

PBT(Polybutylene terephthalate)

DURANEX[®]

733LD

ED3002/EF2001

(Low warpage, LD Series
grade)

NOTES TO USERS

- All property values shown in this brochure are the typical values obtained under varying conditions prescribed by applicable standards and test method.
- This brochure has been prepared based on our own experiences and laboratory test data, and therefore all data shown here are not always applicable to parts used under different conditions. We do not guarantee that these data are directly applicable to the application conditions of users and we ask each user to make his own decision on the application.
- It is the users' responsibility to investigate patent rights, service life and potentiality of applications introduced in this brochure. Materials we supply are not intended for the implant applications in the medical and dental fields, and therefore are not recommended for such uses.
- For all works done properly, it is advised to refer to the appropriate **"Technical Catalog"** for specific material processing.
- For safe handling of materials we supply, it is advised to refer to the Material Safety Data Sheet **"MSDS"** of the proper material. This brochure is edited based on reference literatures, information and data currently available to us. So the contents of this brochure are subject to change without notice due to new data.
- Please contact our office for any questions about products we supply, descriptive literatures or any description in this brochure.

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* WinTech Polymer Ltd. is a member of the Polyplastics Group, while the "DURANEX®" PBT resin manufactured and sold by that firm is marketed by Polyplastics affiliated companies.

General Properties of 733LD

table1-1 General Properties (ISO)

| Item | Unit | Test Method | Low warpage, LD Series |
|---|-----------------------|----------------------|---|
| | | | 733LD |
| | | | GF30% reinforced, Hydrolysis resistance |
| Color | | | ED3002/EF2001 |
| ISO(JIS)quality-of-the-material display: | | ISO11469 (JIS K6999) | >PBT+SAN-GF30< |
| Density | g/cm ³ | ISO 1183 | 1.46 |
| Tensile strength | MPa | ISO 527-1,2 | 139 |
| Strain at break | % | ISO 527-1,2 | 2 |
| Flexural strength | MPa | ISO 178 | 180 |
| Flexural modulus | MPa | ISO 178 | 9000 |
| Charpy impact strength (notched) | kJ/m ² | ISO 179/1eA | 7.8 |
| Temperature of deflection under load (1.8MPa) | °C | ISO 75-1,2 | 195 |
| Coefficient of linear thermal expansion (23~55°C、Flow direction) | x10 ⁻⁵ /°C | ISO 11359-2 | 2 |
| Coefficient of linear thermal expansion (23~55°C、Transverse direction) | x10 ⁻⁵ /°C | ISO 11359-2 | 8 |
| Dielectric breakdown strength (3mmt) | kV/mm | IEC 60243-1 | 26 |
| Volume resistivity | Ω·cm | IEC 60093 | 2 × 10 ¹⁶ |
| Tracking resistance (CTI) | V | IEC 60112 | - |
| Flammability | | UL94 | HB |
| The yellow card File No. | | | E213445 |
| Appropriate List number of Ministerial Ordinance for Export Trade Control | | | Item 16 of Appendix -1 |

※1) Nominal strain at break

All figures in the table are the typical values of the material and not the minimum values of the material specifications.

table1-1 General Properties (ASTM)

| Item | Unit | Test Method | Low warpage, LD Series |
|--|-----------------------------------|----------------------|---|
| | | | 733LD |
| | | | GF30% reinforced, Hydrolysis resistance |
| Color | | | ED3002/EF2001 |
| ISO(JIS)quality-of-the-material display: | | ISO11469 (JIS K6999) | >PBT+SAN-GF30< |
| Specific gravity | | ASTM D792 | 1.46 |
| Tensile strength | MPa | ASTM D638 | 139 |
| Tensile elongation | % | ASTM D638 | 2 |
| Flexural strength | MPa | ASTM D790 | 180 |
| Flexural modulus | MPa | ASTM D790 | 9000 |
| Izod impact strength (Reversed notch side) | J/m | ASTM D256 | 400 |
| Izod impact strength (Notch side, 1/4") | J/m | ASTM D256 | 86 |
| Izod impact strength (Notch side, 1/8") | J/m | ASTM D256 | - |
| Temperature of deflection under load (1.82MPa) | °C | ASTM D648 | 200 |
| Coefficient of linear thermal expansion (room temperature, Flow direction) | $\times 10^{-5}/^{\circ}\text{C}$ | ASTM D696 | - |
| Coefficient of linear thermal expansion (room temperature, Transverse direction) | $\times 10^{-5}/^{\circ}\text{C}$ | ASTM D696 | - |
| Volume resistivity (Thickness 3mm) | $\Omega \cdot \text{cm}$ | ASTM D257 | - |
| Dielectric breakdown strength (Short-time test:1mmt) | MV/m | ASTM D149 | - |
| Dielectric breakdown strength (Short-time test:2mmt) | MV/m | ASTM D149 | - |
| Arc resistance | s | ASTM D495 | - |
| Tracking resistance (CTI) | | ADTM D3638 | - |
| Flammability | | UL94 | HB |
| The yellow card File No. | | | E213445 |
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