### **AUDIO 3D RESINS**

# HIGH PERFORMANCE POLYMERS



>>> PRODUCT CATALOGUE <<< 2024





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### **PRODUCT OVERVIEW**

### 3D PREMIUM RESINS

#### MEDICALPRINT® NOBREAK

In-Ear-Monitoring Earmoulds Hearing Protection ITE Shells







#### MEDICALPRINT® SHELL

ITE Shells In-Ear-Monitoring Foil-Earmoulds Hearing Protection (active)







#### LUXAPRINT® SHELL

ITE Shells In-Ear-Monitoring Foil-Earmoulds Hearing Protection (active)







#### LUXAPRINT® COCOON

Castings/Special Casting Moulds





#### MEDICALPRINT® MOULD

In-Ear-Monitoring Earmoulds Hearing Protection ITE Shells





#### LUXAPRINT® MOULD

In-Ear-Monitoring Earmoulds Hearing Protection ITE Shells







#### LUXAPRINT® FLEX

Swim Plugs Hearing Protection Earmoulds In-Ear-Monitoring







#### **LUXAPRINT® CAST 2.0**

Castings/Casting Moulds







### **PRODUCT OVERVIEW**

### LACQUERS/ACCESSORIES

#### MEDICALPRINT® COAT

High gloss sealing/soft coating: In-Ear-Monitoring Earmoulds Hearing protection



ITE Shells





#### LUXAPRINT® FLEX COAT

Soft surface sealing: In-Ear-Monitoring Hearing Protection Earmoulds

Swim Plugs







#### LUXAPRINT® SHELLAC

High gloss sealing: ITE Shells In-Ear-Monitoring Earmould Hearing Protection







#### LUXAPRINT® SHELLAC COLOR

Coloured sealing:

ITE Shells In-Ear-Monitoring Earmould









#### **CAST SEPARATOR 2.0**

Separating agent for Castings/Casting Mould





#### **CAST SEPARATOR PU**

Separating agent for Castings/Casting Mould







### **APPLICATIONS**

#### **ITE SHELLS**

LUXAPRINT® SHELL LUXAPRINT® MOULD MEDICALPRINT® SHELL MEDICALPRINT® MOULD MEDICALPRINT® NOBREAK





#### **EARMOULD**

LUXAPRINT® MOULD LUXAPRINT® FLEX MEDICALPRINT® MOULD MEDICALPRINT® NOBREAK

#### **HEARING PROTECTION**

LUXAPRINT® MOULD LUXAPRINT® FLEX MEDICALPRINT® MOULD MEDICALPRINT® NOBREAK





#### **FOIL-EARMOULD**

LUXAPRINT® SHELL LUXAPRINT® MOULD MEDICALPRINT® SHELL MEDICALPRINT® MOULD MEDICALPRINT® NOBREAK

#### **HEARING PROTECTION** (ACTIVE)

LUXAPRINT® SHELL LUXAPRINT® MOULD MEDICALPRINT® SHELL MEDICALPRINT® MOULD MEDICALPRINT® NOBREAK





#### IN-EAR-MONITORING

LUXAPRINT® SHELL LUXAPRINT® MOULD MEDICALPRINT® SHELL MEDICALPRINT® MOULD MEDICALPRINT® NOBREAK







#### CASTINGS/ **CASTING MOULD** LUXAPRINT® CAST 2.0 LUXAPRINT® COCOON

Material type

**Application** 



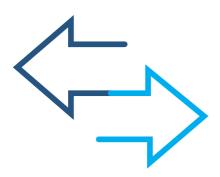
Colour intensity

#### **LUXAPRINT®**

> Bisphenol A free, MMA-free

polyurethane

- > highest initial hardness
- > minimal initial discolouration
- > highest surface hardness
- > drying process



transparent

#### **MEDICALPRINT®**

> MMA-free

· very low viscosity

- > high initial hardness
- > no initial discolouration
- > highest impact resistance
- > no drying process

# **MEDICALPRINT®**

LACQUERS

Material type	Application	Colour	<b>Colour intensity</b> low high	Product features	Medical devices Class MDR
NOBREAK	Earmoulds     Hearing Protection     In-Ear-Monitoring     ITE Shells	clear, rose, red- transparent, blue- transparent, black, white, beige, medium brown, dark brown	transparent opaque	<ul> <li>highest breaking strength</li> <li>max. impact resistance</li> <li>high initial transparency</li> <li>easy processing</li> </ul>	in process
SHELL	ITE Shells Foil-Earmoulds Hearing Protection (active) In-Ear-Monitoring	beige, skin blue-opaque, red-opaque, black, white	:▼.i	<ul> <li>low sedimentation tendency</li> <li>high impact resistance</li> <li>break resistance</li> <li>maximal precision</li> <li>optimal depth curing</li> </ul>	lla
MOULD	Earmoulds     Hearing Protection     In-Ear-Monitoring     ITE Shells	clear, rose, rose-orange	transparent	<ul><li>low viscosity</li><li>high impact resistance</li><li>high initial transparency</li><li>maximal precision</li></ul>	lla

Material type	Application	Colour	low high	Product features	Class MDR
LUXAPRINT® SHELLAC	High gloss sealing:  ITE Shells In-Ear-Monitoring Earmoulds Hearing Protection	transparent	₹i transparent	easy to clean surface     "blue ray" yellowing protection     high surface hardness     strong adhesion     very low viscosity	lla
LUXAPRINT® SHELLAC COLOR	Coloured sealing:  ITE Shells In-Ear-Monitoring Earmoulds Hearing Protection	blue, brown, yellow, green, orange, red, black, violet	transparent	colours freely mixable long-term colour stable extended colour stability scratch proof very low viscosity strong adhesion	lla
LUXAPRINT® FLEX COAT	Soft surface sealing for hard & soft earmoulds:  In-Ear-Monitoring, Hearing Protection Earmoulds Swim Plugs	transparent	<b>▼</b> transparent	permanently soft strong bonding plue ray" yellowing protection low viscosity perfect for dipping	lla
MEDICALPRINT® COAT	High gloss sealing/ soft coating:  • Earmoulds  • Hearing protection  • In-Ear-Monitoring  • ITE Shells	transparent	▼	anti-slip-effect     low viscosity     strong bonding     perfect for dipping     for impact resistant earmoulds	in process



MDR Medical Device Regulation EU TPO-free does not contain Diphenyl(2,4,6-trimethyl-benzoyl)phosphinoxide [Reproductive Toxicity, Cat. 1B] THF-MA-free does not contain any tetrahydrofurfuryl methacrylate [Reproductive Toxicity, Cat. 1B] BPA-free does not contain any raw material based on bisphenol A [Reproductive Toxicity, Cat. 1B] MMA-free does not contain any methyl methacrylate

resin

Medical devices

Class MDR

**Product features** 

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### MEDICALPRINT® NOBREAK

# IN-EAR-MONITORING EARMOULDS HEARING PROTECTION ITE SHELLS

Light-curing formulation for 3D printing of earmoulds, In-Ear-Monitoring, hearing protection & ITE shells.

Colours: clear, rose, red-transparent, blue-transparent, black, white, beige,

medium brown, dark brown

Wavelength: 385 nm

Medical Device Class Ila

Highest breaking strength

- Max. impact resistance
- High initial transparency
- Easy processing



Property	Standard	Unit measurement	Result
Tensile strength	DIN EN ISO 527-11)	MPa	> 45*
Elongation	DIN EN ISO 527-11)	-	>7 %*
Hardness	-	Shore D	>70*

<sup>&</sup>lt;sup>1)</sup> Plastics: Determination of flexural properties (in accordance with the norm at room temperature)

clear	1.000 g
rose	1.000 g
blue-transparent	1.000 g
red-transparent	1.000 g
beige	1.000 g
white	1.000 g
black	1.000 g
medium brown	1.000 g
dark brown	1.000 g

\*available 2024





Wide range of colours for making all kinds of earmoulds: ITE shells, in-ear monitoring, hearing protection, etc.







Maximum space efficiency thanks to extremely thin-walled shells and foil earmolds.



### MEDICALPRINT® MOULD

#### IN-EAR-MONITORING EARMOULDS HEARING PROTECTION ITE SHELLS

Light-curing formulation for 3D printing of earmoulds, In-Ear-Monitoring, hearing protection & ITE shells.

**Colours:** clear, rose, rose-orange

Wavelength: 385 nm

Medical Device Class IIa

• High initial transparency

• High impact resistance

• Max. construction precision

No drying process required











Property	Standard	Unit measurement	Result
Flexural strength	DIN EN ISO 178 <sup>1)</sup>	MPa	> 75
Flexural modulus	DIN EN ISO 178 <sup>1)</sup>	MPa	> 1900
Tensile strength	DIN EN ISO 527-1 <sup>2)</sup>	MPa	> 50
Elongation	DIN EN ISO 527-12)	-	> 4 %
Hardness	-	Shore D	> 80
Biocompatibility	DIN EN ISO 10993-1 <sup>3)</sup>	-	complies



<sup>&</sup>lt;sup>2)</sup> Plastics: Determination of tensile properties (in accordance with the norm at room temperature)

clear 2.0 rose 2.0	1.000 g 1.000 g	0	03316 03314
rose-orange 2.0*	1.000 g		03304





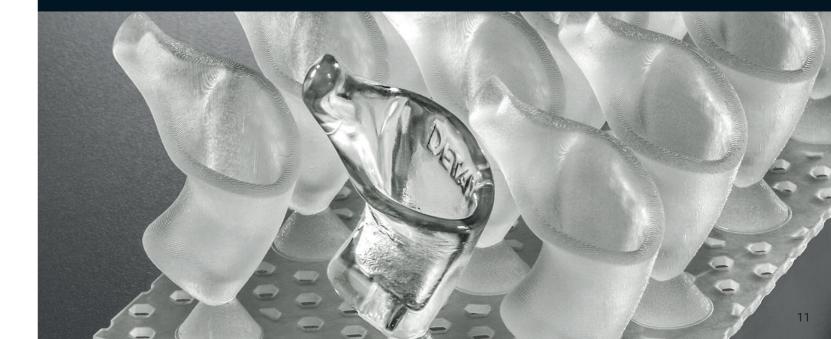
Brilliant transparency directly after printing. Longterm colour stability, without yellowing effects due to post exposure.

The high impact strength and good mechanical flexural and fracture strengths ensure long service life of the earmoulds.





Particularly suitable for delicate foil earmolds and RIC earmoulds, with long supports.



<sup>&</sup>lt;sup>3</sup> Biological evaluation of medical devices – Part 1: Evaluation and testing within a risk management process

### MEDICALPRINT® SHELL

## ITE SHELLS IN-EAR-MONITORING FOIL-EARMOULDS HEARING PROTECTION (ACTIVE)

Light-curing formulation for 3D printing of hearing aid shells, In-Ear-Monitoring and foil earmoulds.

**Colours:** beige, blue-opaque, red-opaque, black, skin, white, medium brown, dark brown

Wavelength: 385 nm Medical Device Class IIa

- Very high construction precision
- High impact resistance
- Reduced sedimentation tendency
- No drying process required









Property	Standard	Unit measurement	Result
Flexural strength	DIN EN ISO 178 <sup>1)</sup>	MPa	> 75
Flexural modulus	DIN EN ISO 1781)	MPa	> 1900
Tensile strength	DIN EN ISO 527-1 <sup>2)</sup>	MPa	> 50
Elongation	DIN EN ISO 527-1 <sup>2)</sup>	-	> 4 %
Hardness	-	Shore D	> 80
Biocompatibility	DIN EN ISO 10993-13)	-	complies

<sup>&</sup>lt;sup>1)</sup> Plastics: Determination of flexural properties (in accordance with the norm at room temperature)

<sup>&</sup>lt;sup>3)</sup> Biological evaluation of medical devices – Part 1: Evaluation and testing within a risk management process

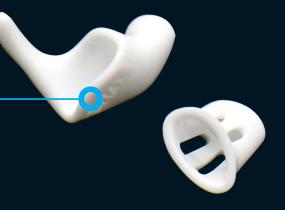
03016	beige 2.0	1.000 g
04164	blue-opaque*	1.000 g
04165	red-opaque*	1.000 g
03043	black*	1.000 g
02192	skin 2.0	1.000 g
04073	white*	1.000 g
04435	medium brown 2.0**	1.000 g
02039	dark brown 2.0**	1.000 g





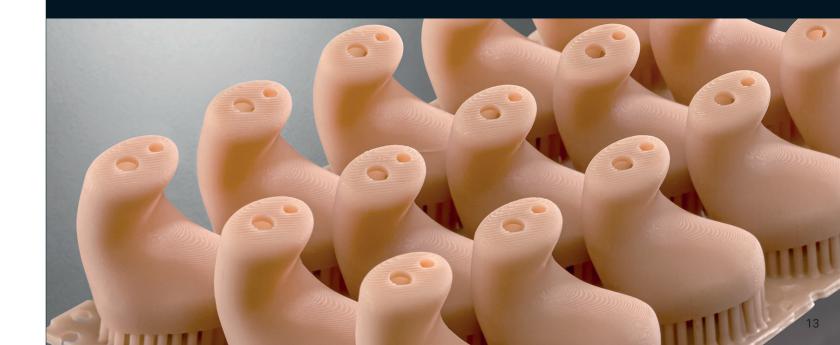
Wide range of classic and modern colours, long-term stability, particularly for thin-walled earmolds.

Very high production precision and surface hardness, outstanding mechanical flexural and breaking strength.





The intense colours are particularly suitable for hearing protection earmoulds and can be optimally used in the area of in-ear monitoring for visual side marking.



<sup>&</sup>lt;sup>2)</sup> Plastics: Determination of tensile properties (in accordance with the norm at room temperature)

### MEDICALPRINT® COAT

HIGH GLOSS SEALING/SOFT COATING: EARMOULDS HEARING PROTECTION IN-EAR-MONITORING ITE SHELLS

Light curing lacquer for permanent surface sealing of 3D printed earmoulds made of (meth)acrylate or for soft coating of hard earmoulds.

**Colour:** transparent

Medical Device Class IIa

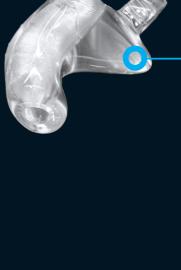
- anti-slip-effect
- low viscosity
- strong bonding
- perfect for dipping
- for impact resistant earmoulds





transparent 50 ml transparent 100 ml transparent 300 ml

\*available 2024



Perfectly matched to the material properties of MEDICALPRINT® NOBREAK.

Soft coating for hard earmoulds. Creates a non-slip surface and ensures high wearing comfort. The anti-slip effect guarantees the secure fitting of the earmould.





Easy application (dip/brush). Creates a homogeneous, easy-to-clean surface.



### **LUXAPRINT®** MOULD

IN-EAR-MONITORING EARMOULDS HEARING PROTECTION ITE SHELLS

Light-curing formulation for 3D printing of hard earmoulds & hearing protection.

**Colours:** clear, rose, rose-orange, light beige, red, blue, intensive blue

Wavelength: 385 nm Medical Device Class IIa

- High initial hardness
- Max construction precision
- Optimum depth curing
- Low material consumption













<b>Parameters</b>	Standard	Unit	Results
Flexural strength	DIN EN ISO 178 <sup>1)</sup>	MPa	> 75
Flexural modulus	DIN EN ISO 178 <sup>1)</sup>	MPa	> 1750
Tensile strength	DIN EN ISO 527-1 <sup>2)</sup>	MPa	> 47
Elongation	DIN EN ISO 527-1 <sup>2)</sup>	-	> 9 %
Hardness	-	Shore D	> 84
Biocompatibility	DIN EN ISO 10993-1 <sup>3)</sup>	_	complies

<sup>&</sup>lt;sup>1)</sup> Plastics: Determination of flexural properties (in accordance with the norm at room temperature)

<sup>&</sup>lt;sup>3)</sup> Biological evaluation of medical devices – Part 1: Evaluation and testing within a risk management process

clear rose rose-orange* light beige* red	500 g 500 g	1.000 g 1.000 g 1.000 g 1.000 g 1.000 g	03609 03946 03973 03611	0	03325 03323
blue intensive blue		1.000 g 1.000 g	03610	5 kg	03324

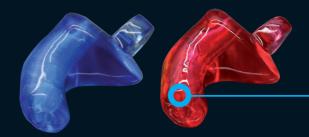




Wide range of classic colours of supreme transparency, especially for hearing protection and hearing aid earmoulds.

Maximum production process reliability thanks to high green part/initial hardness and strength.





Very high mechanical flexural and tensile strength without brittleness.



\* upon reque

<sup>&</sup>lt;sup>2)</sup> Plastics: Determination of tensile properties (in accordance with the norm at room temperature)

### **LUXAPRINT® SHELL**

ITE SHELLS
IN-EAR-MONITORING
FOIL-EARMOULDS
HEARING PROTECTION (ACTIVE)

Light-curing formulation for 3D printing of hard ITE shells.

Colours: beige, intensive blue, intensive red, black, white

Wavelength: 385 nm Medical Device Class IIa

Low viscosity

- High initial hardness
- Max construction precision
- Very high surface hardness











<b>Parameters</b>	Standard	Unit	Results
Flexural strength	DIN EN ISO 178 <sup>1)</sup>	MPa	> 70
Flexural modulus	DIN EN ISO 178 <sup>1)</sup>	MPa	> 1800
Tensile strength	DIN EN ISO 527-1 <sup>2)</sup>	MPa	> 47
Elongation	DIN EN ISO 527-1 <sup>2)</sup>	-	> 9 %
Hardness	-	Shore D	>82
Biocompatibility	DIN EN ISO 10993-1 <sup>3)</sup>	-	complies

<sup>&</sup>lt;sup>1)</sup> Plastics: Determination of flexural properties (in accordance with the norm at room temperature)

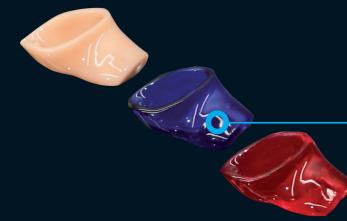




Classic or modern: The color palette offers the right colour for every application. Especially suitable for high-end monitoring.

Very high mechanical flexural and fracture strength without brittleness, even in thin-walled ITE shells.





Targeted colour setting for very high opacity with simultaneous optimum curing.



<sup>&</sup>lt;sup>2)</sup> Plastics: Determination of tensile properties (in accordance with the norm at room temperature)

<sup>&</sup>lt;sup>3)</sup> Biological evaluation of medical devices – Part 1: Evaluation and testing within a risk management process

### **LUXAPRINT® SHELLAC**

HIGH GLOSS SEALING: ITE SHELLS IN-EAR-MONITORING EARMOULD HEARING PROTECTION

Light curing lacquer for permanent surface sealing of 3D printed earmoulds made of (meth)acrylate.

Colour: clear-transparent

Medical Device Class IIa

- Easy to clean surface
- High surface hardness
- Strong bonding
- Very low viscosity
- "blue ray"- yellowing protection











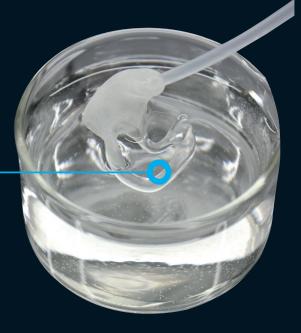






Brilliant finish without mechanical repolishing.

Easy to process (dip/brush). Creates a homogeneous, scratch-resistant and easy-to-clean surface (easy clean) and reduces cerumen adhesion.





Can be used in combination with LUXAPRINT® shellac color for mixing individual colours or for marking lettering.



### **LUXAPRINT® SHELLAC COLOR**

COLOURED SEALING: ITE SHELLS IN-EAR-MONITORING EARMOULD HEARING PROTECTION

Light curing lacquer for permanent coloured sealing of 3D printed earmoulds made of (meth)acrylate.

**Colours:** blue, brown, yellow, green, orange, red, black, violet

Medical Device Class IIa

- Colours freely mixable
- Long-term colour stable
- Extended colour stability
- Scratch-proof
- Very low viscosity







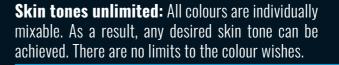


03995 03702 03705 03703 03700 03857	100 ml 100 ml 100 ml 100 ml 100 ml 100 ml	03994 03684 03678 03685 03682 03856
03704	100 ml	03686
	03701 03995 03702 03705 03703 03700 03857 03704	03995       100 ml         03702       100 ml         03705       100 ml         03703       100 ml         03700       100 ml         03857       100 ml





Transparent earmoulds can be simultaneously sealed with a high-gloss finish and permanently colour-coated. The surface is protected and has long-term colour stability.







Easy to process (dip/brush). Creates a homogeneous, scratch-resistant, easy-to-clean surface and reduces cerumen adhesion.



### **LUXAPRINT® FLEX**

SWIM PLUGS
HEARING PROTECTION
EARMOULDS
IN-EAR-MONITORING

**LUXAPRINT® FLEX:** Light-curing formulation for 3D printing of soft, massive earmoulds. **LUXAPRINT® FLEX coat:** UV curing one component lacquer for sealing of 3D printed hard and soft earmoulds.

Colour: clear

Wavelength: 385 nm

Medical Device Class IIa

- Permanently soft
- Memory effect
- High impact resistance
- Fast elastic recovery











\* not MMA-free

Property	Standard	Unit measurement	Resi	ult	
Tensile strength	DIN EN ISO 527-1 <sup>1)</sup>	MPa	>8	>8	
Elongation	DIN EN ISO 527-11)	-	> 60 %	> 60 %	
Tear strength	DIN ISO 34-1 <sup>2)</sup>	N/mm	> 35 without LUXAPRINT®	> 45 with LUXAPRINT®	
Hardness	-	Shore A	> 90 at room temperature	> 70 at body temperature	
Biocompatibility	DIN EN ISO 10993-13)	-	complies		

<sup>1)</sup> Plastics: Determination of flexural properties (in accordance with the norm at room temperature)

<sup>2)</sup> Rubber, vulcanized or thermoplastic: Determination of tear strength (in accordance with the norm at room temperature)

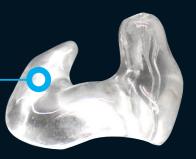
04246	LUXAPRINT® FLEX	500 g
04245	LUXAPRINT® FLEX	1.000 g
04247	LUXAPRINT® FLEX coat*	100 ml

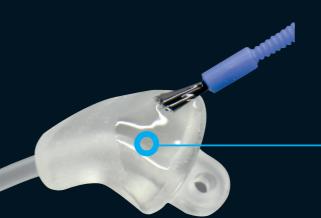




Thanks to the memory effect, the earmould returns to its original shape after deformation, retaining the dimensions.

Earmoulds printed with LUXAPRINT® FLEX guarantee a natural feel: rigid at room temperature, flexible and supple at body temperature.





The permanently soft sealing with LUXAPRINT® FLEX coat improves tear resistance and impact strength and protects the flexible earmold from dirt and cerumen adhesion.



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<sup>&</sup>lt;sup>3)</sup> Biological evaluation of medical devices – Part 1: Evaluation and testing within a risk management process

### **LUXAPRINT®** COCOON

#### CASTINGS/CASTING MOULDS

Light-curing formulation for 3D printing of soft elastic, transparent cast forms, manufacturing of silicone earmoulds.

Colour: clear-transparent Wavelength: 385 nm **Technical Product** 

- Flexible and stable in form
- Easy to remove
- No sticking to the form
- Common VPS silicones













Property	Standard	Unit measurement	Result
Tensile strength	DIN EN ISO 527-1 <sup>1)</sup>	MPa	>7
Tear strength	DIN ISO 34-1 <sup>2)</sup>	N/mm	> 30
Hardness	-	Shore A	> 90



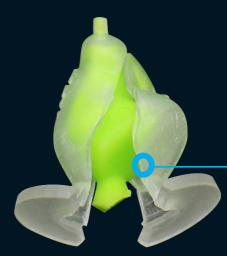




Fast peel-off – quick removal of the blank: No adhesion of silicone to the cast form; no additional separator necessary.

The transparent cast form made of LUXAPRINT® COCOON allows visual control of the filling process; air pockets are avoided.





Due to the predetermined tear line and the flexible material properties, the earmould can be demolded without tools. This prevents formation of sharp-edged fragments that could damage the silicone earmould. The nominal tear line can be easily created directly in the design software (3shape, Cyfex).



<sup>&</sup>lt;sup>1)</sup> Plastics: Determination of flexural properties (in accordance with the norm at room temperature)
<sup>2)</sup> Rubber, vulcanized or thermoplastic: Determination of tear strength (in accordance with the norm at room temperature)

### **LUXAPRINT® CAST 2.0**

#### CASTINGS/CASTING MOULDS

Light-curing formulation for 3D printing of hard cast forms, manufacturing of silicone earmoulds or polyurethane earmoulds.

Colour: green-transparent Wavelength: 385 nm Technical Product

- Easy to break
- Predefined brittleness
- Low viscosity
- "easy peel off" with Cast Separator 2.0



1.000 g

5 kg









Property	Standard	Unit measurement	Result
Flexural strength	DIN EN ISO 178 <sup>1)</sup>	MPa	> 75
Flexural modulus	DIN EN ISO 178 <sup>1)</sup>	MPa	> 2300
Hardness	-	Shore D	> 85

<sup>&</sup>lt;sup>1)</sup> Plastics: Determination of flexural properties (in accordance with the norm at room temperature)

green-transparent

green-transparent





Highest process reliability and production precision with minimum wall thickness.

The high stability of the material enables production of very thin-walled cast forms. The transparency enables visual control of the filling process.





Effortless break-up of the cast form due to defined brittleness and easy peel-off when using the cast separator, especially for more complicated structures.



28

03918

03327

### **CAST SEPARATOR 2.0**

### SEPARATING AGENT FOR CASTINGS/CASTING MOULD

Separating agent for an effective isolation of 3D printed cast forms against VPS or A-silicone.

Colour: transparent
Technical Product



03636 Cast Separator 2.0

500 ml



### **CAST SEPARATOR PU**

### SEPARATING AGENT FOR CASTINGS/CASTING MOULD

Separating agent for an effective isolation of 3D printed cast forms against thermoplastic polyurethane.

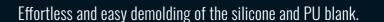
Colour: transparent
Technical Product

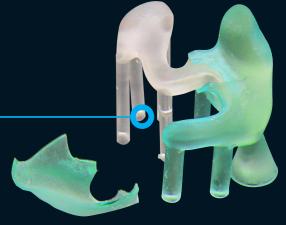






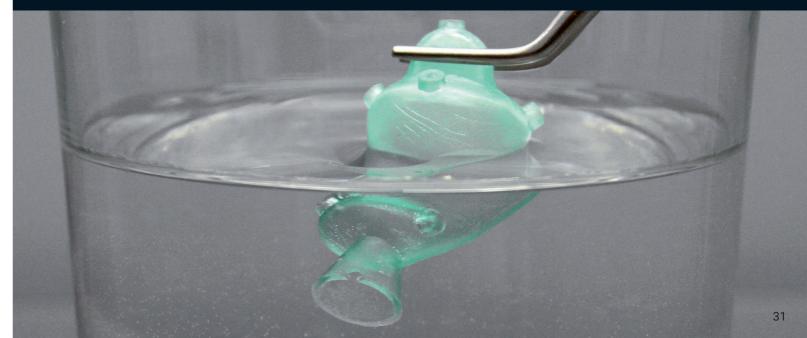
Provides a durable and safe insulating layer for the additively manufactured cast forms.







The ready-to-use immersion solution enables quick and easy application.



04142 Cast Separator PU

500 ml

### PROCESS VALIDATION PRINTERS







Qualific Done In pro		ASIGA MAX Max / Mini	ASIGA Pico2	ASIGA PRO2	ASIGA PRO 4K	MICROLAY Versus	Miicraft Prime / Hyper Series	Milicraft Ultra Series	Rapid shape 20 / 30 Series	Rapid shape 40 Series	Rapid shape 90 Series	W2P osnes
LUXAPRINT	T® MOULD	<b>✓</b>	~	~	~	~	~	~	~	~	~	~
LUXAPRINT	T® SHELL	~	~	~	~	~	~	~	~	~	~	~
LUXAPRINT	T® FLEX	<b>~</b>	~	~	~	~	~	~	~	~	~	~
LUXAPRINT	T® COCOON	~	~	~	~	~	~	~	~	~	~	~
LUXAPRINT	T® CAST 2.0	✓	~	<b>✓</b>	<b>✓</b>	~	~	~	~	~	~	~
	RINT® MOULD	<b>✓</b>	~	~	~	~	~	~	~	~	~	~
MEDICALPI	RINT® SHELL	<b>✓</b>	~	~	~	~	~	~	~	~	~	~
MEDICALPF	RINT® NOBREAK											



### CERTIFIED VALIDATED RELIABLE

Only the combination of high-perfomance resins with scientifically based expert knowledge from all areas of the digital workflow leads to cumulated expertise, to truly innovative products, and thus to an unlimited choice of materials. DETAX 3D materials are validated for all standard DLP printers. Our validation portfolio is continuously being expanded with new materials and qualified printers. To this end, our experts check and document complete process sequences in acordance with the relevant standards and regulatory requirements. This ensures permanently reproducible results and constant product quality.

Digital workflow requires profound material competence and a close cooperation with the technology partners in order to perfectly match individual elements of the process chain. For transparency and process reliability, all instructions for use comprise an overview of validated priters, certified finishing equipment (post-exposure, cleaning, etc.) and detailed flow-charts of the manufacturing process.

Our expert team will support you with useful tips.

edition: 06.10.23

### PROCESS VALIDATION CURING DEVICES

#### Qualification **✓** Done In process On request NK Optik Otoflash G171 N2 NK Optik NK Flash 250 Dentalfarm Rapid Shape Phrozen PCU LED N2 LUXAPRINT® MOULD **~ ~ ~ ~ ~** LUXAPRINT® SHELL **~ ✓ ~ ~ ~ ~ ✓ ~** UXAPRINT® FLEX **~ ✓ ✓ ~** LUXAPRINT® COCOON ~ **✓ ✓ ✓** ✓ ✓ ✓ ~ LUXAPRINT® CAST 2.0 ✓ ✓ ~ ~ ✓ **~** ✓ ~

MEDICALPRINT® MOULD	~	~	~			•		•
MEDICALPRINT® SHELL  bogs 20, skm 20	<b>~</b>	<b>V</b>	<b>V</b>			•		•
black, blue-graque, red-graque	<b>~</b>	<b>.</b>	<b>V</b>			•		•
white	>	~	~	•	•	•	•	•
MEDICALPRINT® NOBREAK				•	•	•	•	•

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### GOOD TO KNOW ...



#### **BOTTLE ROLLER**

By using a bottle roller, optimum mixing of the material is achieved, thus preventing possible segregation. The Eco Bags can be homogenized with an appropriate attachment.

#### **CLEANING**

Best cleaning results of the production jobs are achieved when the preand post-cleaning are carried out in separate tanks in the ultrasonic unit. After cleaning with isopropanol, it is recommended to clean the bores/openings with compressed air.



#### **POST-CURING UNIT**

The post-curing units recommended in the instructions for use ensure optimum through-hardening and surface curing, thus a biocompatible end product, and ensure high color brilliance and transparency, without discoloration.



#### **DETAX EXPERTS**@













**MEDICALPRINT®** 

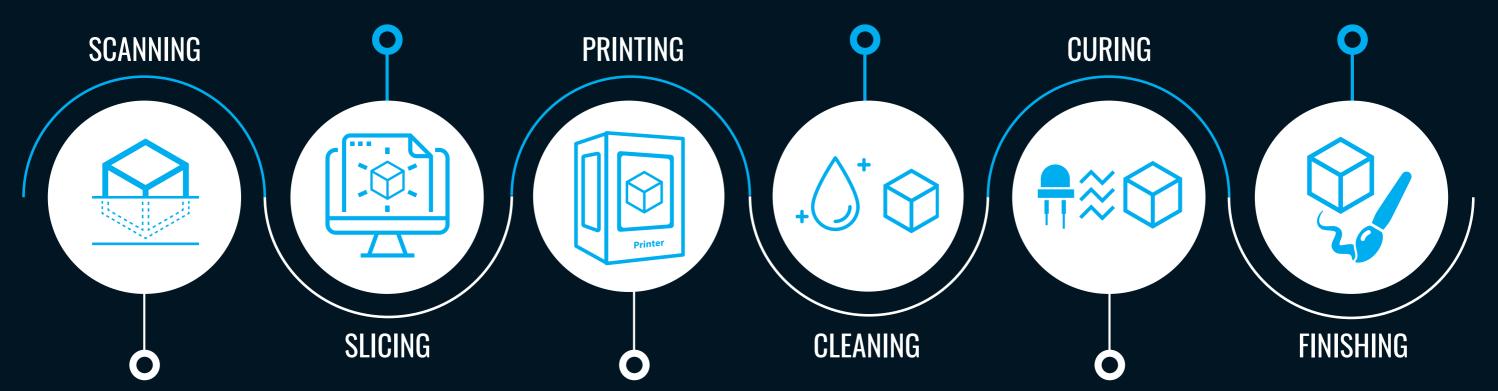
**LUXAPRINT®** 

### 3D WORKFLOW

After completion of the design (CAD), the slicing software prepares the objects for printing. The slicing process creates the individual layers to be exposed. The software serves as an intermediary between the 3D model and the 3D printer.

After printing, the non-polymerized material on the surface must be removed so as to leave no residue before the final post-exposure. Drain the print job off in the printer, then carry out a 2-stage secondary cleaning with isopropanol in an ultrasonic device. Cleaning can also be carried out in suitable separate devices.

Finally, the surface is finished as required, e.g. mechanically polished. Perfect fit, optimal product properties and reliable reproduction are the results of a validated and certified process.



Digitization of the patient's initial situation is the basis for the digital manufacturing process. It is done by scanning the ear directly, or the impression. From the data thus generated, a three-dimensional surface structure is generated – in most cases in the form of an STL file –, which is then transferred to a design software.

For a precise print job, the setting parameters of the corresponding material in the printer are necessary. These data are used not only to control the exposure process for the material, but also to determine the corresponding movement mechanics of the printers. Coordination of these processes is the prerequisite for successful DLP/LCD printing of challenging structures.

The properties of the final product depend, among other things, on the finishing process. Correct post-exposure is very important for biocompatibility. To ensure that the printed structures are fully cured, post-exposure in devices with LED lamps or xenon flash light in an inert gas atmosphere is recommended.

### #HELLO **ECOBAG**



In addition to the 1-kg standard bottles, many LUXAPRINT® and MEDICALPRINT® materials will in future be offered in practical 5 kg Eco Bags. The bags are perfect for frequent users and are handy to use: The 2 handles (top and bottom) make it easy to fi II the printer tray. Highly pigmented materials can be homogenized with a roller mixer (with appropriate attachment). The empty bag can be rolled up to a tiny ball, thus taking up much less waste volume and significantly reducing plastic waste. **NEW: Volume indicator** on each item. The weight indicates how many more objects can be printed.



### >> PRODUCT VIDEOS







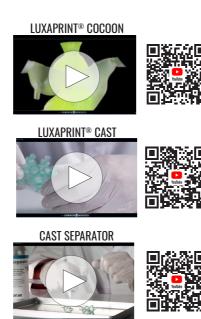












DETAX SOFTWEAR®

### **CERTIFICATION**



All LUXAPRINT® and MEDICALPRINT® Class IIa printing resins have been MDR-certified since October 2020. Thus, DETAX 3D materials are among the first in the industry with MDR certification.



All DETAX 3D Premium printing materials have a shelf life of 36 months and can be used during this period without any loss of quality in the printing process.













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