# CELANEX® 2302SW1 GV1/30

## CELANEX® PBT

Chemical abbreviation according to ISO 1043-1: PBT+PET GF30, PTFE-modified grade with 30% glass fiber for injection molded parts with superior gloss and improved slip and wear characteristics. Flammability UL 94 HB minimum thickness 0.8 mm.
Preliminary Data Sheet

## Product information

| | | |
|---|---|---|
| Resin Identification | (PBT+PET+PTFE)-GF30 | ISO 1043 |
| Part Marking Code | >(PBT+PET+PTFE)-GF30< | ISO 11469 |

## Rheological properties

| | | | |
|---|---|---|---|
| Melt volume-flow rate | 10 | $cm^3$/10min | ISO 1133 |
| Temperature | 509 | °F | |
| Load | 4.76 | lb | |
| Molding shrinkage range, parallel | 0.2 - 0.3 | % | ISO 294-4, 2577 |
| Molding shrinkage range, normal | 0.6 - 0.8 | % | ISO 294-4, 2577 |

## Typical mechanical properties

| | | | |
|---|---|---|---|
| Tensile modulus | 1.52E6 | psi | ISO 527-1/-2 |
| Tensile stress at break, 5mm/min | 21000 | psi | ISO 527-1/-2 |
| Tensile strain at break, 5mm/min | 2.5 | % | ISO 527-1/-2 |

## Thermal properties

| | | | |
|---|---|---|---|
| Melting temperature, 10°C/min | 491 | °F | ISO 11357-1/-3 |
| Temperature of deflection under load, 1.8 MPa | 392 | °F | ISO 75-1/-2 |

## Flammability

| | | | |
|---|---|---|---|
| Burning Behav. at thickness h | HB | class | IEC 60695-11-10 |
| Thickness tested | 0.0315 | in | IEC 60695-11-10 |

## Physical/Other properties

| | | | |
|---|---|---|---|
| Humidity absorption, 2mm | 0.15 | % | Sim. to ISO 62 |
| Density | 0.0542 | $lb/in^3$ | ISO 1183 |

## Injection

| | | |
|---|---|---|
| Drying Recommended | yes | |
| Drying Temperature | 248 | °F |
| Drying Time, Dehumidified Dryer | 4 | h |
| Processing Moisture Content | ≤0.02 | % |
| Melt Temperature Optimum | 509 | °F |
| Min. melt temperature | 491 | °F |
| Max. melt temperature | 527 | °F |
| Max. screw tangential speed | 0.1 - 0.3 | m/s |
| Mold Temperature Optimum | 212 | °F |
| Min. mold temperature | 194 | °F |
| Max. mold temperature | 266 | °F |

# CELANEX® 2302SW1 GV1/30

CELANEX® PBT

## Characteristics

| | |
|---|---|
| Processing | Injection Molding |
| Additives | Release agent |
| Special characteristics | Heat stabilized or stable to heat, Low wear / Low friction |

## Additional information

Injection molding

### Preprocessing

To avoid hydrolytic degradation during processing, CELANEX resins have to be dried to a moisture level equal to or less than 0,02%. The drying should be done in a dry-air dryer (dew point < -30°C) with a temperature of 120 to 140 °C and a drying time of 2 to 4 hours. In case of longer residence times in the dry-air dryer, the temperature should be reduced to 100°C.
The time between drying and processing should be kept as short as possible. The processing machine feed hopper should be closed during the processing operation.

### Processing

Melt Temperature 265-275 °C
Mold Temperature *) 90-100 °C
Maximum Barrel Residence Time **) 5-10 min
Injection Speed fast
Peripheral screw speed max.0,3 m/sec
Back Pressure 10-30 bar
Injection Pressure 600-1000 bar
Holding Pressure 400-800 bar
Nozzle Design open design preferred

Injection speed, injection pressure and holding pressure have to be optimized to the individual article geometry. To avoid material degradation during processing low back pressure and minimum screw speed have to be used. Overheating of the material has to be avoided.

Celanese recommends only externally heated hot runner systems.

*) For moulded parts with especially high requirements to the surface quality or dimensional stability, a mold temperature of up to 110 °C can be advantageous.

**) If the cylinder temperatures are higher than the recommended maximum temperatures, the max. residence time in the barrel has to be reduced.

Processing Notes

### Pre-Drying

CELANEX 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 =< - 30° C. The time between drying and processing

should be as short as possible.

## Storage

For subsequent storage of the material in the dryer until processed (<= 60 h) it is necessary to lower the temperature to 100° C.



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. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, 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.
Copyright © 2026 Celanese or its affiliates. All rights reserved.
Celanese®, registered C-ball design and all other trademarks identified herein with ®, TM, SM, unless otherwise noted, are trademarks of Celanese or its affiliates.