ASA-UV, PC-ISO and ULTEM™ 9085

Materials for the FDM process



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Technical Data Sheet

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ASA-UV, PC-ISO and ULTEM[™] 9085 are production grade thermoplastics for use with the Fortus 400mc for fused deposition modelling (FDM). Each material displays unique properties giving you greater choice and allowing for a wider range of end uses for your products. The materials, combined with the Fortus production system, allow for fully functional parts, ideal for advanced prototypes or end use.

| ASA-UV (ABS) | Properties | XZ Orientation | Test Method |
|---|-----------------------------|----------------|-------------|
| UV stable production grade thermoplastic Best aesthetics of any FDM material Especially suited in end use parts for outdoor use Wide selection of available colours in a matt finish | Tensile strength, ultimate | 4570 psi | ASTM D638 |
| | Tensile elongation at break | 9% | ASTM D638 |
| | Flexural strength | 8700 psi | ASTM D790 |
| Wide selection of available colours in a matt finishStandard colour - black | IZOD impact, un-notched | 6.0 ft-lb/in | ASTM D256 |
| Optional colours - white, black, dark grey, light grey, dark blue, green, yellow, orange, red Soluble supports allow finer detail to be built although this does slow the build process | Heat deflection at 66psi | 98°C | ASTM D648 |
| | Specific gravity | 1.05 | ASTM D792 |
| | Flame classification | НВ | UL94 |

| PC-ISO | Properties | XZ Orientation | Test Method |
|---|-----------------------------|----------------|-------------|
| Industrial thermoplastic Commonly used in food and drug/medical applications ISO 10993 USP class VI medical certification Standard colour - white Optional colours - translucent, although this does not give glass like clarity it will show form and colour through | Tensile strength, ultimate | 8300 psi | ASTM D638 |
| | Tensile elongation at break | 4% | ASTM D638 |
| | Flexural strength | 13100 psi | ASTM D790 |
| | IZOD impact, un-notched | 1.6 ft-lb/in | ASTM D256 |
| | Heat deflection at 66psi | 133°C | ASTM D648 |
| | Specific gravity | 1.2 | ASTM D792 |
| | Flame classification | НВ | UL94 |

| ULTEM™ 9085 | Properties | XZ Orientation | Test Method |
|---|-----------------------------|----------------|-------------|
| Flame retardant high performance thermoplastic Ideal for transportation industry High strength to weight ratio FST (flame, smoke, toxicity) certified material Standard colour - tan Optional colour - black | Tensile strength, ultimate | 9950 psi | ASTM D638 |
| | Tensile elongation at break | 5.8% | ASTM D638 |
| | Flexural strength | 16200 psi | ASTM D790 |
| | IZOD impact, un-notched | 14.6 ft-lb/in | ASTM D256 |
| | Heat deflection at 66psi | 153°C | ASTM D648 |
| | Specific gravity | 1.34 | ASTM D792 |
| | Flame classification | V-0 at 1.5mm | UL94 |

Please be advised that all information provided in this document is representative of typical properties and as advised by the material manufacturer. The performance characteristics of these products may vary according to product application, operating conditions, or with end use. Ogle Models + Prototypes Ltd makes no warranties of any type, express or implied, including, but not limited to, the warranties of merchantability or fitness for a particular use. Specifications subject to change without notice.

ULTEM 9085 is a trademark of SABIC Innovative Plastics IP BV. All other trademarks are the property of their respective owners. Optional colours depend on availability at time of order and may attract additional cost. Build orientation does effect the material properties. Quoted figures on this sheet are based on building flat in XZ orientation.