

FORTRON® 1115L0 - PPS

Description

Fortron® 1115L0 is a 15% fiberglass-reinforced grade of polyphenylene sulfide with high melt strength suitable for blow molding and extrusion applications. The recommended processing conditions are similar to those of our standard grades, except drying conditions are somewhat milder at 80 to 100 C for 3-4 hours.

| Physical properties | Value | Unit | Test Standard |
|----------------------------|-------|-------------------|---------------|
| Density | 1440 | kg/m ³ | ISO 1183 |
| Water absorption, 23°C-sat | 0,02 | % | ISO 62 |

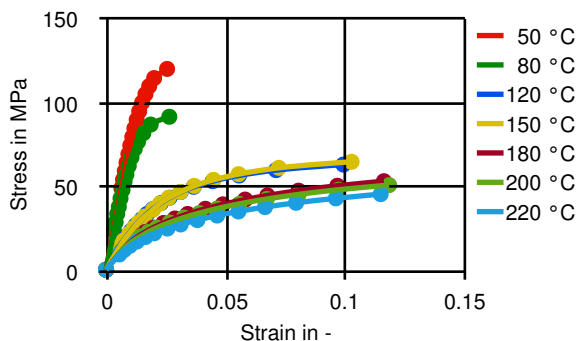
| Mechanical properties | Value | Unit | Test Standard |
|--------------------------------------|-------|-------------------|---------------|
| Tensile modulus | 7700 | MPa | ISO 527-2/1A |
| Tensile stress at break, 5mm/min | 120 | MPa | ISO 527-2/1A |
| Tensile strain at break, 5mm/min | 2 | % | ISO 527-2/1A |
| Flexural modulus, 23°C | 7500 | MPa | ISO 178 |
| Flexural strength, 23°C | 200 | MPa | ISO 178 |
| Charpy impact strength, 23°C | 32 | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength, 23°C | 5 | kJ/m ² | ISO 179/1eA |
| Izod impact notched, 23°C | 5,2 | kJ/m ² | ISO 180/1A |

| Thermal properties | Value | Unit | Test Standard |
|-----------------------------|-------|-------|---------------|
| DTUL at 1.8 MPa | 220 | °C | ISO 75-1, -2 |
| DTUL at 8.0 MPa | 115 | °C | ISO 75-1, -2 |
| Flammability at thickness h | V-0 | class | UL 94 |
| thickness tested (h) | 0,75 | mm | UL 94 |

| Electrical properties | Value | Unit | Test Standard |
|-----------------------|-------|------|---------------|
| Surface resistivity | >1E15 | Ohm | IEC 60093 |

Diagrams

True Stress-strain



Typical injection moulding processing conditions

| Pre Drying | Value | Unit | Test Standard |
|---|-----------|------|---------------|
| Necessary low maximum residual moisture content | 0,02 | % | - |
| Drying time | 3 - 4 | h | - |
| Drying temperature | 100 - 140 | °C | - |
| Temperature | Value | Unit | Test Standard |
| Hopper temperature | 20 - 30 | °C | - |
| Feeding zone temperature | 60 - 80 | °C | - |
| Zone1 temperature | 290 - 300 | °C | - |
| Zone2 temperature | 310 - 320 | °C | - |
| Zone3 temperature | 330 - 340 | °C | - |
| Zone4 temperature | 330 - 340 | °C | - |
| Nozzle temperature | 310 - 330 | °C | - |

FORTRON® 1115L0 - PPS

| | | | |
|----------------------------|--------------|-------------|----------------------|
| Melt temperature | 330 - 340 | °C | - |
| Mold temperature | 140 - 160 | °C | - |
| Hot runner temperature | 330 - 340 | °C | - |
| Pressure | Value | Unit | Test Standard |
| Back pressure max. | 30 | bar | - |
| Speed | Value | Unit | Test Standard |
| Injection speed | fast | - | - |
| Screw Speed | Value | Unit | Test Standard |
| Screw speed diameter, 25mm | 120 | RPM | - |
| Screw speed diameter, 40mm | 75 | RPM | - |
| Screw speed diameter, 55mm | 50 | RPM | - |

Other text information

Pre-drying

FORTRON should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be $\leq -30^{\circ}\text{C}$. The time between drying and processing should be as short as possible.

Longer pre-drying times/storage

For subsequent storage the material should be stored dry in the dryer until processed (≤ 60 h).

Characteristics

Product Categories

Specialty

Contact Information

Americas

8040 Dixie Highway
Florence, KY 41042 USA
Product Information Service
t: +1-800-833-4882
t: +1-859-372-3244
Customer Service
t: +1-800-526-4960
t: +1-859-372-3214
e: info-engineeredmaterials-am@celanese.com

Asia

4560 Jinke Road
Zhang Jiang Hi Tech Park
Shanghai 201203 PRC
Customer Service
t: +86 21 3861 9266
f: +86 21 3861 9599
e: info-engineeredmaterials-
asia@celanese.com

Europe

Am Unisys-Park 1
65843 Sulzbach, Germany
Product Information Service
t: +49-800-86427-531
t: +49-(0)-69-45009-1011
e: info-engineeredmaterials-eu@celanese.com

General Disclaimer

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data values. Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products. The products mentioned herein are not intended for use in medical or dental implants.

Trademark

FORTRON® 1115L0 - PPS

© 2014 Celanese or its affiliates. All rights reserved. (Published 27.July.2016). Celanese®, registered C-ball design and all other trademarks identified herein with ®, TM, SM, unless otherwise noted, are trademarks of Celanese or its affiliates. Fortron is a registered trademark of Fortron Industries LLC.