including mixing time)	1' 35"
Time in mouth	1' 00"
Setting time	2' 35"

* ISO 21563:2013

** Clinical use times are intended as from the start of mixing with deionised water at 23°C / 73°F.

Zetalgin Chromatic

easyPro

Essential chromatic alginate with a mint scent.



PRODUCT BENEFITS

- **Guaranteed quality:** meets ISO standards*, it has essential characteristics but affords guaranteed quality.
- **Chromatic:** provides the practitioner with a visual guide during material mixing, working and positioning in the oral cavity.



MINT

The chromatic variation provides the practitioner with a visual guide during the different phases:

- purple during mixing
- grey during the working phase
- green during positioning in the patient's mouth

Clinical times**

Working time (including mixing time)	1' 10"
Time in mouth	1' 00"
Setting time	2' 10"

* ISO 21563:2013

** Clinical use times are intended as from the start of mixing with deionised water at 23°C / 73°F.

A complete system.

Zhermack's extensive alginate range is completed by the MX-300 automatic mixer.

The **MX-300** is an **automatic mixer** for alginates that significantly improves the quality of the mix compared to manual methods, helps standardise the mixing process and gives consistent, reproducible results.^[1-3]



QUALITY MIXING

Significant reduction in the number of bubbles present in the material.^[1, 2]

PERFECT MIXING EVERY TIME

Reliable results irrespective of who does the mixing.^[3, 4]

SMART MIXING

Easy to use thanks to a touch control panel.

Get the best from the Zhermack alginate range!

MX-300 has been tested with Zhermack alginates range in order to identify the optimum mixing times for each alginate and guarantee the product's technical characteristics.



TOUCHSCREEN



CUSTOMISABLE
MIXING TIME



[1] Inoue K, Song YX, Kamiunte NO, Oku J, Terao T, Fujil K. Effect of mixing method on rheological properties of alginate impression materials. *Journal of Oral Rehabilitation*, 2002; 29: 615-619.

[2] McDaniel TF, Kramer RT, Im F, Snow D. Effects of mixing technique on bubble formation in alginate impression material. *General Dentistry*, 2013; 61(6): 35-39.

[3] Internal test

[4] Presley S, Morgan J. The Selection, Use and Accuracy of Alginate Impression Materials. *Dental Learning – a peer reviewed publication*, 2015; 3(3): 23-30.

Quality mixing

“Variations in the mixing techniques used can influence the porosity of impression alginates^[1].”



**MANUAL
MIXING**



**AUTOMATIC
MIXING**

Why is good quality mixing important?

Impressions are the main form of communication between dental practices and laboratories. Good mixing helps obtain an impression that is able to precisely and accurately record the information required to review the clinical case and produce devices.

Manual or automatic mixing?

Automatic mixing is recommended to improve the quality of the alginate mix and to achieve a more homogeneous compound. Scientific studies^[1,2] have shown that **centrifugal rotation achieves the best results.**

Impressions obtained using this technique have a **significantly lower internal porosity** to those obtained using other mixing techniques (manual, semi-automatic or mechanical), which tend to incorporate more air.^[1]

[1] Inoue K, Song YX, Kamiunte NO, Oku J, Terao T, Fujii K. Effect of mixing method on rheological properties of alginate impression materials. *Journal of Oral Rehabilitation*, 2002; 29: 615-619.

[2] McDaniel TF, Kramer RT, Im F, Snow D. Effects of mixing technique on bubble formation in alginate impression material. *General Dentistry*, 2013 Sep-Oct; 61(6): 35-39.

how to take an impression

manual mixing

MEASURING OUT PRODUCTS



1 MEASURE OUT THE ALGINATE POWDER

Use the measuring spoon to **collect the alginate** without compressing the powder; level off or remove the excess alginate using the flat part of the spatula and **pour into a rubber bowl**.



2 MEASURE OUT THE WATER

For each spoonful of powder add 1/3 of a measuring spoon of water.

Two measuring spoonfuls of alginate powder and 2/3 of a measuring spoon of water are adequate for an **average-sized upper impression tray**.

* Recommended water temperature: 23°C / 73°F.

MIXING



3 POUR IN THE WATER AFTER MEASURING OUT THE POWDER



4 STIR VIGOROUSLY

Then proceed with **mixing** observing the times indicated on the pack or in the instructions for use.

Product users must wear protection goggles, a face-mask with valve providing protection against dust (FFP2 or FFP3), gloves and suitable clothing. Read the instructions for use thoroughly before using the product.

how to take an impression

automatic mixing

MEASURING OUT PRODUCTS



1 MEASURE OUT THE ALGINATE POWDER

Switch on the machine and set the duration of mixing depending on the alginate to be used. Details of the correct mixing time to be used can be found on the label on the inside of the lid of the MX-300 or in the user manual. Measure out the product*

*See point 1 on the previous page.



2 ADD THE WATER TO THE BOWL

Add the water to the mixing bowl.*
The water measuring bottle is equivalent to the purple measuring spoon provided with the 5-day alginates. For 2-day alginates, use the green measuring spoon.

* Recommended water temperature: 10-20°C.

MIXING



3 STIR AND LOCK THE BOWL



4 PLACE THE BOWL INSIDE THE MACHINE AND CLOSE THE LID

how to take an impression manual and automatic mixing

IMPRESSION TAKING



5 PLACE THE ALGINATE ON THE IMPRESSION TRAY

Remove the alginate from the bowl and place it on the impression tray.

Then insert the impression tray into the patient's mouth until the end of the working time.

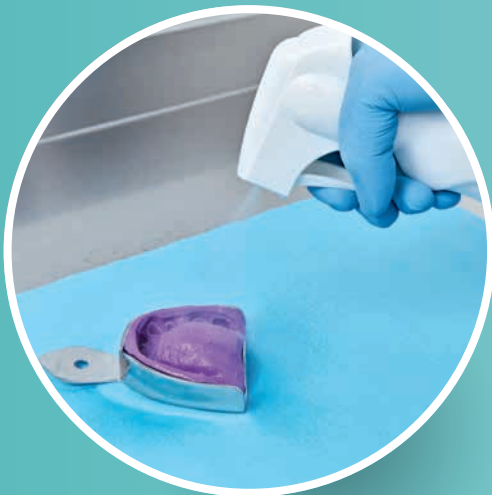


6 TAKE THE IMPRESSION

Wait for the material gelation observing the setting time from the start of mixing and then remove the impression from the patient's mouth.

Once the patient has rinsed his/her mouth, inspect it to make sure there are no residues.

DISINFECTION AND STORAGE



7 DISINFECT THE IMPRESSION

After taking the impression, **rinse it thoroughly** to remove any residues and traces of saliva and **disinfect immediately** following the instructions provided by the manufacturer of the disinfectant.



8 BAG AND STORE THE IMPRESSION

Once the impression has been disinfected, rinse again to remove all traces of the disinfectant. Bag the impression and send it to the dental laboratory.

1 | MEASURING OUT THE PRODUCT

WHY IS IT IMPORTANT TO MEASURE OUT THE WATER AND POWDER CORRECTLY AS INDICATED ON THE PACK?

Although alginate is easy to handle, correct management of the water to powder ratio **influences the properties of the material**^[1]. An incorrect water to powder ratio changes the consistency of the material and can also affect the declared product performance in terms of mechanical characteristics, times and dimensional stability.

What is the correct amount to use?

For each spoonful of powder add 1/3 of a measuring spoon of water.



3 | IMPRESSION-TAKING

WHICH IS THE BEST IMPRESSION TRAY TO USE?

The type of impression tray depends on the clinical case and the practitioner's preferences and habits. In order to improve the retention between alginate and impression tray, it is advisable to use either a perforated impression tray or a specific adhesive for alginates^[3].

The choice of impression tray is important because it impacts the accuracy of the impression^[4,5].

Stiffness and retention are two of the fundamental characteristics of an impression tray.



2 | MIXING

WHY SHOULD THE WATER BE ADDED AFTER THE ALGINATE POWDER?

When mixing is performed manually, it is preferable to add the water after measuring out the powder in order to reduce the surface porosity of the mix^[2].

4 | DISINFECTION AND STORAGE

IF I LEAVE THE IMPRESSION IMMERSED IN THE DISINFECTANT SOLUTION, WILL IT DAMAGE IT?

Leaving the impression in the disinfectant solution for longer than indicated by the manufacturer can damage the impression and cause dimensional changes: hydrocolloids are by nature hydrophilic, and therefore tend to swell when immersed in water or disinfectant^[6].

HOW SHOULD I STORE IMPRESSIONS?

If the gypsum cannot be cast immediately, eliminate the excess water and store the impression at room temperature (23°C) in an airtight polyethylene bag.



[1] Dreesen K, Kellens A, Wevers M, Thilakarathne P, Willems G. The influence of mixing methods and disinfectant on the physical properties of alginate impression materials. *European journal of orthodontics*. 2012; 35(3). doi: 10.1093/ejo/cjs031
 [2] McDaniel TF, Kramer RT, Im F, Snow D. Effects of mixing technique on bubble formation in alginate impression material. *General Dentistry*. 2013 Sep-Oct; 61(6): 35-39[2]. A. Punj, D. Bompolaki, J. Garaicoa, *Dental Impression Materials and Techniques*, Dent Clin North Am, 2017
 [3] Thirunavakarasu R, Nittla P.P. Alginate impression material-a review. *Drug invention today*. 2018; 10(4): 3556-3561. ISSN: 0975-7619
 [4] Hoyos A, Soderholm KJ. Influence of tray rigidity and impression technique on accuracy of poly(vinyl siloxane) impressions. *Int J Prosthodont*. 2011. 107(6): 9-15; doi: 10.1016/S0022-3913(12)60096-1
 [5] Punj Armit, Bompolaki D, Garaicoa J. *Dental Impression Materials and Techniques*. Dental Clinics of North America. 2017. 61. 779-796. 10.1016/j.cden.2017.06.004.
 [6] Nandini VV, Venkatesh KV, Nair KC. Alginate impressions: A practical perspective. *J Conserv Dent*. 2008;11(1):37-41. doi: 10.4103/0972-0707.43416

Pack types



extraPro

HIGH-TECH, HIGH-PERFORMANCE ALGINATES

Code	Product	Setting time	Pack type
C302070	Hydrogum 5	Extra Fast Set	1 x 453 g bag
C302071	Hydrogum 5	Extra Fast Set	1 tub + 2 x 453 g bags + measuring spoons set
C302075	Hydrogum 5	Extra Fast Set	1 x 21 g single-dose bag
C302120	Hydrocolor 5	Fast Set	1 x 453 g bag
C302140	Pinkalgin 5	Extra Fast Set	1 x 453 g bag

specialPro

ALGINATES FOR SPECIAL APPLICATIONS

Code	Product	Setting time	Pack type
C302145	Orthoprint	Extra Fast Set	1 x 500 g bag
C302171	Orthoprint	Extra Fast Set	1 x 18 g single-dose bag
C302205	Neocolloid	Normal Set	1 x 500 g bag

multiPro

VERSATILE ALGINATES

Code	Product	Setting time	Pack type
C302240	Tropicalgin	Fast Set	1 x 453 g bag
C302244	Tropicalgin	Extra Fast Set	1 x 453 g bag
C302245	Tropicalgin	Fast Set	1 x 18 g single-dose bag
C302025	Hydrogum	Fast Set	1 x 500 g bag

easyPro

ESSENTIAL ALGINATES

Code	Product	Setting time	Pack type
C301001	Zetalgin	Fast Set	1 x 453 g bag
C301004	Zetalgin Chromatic	Fast Set	1 x 453 g bag

Accessories

C300900



Measuring spoons set for 5-day alginates

C300910



Measuring spoons set for 48-hour alginates

C300992



Rubber bowl

C300990



Fluorescent alginate spatulas (6 pcs)

C300960



Long Life Bag, 1 pack contains 100 pcs (impression storage bags with airtight seal)

C400435



Algitray 1 kg

Find out more about related Zhermack preliminary impression products



MX-300

Automatic mixer for alginates



Zeta 7 Spray and Zeta 7 Solution

Zeta 7 Spray - Ready-to-use disinfectant spray with a broad spectrum of action for rapid impression disinfection.

Zeta 7 Solution - Concentrated disinfectant with a broad spectrum of action for impression disinfection.

For more information please visit our website: www.zhermack.com

Fulfilling your needs