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VILLACRYL THERMO PRESS

Thermoplastic for dentures

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WHY VILLACRYL THERMO PRESS?

Villacryl Thermo Press is the result of years of collaboration between the R&D department of firm Everall7 and dental technicians.

The Villacryl Thermo product line is a top-quality system consisting of an injection molding material based on microcrystalline polyamide and properly selected auxiliary materials. Materials and accessories from the Villacryl Thermo line are a guarantee of stable color, a perfectly smooth, glossy surface after processing, and, as a result, a perfectly fitting denture.

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CERTIFICATE

The quality of the dentures
Confirming the use of the original material

VILLACRYL
THERMO PRESS

CE

MD

GUARANTEE OF QUALITY

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ISO

ISO 13485:2016
certified

The product tested by the National Medicines Institute in Warsaw and the Institute of Occupational Medicine in Łódź is compatible with directives 93/42 / EEC and MDR 2017/745

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Villacryl Thermo Press is dedicated to all removable tissue-borne dentures such as complete dentures, partial dentures, microdentures, as well as retention elements in frame dentures, splints and space maintainers.

CHARACTERISTICS

- Microcrystalline structure
- No residual monomer
- Low absorption of fluids from the oral cavity

ADVANTAGES

- Easy processing and polishing
- Optimal flexibility and hardness of the denture
- No irritating or sensitizing effect

Technical parameters for injection*:

Injection temperature [°C]	275 - 285
Injection pressure [bar]	7.5 - 9.0
Cooling time [min]	min. 15

Melting time [min]	15 – 27
Small cartridge (max. 13g)	15
Medium cartridge (max. 17g)	19
Large cartridge (max. 25g)	27

*parameters may vary depending on the performance and type of injection molding machine used

Colours

0 T2 T3 T4

VILLACRYL THERMO PRESS

IN GRANULAR FORM

Villacryl Thermo Press in granular form is a material that provides versatility of application and economy of the material. It provides the ability to accurately measure the amount of granules needed for injection molding of a prosthetic restoration.

CHARACTERISTICS

- Granular form
- Packaging: 250g container

ADVANTAGES

- Versatility of application
- Material economy

VILLACRYL THERMO PRESS

IN CARTRIDGES

Villacryl Thermo Press in cartridges is a material that offers more freedom of work and saves time. Vacuum-packed granules in a cartridge ensure delivery of sufficient material when injecting even extensive dentures.

CHARACTERISTICS

- Finished cartridges:
  - Diameters of 22, 24 and 25 mm
  - M (17g) and L (25g) sizes

ADVANTAGES

- Saves time
- Convenient to use

VILLACRYL THERMO ISO-CLEAR

Villacryl Thermo Iso-Clear is a transparent light-curing insulator designed to insulate stone models from injected polyamide plastic. Efficient and reliable, as it is resistant to high temperatures and forms a thin layer on the surface of the stone that shows no adhesion to the polyamide.

CHARACTERISTICS

- Resistant to high temperatures
- Optimum density and fluidity

ADVANTAGES

- Perfectly smooth surface
- One layer is enough to effectively insulate the model

ALUMINUM TUBES

Universal disposable aluminum tubes for injection molding of thermoplastic materials.

CHARACTERISTICS

- Available in the following sizes and diameters:
  - ø22mm wys. 90mm and 120mm
  - ø24mm wys. 80mm and 110mm
  - ø25mm wys. 75mm and 100mm

ADVANTAGES

- Special plug design ensures safe and reliable injection of material
- Compatible with numerous injection molding machines on the market

VILLACRYL THERMO MULTI SPRAY

Villacryl Thermo Multi Spray is an all-purpose aerosol lubricant for flasks and cartridges. After spraying, it forms a thin, heat-resistant slip layer on the surface, guaranteeing protection of the injection molding machine's heating chamber from seizure, and providing a trouble-free injection process. It contains no solvents and leaves no residue in the heating chamber, making it suitable for any type of injection molding machine. In addition, it can be used for maintenance and insulation of injection flasks.

CHARACTERISTICS

- Resistant to high temperatures
- Does not contain solvents

ADVANTAGES

- Does not build up in the heating chamber
- Safe for the injection molding machine

4SHINE POLISHING POWDER

4Shine Polishing Powder is designed for pre-polishing acrylic and thermoplastic plastics. There are two abrasiveness variants: regular – moderately abrasive, and hard – highly abrasive. The varied size and sharpness of the grains allows for easier and faster high-gloss polishing without the need for silicone polishers.

CHARACTERISTICS

- The correctly selected proportion of grains in terms of hardness and contouring
- Contains bacteriostatic and fungostatic agent

ADVANTAGES

- Saves time during the pre-polishing process
- Ease to obtain a very high gloss by perfect preparation of the polished surfaces for final polishing

4SHINE POLISHING PASTE THERMOPLASTIC

4Shine Polishing Paste thermoplastic was created to make the process of final polishing of thermoplastics as fast and simple as possible. Thanks to the varied gradation of polishing and glossing agents, and a specifically selected binding agent, it guarantees a perfectly smooth restoration surface. Professionals will appreciate the ease of removing paste residue, performance and good adhesion.

CHARACTERISTICS

- Variable gradation
- Beige color

ADVANTAGES

- Easy removal of paste residue
- High gloss guarantee

MODELLING WAX

Modelling Wax for dental laboratories and dental offices, e.g. For making occlusal bites and rims.

CHARACTERISTICS

- Pink color
- Two hardnesses: soft and hard

ADVANTAGES

- Optimum hardness
- High resistance to cracking

STODENT III ARTI

Stodent III Arti a Type 3 stone designed for temporary fixation of stone models in occluders or articulators. Optimal setting time combined with low flow makes the articulation process easier.

CHARACTERISTICS

- Yellow color

ADVANTAGES

- Optimum working time
- Suitable mechanical properties

STODENT III

Stodent III is a Type 3 hard stone for making working models for removable dentures and thermoformed splints, antagonist models and flasking thermoplastic dentures. The combination of low expansion and compressive strength with a smooth surface makes STODENT III a versatile stone for numerous basic applications in the dental laboratory.

CHARACTERISTICS

- Low expansion
- Color: yellow, blue, light green (mango scent)

ADVANTAGES

- High fluidity
- Good mechanical properties

STODENT IV

Stodent IV is a Type 4 super-hard stone designed for making dies, working models for frame dentures, implant dentures or thermoformed splints. Its high mechanical resistance makes it perfect for flasking thermoplastic dentures. Low expansion along with perfect detail production makes this the perfect stone for any high-precision work, such as with crowns and bridges.

CHARACTERISTICS

- Low expansion
- Colors: brown, creamy (vanilla fragrance), light-gray (strawberry aroma)

ADVANTAGES

- Perfect reproduction of details
- Very good mechanical properties

THERMO PRESS 25
INJECTION MOLDING MACHINE

Thermo Press 25 is an automated thermoplastic injection molding machine, providing the ability to inject most thermoplastic materials on the market. It is adapted to aluminum tubes and cartridges with a diameter of 25 mm, a maximum operating temperature of 300°C and a pressure in the range of 4-9 bar. Combined with quick-mount flasks and compact dimensions, it makes it versatile and perfect for the daily work of dental technicians.

CHARACTERISTICS

- Cartridge diameter: 25 mm
- Operating pressure: 4 - 9 bar
- Compact dimensions
- Quick-mount flasks

ADVANTAGES

- Occupational safety
- Easy to use
- Simple installation and maintenance
- Versatility of material selection for injection molding

Technical data:

Voltage	230V 1N ~ 50Hz
Power	550 W
Pressure	4 - 9 Bar
Max temperature	300°C
Dimensions	180 x 620 x 265 mm
Weight	27 kg

VILLACRYL THERMO PRESS
THERMOPLASTIC MATERIAL FOR DENTURES

GRANULES

VTPG2500	**Villacryl Thermo Press 0**	250 g
VTPG250T2	**Villacryl Thermo Press T2**	250 g
VTPG250T3	**Villacryl Thermo Press T3**	250 g
VTPG250T4	**Villacryl Thermo Press T4**	250 g

CARTRIDGES

VTPK22M0	**Villacryl Thermo Press CARTRIDGES 22mm M 0**	12 pcs
VTPK22L0	**Villacryl Thermo Press CARTRIDGES 22mm L 0**	12 pcs
VTPK24M0	**Villacryl Thermo Press CARTRIDGES 24mm M 0**	12 pcs
VTPK24L0	**Villacryl Thermo Press CARTRIDGES 24mm L 0**	12 pcs
VTPK25M0	**Villacryl Thermo Press CARTRIDGES 25mm M 0**	12 pcs
VTPK25L0	**Villacryl Thermo Press CARTRIDGES 25mm L 0**	12 pcs
VTPK22MT2	**Villacryl Thermo Press CARTRIDGES 22mm M T2**	12 pcs
VTPK22LT2	**Villacryl Thermo Press CARTRIDGES 22mm L T2**	12 pcs
VTPK24MT2	**Villacryl Thermo Press CARTRIDGES 24mm M T2**	12 pcs
VTPK24LT2	**Villacryl Thermo Press CARTRIDGES 24mm L T2**	12 pcs
VTPK25MT2	**Villacryl Thermo Press CARTRIDGES 25mm M T2**	12 pcs
VTPK25LT2	**Villacryl Thermo Press CARTRIDGES 25mm L T2**	12 pcs
VTPK22MT3	**Villacryl Thermo Press CARTRIDGES 22mm M T3**	12 pcs
VTPK22LT3	**Villacryl Thermo Press CARTRIDGES 22mm L T3**	12 pcs
VTPK24MT3	**Villacryl Thermo Press CARTRIDGES 24mm M T3**	12 pcs
VTPK24LT3	**Villacryl Thermo Press CARTRIDGES 24mm L T3**	12 pcs

VILLACRYL THERMO ISO-CLEAR
Light-curing insulator

TP032	**Villacryl Thermo Iso-clear**	30 ml

VILLACRYL THERMOTUBES
Universal disposable aluminum tubes

TP034	**Aluminum tubes hollow 22 height 90mm**	30 pcs
TP035	**Aluminum tubes hollow 22 height 120mm**	30 pcs
TP040	**Aluminum tubes hollow 25 height 75mm**	30 pcs
TP041	**Aluminum tubes hollow 25 height 100mm 30 pcs**	30 pcs

VILLACRYL THERMO MULTI SPRAY
Multi-purpose spray lubricant for flasks and cartridges

TP044	**Villacryl Thermo Multi Spray**	400 ml

4SHINE POLISHING POWDER
Polishing powder for pre-polishing

TP4SPPR02	**4Shine Polishing powder Regular**	2 kg
TP4SPPR10	**4Shine polishing powder Regular**	10 kg
TP4SPPH02	**4Shine polishing powder Hard**	2 kg
TP4SPPH10	**4Shine polishing powder Hard**	10 kg

4SHINE POLISHING PASTE
Polishing paste for final polishing and shining

TP4SPPT	**4Shine Polishing paste thermoplastic**	250 g

STODENT III ARTI
Type 3 hard stone for articulation of stone models

Yellow	**G3A03: 3 kg**	**G3A06: 6 kg**	**G3A20: 4x5 kg**	**G3A25: 25 kg**

STODENT III
Type 3 hard stone for antagonistic modeling and flasking

Yellow	**G3Z03: 3 kg**	**G3Z06: 6 kg**	**G3Z25: 25 kg**
Blue	**G3N03: 3 kg**	**G3N06: 6 kg**	**G3N25: 25 kg**
Light green	**G3J03: 3 kg**	**G3J20: 4x5 kg**	**G3J25: 25 kg**

STODENT IV
Type 4 hard stone for working models and flasking

Brown	**G4B03: 3 kg**	**G4B06: 6 kg**	**G4B20: 4x5 kg**	**G4B25: 25 kg**
Beige		**G4K03: 3 kg**	**G4K20: 4x5 kg**	**G4K25: 25 kg**
Grey		**G4P03: 3 kg**	**G4P20: 4x5 kg**	**G4P25: 25 kg**

MODELLING WAX
Modelling wax for auxiliary works

TP030	**Modelling wax soft**	500 g
TP031	**Modelling wax hard**	500 g

THERMO PRESS Q&A

1. Does the material contain monomer or acrylic?
Villacryl Thermo Press is a thermoplastic material based on microcrystalline polyamide, it is free of acrylic polymers, and therefore does not cause irritation and allergies.

2. Can Villacryl Thermo Press be repaired?
Villacryl Thermo Press, like all polyamide-based materials, does not chemically combine with traditional acrylic resins. Denture corrections and repairs can be performed with material injection using polyamide-based thermoplastic repair fluids. To inject the material, in the case of repair or relining, a small amount of repair material should be applied (before injection) to the previously prepared edges of the denture.

3. Is Villacryl Thermo Press irritating and allergenic?
Villacryl Thermo Press material has been tested by external medical device inspection centers. Studies have shown that Villacryl Thermo Press is safe for use in the oral cavity and does not cause irritation, allergies or soft tissue inflammation.

4. What kind of stone is used to make the model for working with the Villacryl Thermo Press?
Villacryl Thermo Press was created with ultra-low shrinkage materials to ensure the best possible fit of the denture in oral cavities of the patients. Therefore, there is no need to use expansion stone, and the model can be made from standard class IV stone.

5. How to make injection channels?
It is recommended to use sprue with a minimum diameter of 5 mm. Glue the injection channels to the flasked denture in the first part of the injection flask. The channels should be "U"-shaped and adhere to the denture plate with a surface corresponding to their diameter. This will prevent the formation of undercuts.

6. What is the recommended thickness of the material?
The recommended minimum thickness of the modeled element is 2 mm. The flexibility of the denture plate components can be adjusted by changing the modeling thickness or shape in wax. Correct design and optimal process of denture preparation prevents mechanical damage to the denture made of Villacryl Thermo Press.

7. How to prepare the teeth for injection?
The artificial teeth do not chemically bond with Villacryl Thermo Press. Mechanical retention in the form of "T"-shaped retention channels should be performed to ensure their good retention in the denture plate. One canal on the mucosal side of the tooth, and the other two on the approximal surfaces. We recommend using a drill bit with a diameter of about 1 mm, as well as very carefully removing any residual wax during scalding

8. How to determine the melting time of the material?
For the cartridge, the melting time of the material is indicated in the instructions for use and on the label, and is 19 minutes for size M and 27 minutes for size L, respectively. When using granules to fill the aluminum tubes themselves, use the formula: number of grams of granules + 2 = melting time of the material

9. Should the flask be heated before injection?
If the injection molding machine does not heat the flasks before injection, ensure that the flask is heated to 90-100°C. The best result is obtained by heating the injection flaskin a model drying oven.

10. What is the temperature range for injection?
The most suitable temperature for injection is 275°C. Be sure not to exceed temperatures above 285°C.

11. What is the recommended injection pressure?
The injection pressure will vary with different injectors. Refer to the recommendations of the injection molding machine manufacturer. Positive results are obtained at as low as 6 bars.

12. How long should I wait before opening the flaskafter injection?
After injection, the flaskshould spontaneously cool to room temperature. To eliminate shrinkage, it is recommended to wait a minimum of 15 minutes after the injection.

13. Raising the height of the occlusion

Adequate occlusion height is the basis of a well-made prosthetic restoration. To prevent lifting, follow the manufacturer's recommendations for the injection procedure, and keep the injection flaskin perfect condition and fit.

14. Denture does not fit in patient's mouth

Denture's failure to fit can be due to shrinkage of the material during the injection procedure; using too much UV insulator; or a problem created at the impression taking or storage stage. It is also important to properly prepare the impression for casting the model. To protect against dimensional changes or an incorrect surface of the stone model, special attention should be paid to: the time from impression taking to casting and the selection of an appropriate disinfectant that is safe for the material used to take the impression. Residual saliva and blood can disrupt the prosthetic area, resulting in a poor fit of the restoration in the mouth.

15. Dentures often break

Every Everall7 product has mechanical properties that exceed the minimum requirements of ISO standards. Villacryl Thermo Press is characterized by its tailored flexibility and hardness for most clinical cases, which can be further adjusted by the thickness and shape of the modeling in the wax. Problems with reduced mechanical properties can result from an improper fabrication process, the use of non-complementary products, or errors in designing the thickness of the prosthetic restoration. Individual anatomical features of the patient's prosthetic area or trauma nodes leading to denture fracture are also very important.

16. How to clean and care for a denture made of Villacryl Thermo Press?

Wash the denture after each meal with a soft brush under cool, running water. Standard denture hygiene pastes that do not contain abrasive substances can be used for cleaning. It is recommended to wash the denture from time to time in a vibrating washer filled with a special cleaning liquid for dentures made of thermoplastic materials. Do not leave the denture in the sun or near heat sources. Strongly oxidizing substances, such as Corega Tabs, should not be used to clean dentures. The denture is not resistant to the long-term effects of alcoholic beverages with a concentration above 40%.

17. Discoloration caused by the use of dentures

Discoloration of restorations used by the patient is due to improper care of the denture. Sediment caused by smoking, drinking coffee and dyes contained in food consumed, and even medications taken affect the aesthetics of the denture. In order to prevent this, the denture should be perfectly polished to reduce adhesion and sorption of substances from the oral cavity. In addition, the patient must not use aggressive denture cleaners, meaning those containing oxidizing substances, as this will degrade the color of the denture.

18. Injection failures

Most often, they are caused by failure to follow the instructions in the product manual or because of the use of non-complementary products. The most common failures include:

- material under-injecting, which can be caused by: inadequate modeling, too little material, too low melting point, placing the material in a cool flask, poorly localized channels or too low pressure;

- contamination can result from: improper storage of granules, moisture in the granules, failure to keep the workplace clean, use of an unsuitable insulator, or poor maintenance of the heating chamber of the injection molding machine;

- teeth can fall out of the denture when: the retention canals are improperly prepared (location and diameter), too soft silicone is used or there is too much silicone; the denture is improperly modeled in wax or improperly machined after injection;

- raising occlusion height can occur when: the injection can will be inaccurately fitted, and the screw threads will be stripped; too soft silicone will be used or there will be too much silicone; the stone used for flasking will not have the right mechanical parameters; the injection pressure will be too high.

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Trust the experience

Rev.08.2022