FLEXA 692 Technical Data Sheet

TDS EN_FLEXA692_102019



THE RUBBER-LIKE MATERIAL

FLEXA 692 is a photosensitive material for DWS stereolithography 3D printers, developed for the realization of flexible, rubber like models. It is suitable for prototypes of handles, gaskets, ergonomic tests, functional parts, footwear and wearable devices.

It is available also transparent (FLEXA 693).

THE FLEXA SERIES

The Flexa series includes all the materials suitable for the production of flexible prototypes and models. These materials are extremely accurate and precise and were developed inhouse by DWS.

HINTS FOR THE DESIGN

FLEXA 692 is the ideal material for models demanding flexibility and high elongation.

FLEXA 692 was developed exclusively exclusively for DWS 3D printers XFAB 2000 e XFAB 2500SD.

UV post treatment after the print and the cleaning is not required.

FEATURES

- Smooth Surfaces
- High Flexibility
- High Resolution and Precision
- High Accuracy

TECHNICAL FEATURES OF THE LIQUID MATERIAL

Environmental Values for Use	22°C - 27°C - max, RH 40% - 60%
Appearance / Colour	Liquid / Black
Viscosity	2300 ~ 3500 mPa•s at 25°C
Density	1,02 g/cm ³

TECHNICAL CHARACTERISTICS OF THE RESIN AFTER UV CURING

Elongation at Break (%)	20 ~ 80
Surface Hardness (Shore D)	27 ~ 33
Application / Use	For flexible, rubber-like models

Technical specification subject to change without notice.



FUSIA 445

Technical Data Sheet



HIGH RESOLUTION EASY TO BURN OUT

FUSIA 445 was developed for direct casting of jewellery models. FUSIA 445 allows the building of detailed parts with high quality resolution, accuracy, smooth and thin surfaces, and does not require any other manual finishing. It is easy to burn out with standard investments.

HINTS FOR DESIGN

FUSIA 445 is a photosensitive material for DWS stereolithography 3D printers, suitable for direct casting of detailed thin and solid models.

THE FUSIA SERIES

The Fusia series includes all the materials suitable for direct casting for jewellery and they are in-house developed by DWS. FUSIA 445 was developed expressly for DWS XFAB range 3D printers and for XPRO Q, for the print of clusters with Nauta Plus module "XCluster".

FEATURES

- Smooth Surfaces
- Filigree and Fine Details
- Easy to Burn Out
- High Accuracy
- No further manual finishing needed
- Yellow Colour

TECHNICAL CHARACTERISTICS OF THE LIQUID MATERIAL

Environmental Values for Use	22°C - 27°C - max, RH 40% - 60%
Appearance / Colour	Liquid / Yellow
Viscosity	300 ~ 600 mPa•s at 25°C
Density	1,08 g/cm ³

TECHNICAL CHARACTERISTICS OF THE RESIN AFTER UV CURING

Surface Hardness (Shore D)	56 ~ 63
Flexural Strength (MPa)	10 ~ 16
Flexural Modulus (MPa)	240 ~ 270
Elongation at Break(%)	6 ~ 11
Tensile Strength (Mpa)	6 ~ 13
Tensile Modulus (Mpa)	120 ~ 290
HDT@1,81MPa	31 ~ 34
Application / Use	Direct casting, XCluster



GL 4000 Technical Data Sheet



FEATURES

- Smooth Surface

- High Resolution

- High Accuracy

Soft Material
Pink Colour

THE SOFT MATERIAL FOR GINGIVAL MASKS

GL 4000 is a gingiva-like material designed for the production of realistic models of soft tissues and gingival masks. Its pink color and its consistence remind the natural gingiva ones.

This material is developed and produced in-house by DWS.

UV post treatment after the print and the cleaning is not required.

TECHNICAL CHARACTERISTICS OF THE LIQUID MATERIAL

Environmental Values for Use	22°C - 27°C - max, RH 40% - 60%
Appearance / Colour	Liquid / Pink
Density	1,00 g/cm ³
Viscosity	1400 ~ 2100 mPa•s at 25°C

TECHNICAL CHARACTERISTICS OF THE RESIN AFTER UV CURING

Elongation at Break (%)	25 ~ 65
Surface Hardness (Shore D)	20 ~ 24
Application / Use	Soft Tissue Models, Gingival Masks



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INVICTA 907

Technical Data Sheet

TDS EN_INVICTA907_112020





THE ABS-LIKE MATERIAL

INVICTA 907 is a photosensitive ABS-like material for DWS stereolithography 3D printers, designed to produce prototypes, concept models and mock up models.

The material is impact resistant and long-lasting and resistant to thermal stress.

THE INVICTA SERIES

The Invicta series includes all the materials suitable for the rapid prototyping of industrial and concept models. These materials are extremely accurate and precise and were developed to be used on DWS 3D printers.

HINTS FOR THE DESIGN

INVICTA 907 is the ideal material also for dental models and orthodontic arches. The opaque dark grey colour gives depth and detail to the surfaces.

FEATURES

- Smooth Surfaces
- High Resolution and Accuracy
- High Accuracy
- Heat Resistant
- . Very short printing times and costs

TECHNICAL FEATURES OF THE LIQUID MATERIAL

Environmental Values for Use	22°C - 27°C - max, RH 40% - 60%
Appearance / Colour	Liquid / Matt Dark Grey
Density	1,02 g/cm ³
Viscosity	800 ~ 1100 mPa•s at 25°C

TECHNICAL CHARACTERISTICS OF THE RESIN AFTER UV CURING

Elongation at Break (%)	6 ~ 8
Surface Hardness (ShoreD)	86 ~ 87
Tensile Strenght (MPa)	40 ~ 55
Tensile Modulus (MPa)	1750 ~ 2100
Flexural Strenght (MPa)	75 ~ 105
Flexural Modulus (MPa)	1900 ~ 2500
HDT@ 0,46 MPa	50 ~ 54
Application / Use	Rapid Prototyping, Functional Prototypes, Dental Models

Technical specification subject to change without notice.



PRECISA DL260

Technical Data Sheet







THE NANO-FILLED CERAMIC RESIN

PRECISA DL260 is a photosensitive nano-filled ceramic material for DWS stereolithography 3D printers, developed for rubber moulding applications, including VLT, liquid silicones and vulcanized rubber at medium-low temperatures (max. 90°C). Thanks to its accuracy it allows to build also prototypes, concept models and mock up models.

HINTS FOR THE DESIGN

PRECISA DL260 is suitable both for thin and thick models. It can be used to make rubber moulds with liquid silicones and vulcanized rubber at a maximum temperature of 90°C. Models made of PRECISA DL260 can be easily removed from the rubber mould and they can also be broken, allowing to carrying out some difficult cuts that would not be possible, otherwise, with a metal model. PRECISA DL260 delivers extremely smooth surfaces and exceptionally precise and sharp details.

THE PRECISA SERIES

The Precisa series includes all the materials suitable for the production of models for rubber moulding and for rapid prototyping of industrial and concept models. These materials are extremely accurate and precise and were developed inhouse by DWS.

FEATURES

- Smooth Surfaces
- High Resolution and Precision
- High Accuracy

TECHNICAL FEATURES OF THE LIQUID MATERIAL

Environmental Values for Use	22°C - 27°C - max, RH 40% - 60%
Appearance / Colour	Liquid / Opaque Grey
Density	1.29 g/cm ³
Viscosity	1600 ~ 2400 mPa•s at 25°C

TECHNICAL CHARACTERISTICS OF THE RESIN AFTER UV CURING

Elongation at Break (%)	2 ~ 6
Surface Hardness (Shore D)	86 ~ 91
Tensile Strength (MPa)	25 ~ 40
Tensile Modulus (MPa)	1350 ~ 2700
Flexural Strength (MPa)	50 ~ 65
Flexural Modulus (MPa)	1300 ~ 2800
HDT@0,46MPa	50 ~ 82
Application / Use	Rubber Master Models

Technical specification subject to change without notice.



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THERMA DM220

Technical Data Sheet





THE NANO-FILLED CERAMIC MATERIAL

THERMA DM220 is a photosensitive material for DWS' SLA systems. It is suitable for thick and thin models. It can be used to make liquid silicones and vulcanized rubber at a maximum temperature of 180-200°C.

THE THERMA SERIES

The Therma series includes all the materials suitable for rubber moulding of jewellery models, fashion accessories, design models and industrial parts. THERMA DM220, along with the materials of the Therma Series, was developed exclusively for DWS 3D printers.

ADVICE FOR USE

A thermal post treatment of 30 minutes at 120°C is recommended in order to obtain the maximum thermal resistance.

HINTS FOR DESIGN

THERMA DM220 is suitable for thick and thin models. It can be used to make liquid silicones and vulcanized rubber at a maximum temperature of 180-200°C.

Models made of THERMA DM220 can be easily removed from the rubber mould and they can also be broken, allowing to carrying out some difficult cuts that would not be possible, otherwise, with a metal model.

THERMA DM220 delivers extremely smooth surfaces and exceptionally precise and sharp details.

FEATURES

- Smooth Surfaces
- High Accuracy
- High Resolution
- No further manual finishing needed

TECHNICAL CHARACTERISTICS OF THE LIQUID MATERIAL

Environmental Values for Use	22°C - 27°C - max, RH 40% - 60%
Appearance / Colour	Liquid / Light Blue
Viscosity	12050 ~ 18050 mPa•s at 25°C
Density	1,52 g/cm³

TECHNICAL CHARACTERISTICS OF THE RESIN AFTER UV CURING

Surface Hardness (Shore D)	91 ~ 93
Flexural Strength (MPa)	65 ~ 120
Flexural Modulus (MPa)	4600 ~ 6500
Elongation at Break (%)	1~2
Tensile Strength (Mpa)	40 ~ 55
Tensile Modulus (Mpa)	4650 ~ 5600
HDT@0,46MPa	75 ~ 110
Application / Use	Rubber master models

Technical specification subject to change without notice.



VITRA DS2000

Technical Data Sheet



TRANSPARENT MATERIAL FOR MEDICAL IMAGING AND DIAGNOSTICS

VITRA DS2000 is a transparent material that makes it possible to display the patient's nerves position and anatomic structure for the study and planning of surgical actions.

FEATURES

- Smooth Surface
- High Resolution
- High Accuracy
- Transparent
- No further manual finishing needed

THE VITRA SERIES

The Vitra series includes all those materials suitable for the production of transparent models, prototypes and clear functional parts. These materials are extremely accurate, precise and are developed in-house by DWS.

TECHNICAL CHARACTERISTICS OF THE LIQUID MATERIAL

Environmental Values for Use	22°C - 27°C - max, RH 40% - 60%
Appearance / Colour	Liquid / Light yellow transparent
Density	1,01 g/cm ³
Viscosity	600 ~ 800 mPa•s at 25°C

TECHNICAL CHARACTERISTICS OF THE RESIN AFTER UV CURING

Surface Hardness (Shore D)	84 ~ 88
Elongation at Break (%)	2~6
Tensile Strength (MPa)	10 ~ 50
Tensile Modulus (MPa)	690 ~ 2200
Flexural Strength (MPa)	60 ~ 95
Flexural Modulus (MPa)	1300 ~ 2400
HDT @ 1,81 MPa	48 ~ 67
Application / Use	3D Medical Imaging, Diagnostics

Technical specification subject to change without notice.

