

# ULTEM™ RESIN JD7904

## DESCRIPTION

ULTEM JD7904 compound is based on Polyetherimide (PEI) resin containing conductive carbon powder. Added features of this grade include: Anti-Static, Anti-Dust.

## TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES                                  | TYPICAL VALUES | UNITS | TEST METHODS         |
|---|----------------|-------|----------------------|
| <b>MECHANICAL <sup>(1)</sup></b>            |                |       |                      |
| Tensile Stress, yield                       | 84             | MPa   | SABIC - Japan Method |
| Tensile Strain, break                       | 4              | %     | SABIC - Japan Method |
| Flexural Stress                             | 127            | MPa   | ASTM D790            |
| Flexural Modulus                            | 3720           | MPa   | ASTM D790            |
| <b>IMPACT <sup>(1)</sup></b>                |                |       |                      |
| Izod Impact, notched, 23°C                  | 29             | J/m   | ASTM D256            |
| <b>THERMAL <sup>(1)</sup></b>               |                |       |                      |
| HDT, 0.45 MPa, 3.2 mm, unannealed           | 200            | °C    | ASTM D648            |
| <b>PHYSICAL <sup>(1)</sup></b>              |                |       |                      |
| Specific Gravity                            | 1.31           | -     | ASTM D792            |
| Mold Shrinkage, flow, 3.2 mm <sup>(2)</sup> | 0.5 – 0.7      | %     | SABIC method         |
| <b>ELECTRICAL <sup>(1)</sup></b>            |                |       |                      |
| Surface Resistivity <sup>(3)</sup>          | 1.E+10         | Ω     | ASTM D257            |
| <b>INJECTION MOLDING <sup>(4)</sup></b>     |                |       |                      |
| Drying Temperature                          | 150            | °C    |                      |
| Drying Time                                 | 4 – 6          | Hrs   |                      |
| Maximum Moisture Content                    | 0.02           | %     |                      |
| Melt Temperature                            | 380 – 410      | °C    |                      |
| Nozzle Temperature                          | 380 – 405      | °C    |                      |
| Front - Zone 3 Temperature                  | 380 – 410      | °C    |                      |
| Middle - Zone 2 Temperature                 | 370 – 400      | °C    |                      |
| Rear - Zone 1 Temperature                   | 360 – 390      | °C    |                      |
| Mold Temperature                            | 140 – 170      | °C    |                      |
| Back pressure (Plastic Pressure)            | 5 – 10         | MPa   |                      |
| Screw speed (Circumferential speed)         | 0.1 – 0.2      | m/s   |                      |
| Shot to Cylinder Size                       | 40 – 70        | %     |                      |

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(3) Measurement meets requirements as specified in ASTM D4496.

(4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.



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