

DLP

Digital Light Processing



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ABS 3SP Tough

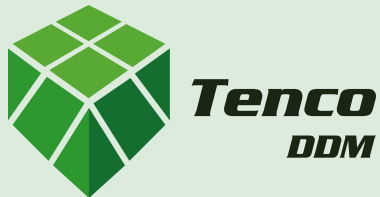
ABS Tough is an extremely tough ABS-like 3D printing material. ABS Tough 3SP is an ideal solution for a wide variety of applications including snap-fit items and assembly applications which require some elasticity. It is a tough material, suitable for high quality prototypes of items in categories such as automotive and consumer goods as well as stable enough for production-quality end use parts. ABS Tough 3SP is ideal for any application which requires a material capable of holding high stress and force. It is also capable of very high speed builds, allowing for large models to be built in under a day without sacrificing its exceptional surface quality.

| Material Properties | |
|-----------------------------|-----------------------------|
| Description | |
| Heat deflection temperature | 60°C at 1,82MPa |
| Impact Izod | 16,5J/m |
| Description | After post curing 5 min x 2 |
| Tensile strength | 75MPa |
| Tensile modulus | 1927MPa |
| Elongation at break | 5,2% |
| Flexural strength | 125MPa |
| Flexural modulus | 3016MPa |
| Viscosity | 365 cP at 25°C |

ABS 3SP Flex

ABS 3SP Flex Series is an extremely flexible ABS-like 3D printing material for 3SP technology. ABS 3SP Flex is an ideal solution for a wide variety of applications including snap-fit items and assembly applications which require some elasticity. It is a tough material, suitable for high quality prototypes of items in categories such as automotive and consumer goods as well as stable enough for production-quality end use parts. ABS 3SP Flex is ideal for any application which requires a material capable of holding high stress and force. It is also capable of very high speed builds, allowing for large models to be built in under a day without sacrificing its exceptional surface quality.

| Material Properties | |
|---------------------|-----------------------------|
| Description | After post curing 5 min x 2 |
| Tensile strength | 65MPa |
| Tensile modulus | 1772MPa |
| Elongation at break | 6,6% |
| Flexural strength | 108MPa |
| Flexural modulus | 2543MPa |
| Viscosity | 765 cP at 30°C |
| Colors available | ABS 3SP Flex Light Gray |



ABS 3SP Superflex

Superflex 3SPTM is an extremely flexible polypropylene-like 3D printing material for 3SPTM technology. Superflex 3SPTM is an ideal solution for a wide variety of applications including snap-fit items, assembly applications, and living hinges which require some elasticity. It is a tough material, suitable for high quality prototypes of items in categories such as automotive and consumer goods as well as stable enough for production-quality end use parts. Superflex 3SPTM is ideal for any application which requires a material capable of holding high stress and force. It is also capable of very high speed builds, allowing for large models to be built in under a day without sacrificing its exceptional surface quality.

| Material Properties | | |
|-----------------------------|-----------------|----------|
| Description | | |
| Heat deflection temperature | 46°C at 1,82MPa | |
| Impact Izod | 16,5 J/m | |
| Description | Uncured | Cured |
| Tensile strength | 32 MPa | 53,8 MPa |
| Tensile modulus | 1104 MPa | 1480 MPa |
| Elongation at break | 10% | 6,8% |
| Flexural strength | 62 MPa | 90 MPa |
| Flexural modulus | 1363 MPa | 2064 MPa |



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RC31

RC31 is a high temperature resistant resin for building tough and stiff parts. RC31 is a nanoparticle- filled material that is used to build hard-wearing, stiff and high temperature-resistant parts. They have an opaque peach color appearance. RC31 is ideal for applications requiring superior stiffness and high heat deflection temperature, such as automotive components, pump housings and impellers, wind tunnel test parts, light reflectors, injection molds, hard chrome plating, etc.

| Mechanical Properties | | |
|-----------------------------------|--|------------------------------|
| ASTM Method | Description | RC31 |
| D638M | Tensile Strength Elongation at Break Modulus of Elasticity | 35,4 MPa 2,5% 4890 MPa |
| D790M | Flexural Strength Flexural Modulus | 102MPa 3,860 MPa |
| D256A | Izod Impact-Notched | 0,016kJ/m ² |
| D695-02a | Maximum Compressive Strength Compressive Modulus | 127 MPa 4,490 MPa |
| D1004 | Hardness (Shore D) | 93,1 Shore |
| Thermal and Electrical Properties | | |
| ASTM Method | Description | RC31 |
| E1545-00 | Glass Transition Temperature | 42°C |
| D648-98c | HDT @ 0,455 MPa | 67°C |
| | HDT @ 1,82 MPa | 53,6°C |

RCP30

RCP30 is a high temperature resistant resin for building tough and stiff parts at very high resolutions. RCP30 is a nanoparticle-filled material that is used to build hard-wearing, stiff and high temperature-resistant parts that are ideal for silicone molding. They have an opaque peach color appearance. RCP30 is ideal for applications requiring superior stiffness and high heat deflection temperature, such as pump housings, blades, test parts for wind tunnels, light reflectors and various automotive applications.

| Properties | | |
|------------------|---------------------|-------------------------|
| Method | Description | RCP30 |
| DIN EN ISO 527-1 | Tensile Strength | 46 MPa |
| DIN EN ISO 527-1 | Elongation at Break | 2,5% |
| DIN EN ISO 178 | Flexural Strength | 102 MPa |
| DIN EN ISO 178 | Flexural Modulus | 3860 MPa |
| DIN EN ISO 180 | Izod Impact-Notched | 0,0016kJ/m ² |
| DIN EN ISO 868 | Hardness | 93,1 Shore D |
| ASTM D 648 | HDT @ 0,46MPa | 67°C |
| ASTM D 648 | HDT @ 1,81MPa | 53,6°C |

E-Tool

E-Tool material allows manufacturers to 3D print molds for thermoplastic injection molding quickly and efficiently. It is ideal for low volume production runs or for the creation of multiple iterations of a mold during the prototyping phase. 3D printing molds using E-Tool is much faster and more cost-effective than traditional aluminum tooling. There is no minimum limit to the number of molded pieces needed to make it cost effective and unlike traditional metal tooling, 3D printed molds can be stored digitally and 3D printed as needed. E-Tool's strength and elongation at break make it ideal for minimizing the costs associated with the traditional manufacturing process in early stage prototyping and in short run production.

| Material Properties | |
|--|----------|
| Description | Values |
| Tensile strength | 35 MPa |
| Tensile modulus | 1410MPa |
| Elongation at break (post cured 5 min x 2) | 17% |
| Flexural strength | 48 MPa |
| Flexural modulus | 1200 MPa |
| Viscosity at 25°C | 1400 cP |
| HDT at 1,82 MPa | 42°C |

E-Glass

E-glass is a transparent material with an excellent surface quality and feature resolution. It's an ideal material for simulating clear plastics and glass for a variety of applications such as optics, medical, lighting, special effects, packaging, art and more. E-glass's strength and dimensional stability offer the ability to use it for both prototypes and end use parts.

| Material Properties | |
|--|-----------------------------|
| Description | After post curing 5 min x 2 |
| Tensile strength | 21 MPa |
| Tensile modulus | 2000 MPa |
| Elongation at break (post cured 5 min x 2) | 1,15% |
| Flexural strength | 75 MPa |
| Flexural modulus | 3240 MPa |



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HTM140 – High Temperature Mold Material

HTM140 High Temperature Mold Material dramatically changes 3D printing capabilities for manufacturers. With a heat deflection temperature of 140°C straight out of the machine, high definition parts printed in HTM140 can be directly vulcanized in rubber, eliminating the need for a metal master. It is designed to withstand both the heat and pressure of vulcanizing the model in rubber with incredible detail and no loss of dimensional stability. It can also be used in a variety of applications that require thermal resistance such as items to be metallized or tested for high temperature gas and liquid applications. To add to its versatility, another use is for making tools for small run injection molding. It is easily paintable for visual aids.

| Material Properties | |
|-----------------------------------|---------------|
| Description | HTM140 |
| Tensile strength | 56 MPa |
| Elongation at break | 3,5% |
| Flexural strength | 115 MPa |
| Flexural modulus | 3350 MPa |
| HDT (No heat treatment necessary) | 140°C (284°F) |
| Colors available | Green |



R5 Red

R5 is a liquid photopolymer that produces robust, accurate, and functional parts. The material offers superior chemical resistance, a wide processing latitude, and excellent tolerance to a broad temperature and humidity range during and after build. Parts created from R5 exhibit superior fatigue properties, strong memory retention, and high quality up-facing and down-facing surfaces. R5 also offers a good balance of properties between rigidity and functionality.

| Mechanical Properties | | |
|-----------------------------------|---|--|
| ASTM Method | Description | R5 Red |
| D638M | Tensile Strength Elongation at Break Elongation at Yield Modulus of Elasticity | 31-39 MPa 11-25% 16% 1,245-1,510 MPa |
| D790M | Flexural Strength Flexural Modulus | 40-45 MPa 1,190-1,383 MPa |
| D256A | Izod Impact-Notched | 0,27-0,50 J/cm |
| D2204 | Hardness (Shore D) | 81 Shore |
| D570-98 | Water Absorption | 0,78% |
| D1004 | Graves Tear | 154,287 N/m |
| Thermal and Electrical Properties | | |
| ASTM Method | Description | R5 Red |
| E381-00 | C.T.E. -40°C – 0°C C.T.E. 0°C – 50°C C.T.E. 50°C – 100°C C.T.E. 100°C – 150°C | 55 – 63 $\mu\text{m}/\text{m}^*\text{K}$ 88 – 94 $\mu\text{m}/\text{m}^*\text{K}$ 170 – 189 $\mu\text{m}/\text{m}^*\text{K}$ 192 – 201 $\mu\text{m}/\text{m}^*\text{K}$ |
| E1545-00 | Glass Transition Temperature | 37 - 52°C |
| D648-98c | HDT @ 0,46 MPa HDT @ 1,81 MPa | 84,5 – 102,6°C 65,4 - 88°C |



R5 Gray

R5 Gray is an accurate and functional resin for producing robust and durable parts. R5 Gray is a liquid, photo-reactive acrylate with a wide processing latitude, which is used to produce parts with high quality up-facing and down-facing surfaces. The parts exhibit superior fatigue strength properties and excellent tolerance to a broad temperature and humidity range during and after build. The material offers distinguished chemical resistance and a good balance of properties between rigidity and functionality. R5 Gray is ideal for creating master patterns in rubber molding applications and is suitable for electrical housings, medical products, snap-fit parts, consumer products, and automotive applications.

| Mechanical Properties | | |
|-----------------------------------|------------------------------|-------------------------|
| ASTM Method | Description | R5 Red |
| DIN 1342-2 | Viscosity | 643,1 cP |
| DIN EN ISO 527-1 | Tensile Strength | 49,7 MPa |
| DIN EN ISO 527-1 | Elongation at Break | 5,24% |
| DIN EN ISO 178 | Elongation at Yield | 7,93% |
| DIN ISO 178 | Flexural Strength | 79,7 MPa |
| DIN ISO 178 | Flexural Modulus | 1960 MPa |
| DIN ISO 1183-1 | Density | 1.215 g/cm ³ |
| DIN EN ISO 180 | Izod Impact-Notched | 5.05kJ/m ² |
| DIN EN ISO 868 | Hardness (Shore D) | 89 Shore |
| DIN 53765 | Glass Transition Temperature | 120 – 150°C |
| Thermal and Electrical Properties | | |
| ASTM Method | Description | R5 Red |
| E381-00 | C.T.E. -40°C – 0°C | 55 – 63 µm/m*K |
| | C.T.E. 0°C – 50°C | 88 – 94 µm/m*K |
| | C.T.E. 50°C – 100°C | 170 – 189 µm/m*K |
| | C.T.E. 100°C – 150°C | 192 – 201 µm/m*K |
| D648-98c | HDT @ 0,46 MPa | 84,5 – 102,6°C |
| C648-98c | HDT @ 1,81 MPa | 65,4 - 88°C |

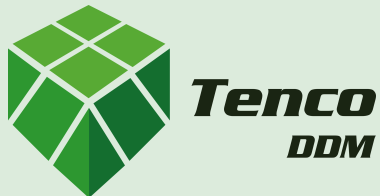


ABS-Tuff & ABflex

AB Materials are the closest prototype resins to production grade ABS Plastic. Finally, rapid prototyping/3D Printing has a true production representation of ABS with the launch of the AB material. Combining AB Materials with patented DLP technology gives you the absolute closest 3D representation available in the industry.

ABS-Tuff is a high grade rapid prototyping resin providing the structural representation of ABS plastic. ABflex provides the same structural representation of AB plastic with new flexibility characteristics.

| Material Comparisons of Mechanical Properties | | | |
|--|-------------------------------|-------------------------------|--------------------|
| Description | ABS-tuff | ABflex | ABS Plastic |
| Tensile strength | 48,6 MPa | 28,6 MPa | 45 MPa |
| Elongation at break | 7% | 514,6% | 10% |
| Flexural strength | 2100 MPa | 1400 MPa | 2300 MPa |
| Hardness Shore D | 83 | 77 | N/A |
| Resin Specific Gravity | 1,10 – 1,12 g/cm ³ | 1,10 – 1,12 g/cm ³ | N/A |



E-Shell 300

E-Shell 300 series has been designed especially for applications in the Hearing Aid industries and is distinguished for rigidity and durability. The material is used on Perfactory UV machines only. EnvisionTEC E-Shell 300 is a liquid, photo-reactive acrylate for building functional parts. It is CE certified and Class-IIa biocompatible according to ISO 10993 (Medical Product Law) for Hearing Aid shells and otoplastics. They are tough, opaque, water- and perspiration-resistant and available in several different transparent tones like water clear, rosé clear, red, and blue.

| Material Properties | | |
|---------------------|--------------------------------|-------------------------|
| ASTM Method | Description | E-Shell 300 |
| DIN 1342-2 | Viscosity | 339,8 Mpa |
| DIN EN ISO 527-1 | Tensile Strength | 51,6 MPa |
| DIN EN ISO 527-1 | Elongation at Break | 6,62% |
| DIN EN ISO 178 | Bending Strain | 8,43% |
| DIN EN ISO 178 | Flexural Modulus | 1,920 Mpa |
| DIN EN ISO 178 | Flexural Strength | 88,4 MPa |
| DIN EN ISO 180 | Izod Impact-Notched | 4,99 kJ/m ² |
| DIN EN ISO 1183-1 | Density | 1,185 g/cm ³ |
| DIN EN ISO 868 | Hardness (Shore D) | 85 Shore |
| D570-98 | Glass Transmission Temperature | 86 – 160°C |

E-Shell 500

E-Shell 500 series has been designed especially for applications in the Hearing Aid industries and is distinguished for soft durability. The material is used on Perfactory UV machines only. E-Shell 500 is a liquid, photo-reactive acrylate for building functional parts. It is CE certified and Class-IIa biocompatible according to ISO 10993 (Medical Product Law) for soft ear shells and tips. They are tough, water- and perspiration-resistant and available in several in two variations clear and opaque pink.

| Material Properties | |
|---------------------|-------------|
| Description | E-Shell 500 |
| Viscosity | 3000 cps |
| Curing | 10s |
| Elongation | 60% |
| Shore A | 87 |
| Tear Strength | 810 MPa |

E-Shell 600

The E-Shell 600 3D Printer Material series has been designed especially for applications in the hearing aid industries and is distinguished for rigidity and durability. It is CE certified and Class-IIa biocompatible according to ISO 10993 (Medical Product Law) for hearing aid shells and otoplastics. This 3D Printer Material is tough and water- and perspiration-resistant.

| Material Properties | | |
|---------------------|--------------------------------|-------------------------|
| Method | Description | E-Shell 600 |
| DIN 1342-2 | Viscosity | 339,8 Mpa |
| DIN EN ISO 527-1 | Tensile Strength | 51,6 MPa |
| DIN EN ISO 527-1 | Elongation at Break | 6,62% |
| DIN EN ISO 178 | Bending Strain | 8,43% |
| DIN EN ISO 178 | Flexural Modulus | 1,920 Mpa |
| DIN EN ISO 178 | Flexural Strength | 88,4 MPa |
| DIN EN ISO 180 | Izod Impact-Notched | 4,99 kJ/m ² |
| DIN EN ISO 1183-1 | Density | 1,185 g/cm ³ |
| DIN EN ISO 868 | Hardness (Shore D) | 85 Shore |
| DIN 53765 | Glass Transmission Temperature | 86 – 160°C |

SLA

Stereolithography



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Epoxy - Transparent

This durable clear plastic can be used to simulate the properties and appearance of PC and ABS. General prototyping is possible with this material, but the main application are models that require a high clarity, f.e. headlamps, lenses, fluid flow and visualization models.

Besides the high clarity and transparency the material is also very durable and strong and it is humidity and moisture stable.

| Material Properties | |
|---------------------------|-------------------------|
| Description | Epoxy Transparent |
| Tensile modulus | 2270-2640 MPa |
| Tensile strength | 46-53 MPa |
| Elongation at break | 3-15% |
| Impact strength | 40-58 kJ/m ² |
| Flexural strength | 72-84 MPa |
| Flexural modulus | 1980-2310 MPa |
| Heath deflection @ 66 PSI | 51°C |
| @ 264 PSI | 50°C |
| Glass Transition (Tg) | 62°C |
| Shore D | 80 |
| Water absorption | 0,3% |

Epoxy - White

White epoxy is a very rigid and strong material, which is ideal for functional assemblies and short-run production parts. It's commonly used for electronic and automotive components.

| Material Properties | |
|--|--------------------------|
| Description | Epoxy White |
| Tensile modulus | 3200-3380 MPa |
| Tensile strength | 63-68 MPa |
| Elongation at break | 5-8% |
| Impact strength | 12-22 kJ/m ² |
| Flexural strength | 88-110 kJ/m ² |
| Flexural modulus | 2690-3240 MPa |
| Heath deflection @ 66 PSI @ 264 PSI | 55-58°C 51-53°C |
| Glass Transition (Tg) | 56°C |
| Shore D | 85 |



Epoxy - Grey

This ultra-tough grey plastic is ideal for challenging functional assemblies and has a high break resistance. The material can be chosen when looking for an alternative for machined PP or ABS. Common applications for this material are snap fit assemblies.

| Material Properties | |
|--|-------------------------|
| Description | Epoxy Grey |
| Tensile modulus | 1790-1980 MPa |
| Tensile strength | 38-44 MPa |
| Elongation at break | 14-22% |
| Impact strength | 35-52 kJ/m ² |
| Flexural strength | 57-71 kJ/m ² |
| Flexural modulus | 1520-2070 MPa |
| Heath deflection @ 66 PSI @ 264 PSI | 62°C 54°C |

SLS

Selective Laser Sintering



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PA2200

This whitish fine powder PA 2200 on the basis of polyamide 12 serves with its very well-balanced property profile a wide variety of applications. Laser-sintered parts made from PA 2200 possess excellent material properties. A big advantage of this material, is that it is self-supporting. This makes supports (typical for DLP and stereolithography) redundant. The polyamide material allows the production of fully functional prototypes with high mechanical and thermal resistance.

Polyamide parts have an excellent long-term stability and are resistant against most chemicals. They can be made watertight by impregnation. The PA material is FDA approved (Class VI/121°C).

| Material Properties | |
|--|-----------------------|
| Description | PA2200 |
| Tensile modulus | 1650 MPa |
| Tensile strength | 48 MPa |
| Strain at break | 18% |
| Charpy impact strength (+23°C) | 53 kJ/m ² |
| Charpy notched impact strength (+23°C) | 4,8 kJ/m ² |
| Flexural modulus (23°C) | 1500 MPa |
| Izod impact notched (23°C) | 4,4 kJ/m ² |
| Shore D Hardness (15s) | 75 |

PA-GF

PA 3200 GF is a whitish, glass-filled polyamide 12 powder, which is characterised by an excellent stiffness in combination with good elongation at break. The material has a much higher thermal resistance and is typically used in functional tests with high thermal loads. Laser-sintered parts made from PA 3200 GF possess excellent material properties.

| Material Properties | |
|--|--|
| Description | PA-GF |
| Tensile modulus | 2500 – 3200 MPa |
| Tensile strength | 47 – 51 MPa |
| Strain at break | 9% (x and y direction) 5,5% (z direction) |
| Charpy impact strength (+23°C, x direction) | 35 kJ/m ² |
| Charpy notched impact strength (+23°C, x direction) | 5,4 kJ/m ² |
| Flexural modulus (23°C, x direction) | 2900 MPa |
| Flexural strength (x direction) | 73 MPa |
| Temp. of deflection under load <ul style="list-style-type: none">• 1,80 MPa, x direction• 0,45 MPa, x direction | 96°C 157°C |
| Melting temperature (20°C/min) | 176°C |

Alumide

Alumide is a metallic grey, aluminium-filled PA12 powder, which is characterised by its high stiffness, metallic appearance and good postprocessing possibilities. The surfaces of Alumide parts can be refined very easily by grinding, polishing or coating. The machining of Alumide laser-sintered parts is simplified through the cut breaking effect of the aluminium filling.

A typical application for Alumide is the manufacturing of stiff parts of metallic appearance for applications in automotive manufacturing (e.g. wind tunnel tests), for tool inserts for injecting and moulding small production runs, for illustrative models (metallic appearance), for education and jig manufacture et al.

| Material Properties | |
|--|-----------------------|
| Description | Alumide |
| Tensile modulus | 3800 MPa |
| Tensile strength | 48 MPa |
| Strain at break | 4% |
| Charpy impact strength (+23°C) | 29 kJ/m ² |
| Charpy notched impact strength (+23°C) | 4,6 kJ/m ² |
| Flexural modulus (23°C) | 3600 MPa |
| Flexural strength | 72 MPa |
| Shore D hardness (15s) | 76 |
| Temp. of deflection under load <ul style="list-style-type: none">• 1,80 MPa• 0,45 MPa | 144°C 175°C |
| Melting temperature (20°C/min) | 176°C |

CarbonMide

The anthracite black, carbon-fibre filled PA12 material stands out for excellent stiffness and a maximised weight-strength-ratio. Due to the process related orientation of the fibres the mechanical properties varies in the three axis directions. Typical applications of the material are mechanically stressed parts which are optimised considering the self-weight of the part. Surface finished CarbonMide laser-sinter parts are suited for e.g. usage as aerodynamic components in motor sports application.

| Material Properties | |
|--|------------------------------|
| Description | CarbonMide |
| Tensile modulus | 2200 – 6100 MPa |
| Tensile strength | 25 - 72 MPa |
| Strain at break | 1,6 – 6,3% |
| Charpy impact strength (+23°C) | 5,5 – 27,5 kJ/m ² |
| Charpy notched impact strength (+23°C) | 2,1 – 5,3 kJ/m ² |
| Melting temperature (20°C/min) | 176°C |

PEBA2301

PEBA 2301 is a natural coloured powder of a polyether block amide, which is developed and optimised for the application in a Laser Sinter system. Parts made from PEBA 2301 possess high elasticity and strength, good chemical resistance, excellent long-term stability, high selectivity and detail resolution.

Typical applications of the material are fully functional, flexible plastic parts of highest quality. Due to the excellent mechanical properties the material is often used as a production material for long term use. The rubber-like fatigue behaviour qualifies PEBA 2301 as excellent prototyping and series material.

| Material Properties | |
|--------------------------------|--------|
| Description | Peba |
| Tensile modulus | 75 MPa |
| Tensile strength | 8 MPa |
| Strain at break | 200 % |
| Shore D hardness (15s) | 35 |
| Melting temperature (20°C/min) | 150°C |

FDM

Fused Deposition Modelling



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ABS Plus

ABS Plus is a production-grade thermoplastic that is durable enough to perform virtually the same as production parts. It's an ideal material for building 3D models and prototypes.

| Material Properties | |
|--|---------------|
| Description | ABS Plus |
| Tensile modulus | 2200MPa |
| Tensile strength | 31 MPa |
| Flexural modulus (23°C) | 1650-2100 MPa |
| Flexural strength | 35-58 MPa |
| Shore D hardness (15s) | 76 |
| Heath deflection @ 66 PSI @ 264 PSI | 96°C 82°C |
| Glass transition temperature (Tg) | 108°C |

Polycarbonate

Polycarbonate has an excellent impact strength and a high temperature resistance. The material is very well suited for demanding applications, requiring high flexural and tensile strength.

| Material Properties | |
|--|----------------|
| Description | Polycarbonate |
| Tensile modulus | 2280 MPa |
| Tensile strength | 68 MPa |
| Flexural modulus (23°C) | 2234 MPa |
| Flexural strength | 104 MPa |
| Notched Izod Impact | 53 J/m |
| Unnotched Izod Impact | 320 J/m |
| Heat deflection @ 0,45MPa @ 1,81MPa | 138°C 127°C |
| Elongation at break | 4,8% |
| Flame Retardancy | HB 1,5mm |

Ultem

Ultem is an FDM thermoplastic ideal for aerospace, automotive and military applications because of its FST rating, high strength-to-weight ratio and existing certifications. It can be used for advanced functional prototypes and durable end use production parts. Ultem has a good thermal and chemical resistance (UL94-V0).

| Material Properties | |
|----------------------------|-----------|
| Description | Ultem |
| Tensile modulus | 2220 MPa |
| Tensile strength | 72 MPa |
| Flexural modulus (23°C) | 2507 MPa |
| Flexural strength | 115 MPa |
| Notched Izod Impact | 106 J/m |
| Unnotched Izod Impact | 613,8 J/m |
| Heath deflection @ 1,81MPa | 153°C |
| Elongation at break | 5,9% |
| Oxygen index | 49% |

VC

Vacuum Casting



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General Overview

| Material Name | PR 403 | PR 1503 | PR 700 | PR 751 | PR 891 |
|------------------------------|---------------------------|-----------------------|-----------------------|------------------------|------------------------|
| | Medium Flexible and Rigid | | | | Flexible |
| Simulation of | ABS/PS | ABS/PS | ABS | ABS/PEEK | PP/HDPE |
| Colour | Milky/white | Milky/white | Black | Black | Yellowish |
| Shore D hardness | 74D | 74D | 80D | 81D | 68D |
| Density (g/cm ³) | 1,1 g/cm ³ | 1,1 g/cm ³ | 1,4 g/cm ³ | 1,15 g/cm ³ | 1,15 g/cm ³ |
| Flexural Modulus | 1700 MPa | 1700 MPa | 2300 MPa | 2000 MPa | 480 MPa |
| Flexural Strength | 65 MPa | 65 MPa | 80 MPa | | 100 MPa |
| Elongation at break | 6% | 6% | 13% | 8% | 100% |
| Tensile Strength | 47 MPa | 47 MPa | 60 MPa | 80 MPa | 20 MPa |
| Impact Strength | 35 kJ/m ³ | 35 kJ/m ³ | 60 kJ/m ³ | 50 kJ/m ³ | |
| HDT | 75°C | 75°C | 130°C (UL-94 HB) | 150°C | 90°C |

| Material Name | EHP 55D | EHP 33-55D | EHP 80A | EHP 40-80A | EHP 40A |
|---------------------|-------------|-------------|----------------|------------|------------|
| | Flexible | | Rubber Elastic | | |
| Simulation of | HDPE/Rubber | HDPE/Rubber | Rubber | Rubber | Rubber |
| Colour | Amber | Amber | Amber | Amber | Amber |
| Shore D hardness | 55D/100A | 55D-30D | 80A | 80A-40A | 40A |
| Elongation at break | 120 | 120-170 | 800 | 800-1300 | 1300 |
| Tear Strength | 50 | 50-60 | 60 | 60-15 | 15 |
| HDT | -40°/+90°C | -40°/+90°C | -40°/+90°C | -40°/+90°C | -40°/+90°C |



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General Overview

| Material Name | PRC 1708 | PRC 1700 | C 3000 | C 5000 |
|------------------------------|--|-----------------------|-----------------------|------------------------|
| | Glass-clear, UV-stable for optical parts | | | |
| Simulation of | ABS/PC/PMMA | ABS/PC/PMMA | PMMA | PMMA |
| Colour | Transparent/UV | Transparent/UV | Transparent/UV | Transparent/UV |
| | | | | |
| Shore D hardness | 87D | 87D | 85D | 81D |
| Density (g/cm ³) | 1,1 g/cm ³ | 1,1 g/cm ³ | 1,1 g/cm ³ | 1,15 g/cm ³ |
| Flexural Modulus | 2200 MPa | 2200 Mpa | | |
| Flexural Strength | 80 MPa | 80MPa | | |
| Elongation at break | 16% | 16% | | |
| Tensile Strength | 62 MPa | 62MPa | | |
| Impact Strength | 90 kJ/m ³ | 90 kJ/m ³ | | |
| HDT | 105°C | 105°C | 75°C | 80-90°C |

General Overview

| Material Name | PRA 730 | PRA 794 | PRA 1708/PRC 1700 |
|------------------------------|-----------------------|------------------------|-----------------------|
| | Hardly flammable | | |
| Simulation of | ABS | ABS | ABS/PC |
| Colour | Amber | Amber | Amber |
| | | | |
| Shore D hardness | 81D | 80D | 87D |
| Density (g/cm ³) | 1,2 g/cm ³ | 1,15 g/cm ³ | 1,1 g/cm ³ |
| Flexural Modulus | 2100 MPa | 1500 MPa | 2200 MPa |
| Flexural Strength | 63 MPa | 65 MPa ^a | 80 MPa |
| Elongation at break | 4% | 5% | 16% |
| Tensile Strength | 41 | 60 | 62 |
| Impact Strength | | | 90 kJ/m ³ |
| HDT | 130°C | 130°C | 105°C |