

Polybutylene Terephthalate (PBT)

DURANEX®

930MA

EF2001

Metal Adhesion

General Properties of 930MA

table1-1 General Properties (ISO)

| Item | Unit | Test Method | Metal Adhesion |
|---|-----------------------|-------------------------|------------------------|
| | | | 930MA |
| | | | GF25% Reinforced |
| Color | | | EF2001 |
| ISO(JIS)quality-of-the-material display: | | ISO11469 (JIS K6999) | >PBT+PET-I-GF25< |
| Density | g/cm ³ | ISO 1183 | 1.47 |
| Water absorption (23°C,24hrs,1mmt) | % | ISO 62 | 0.2 |
| Tensile strength | MPa | ISO 527-1,2 | 127 |
| Strain at break | % | ISO 527-1,2 | 3.5 |
| Flexural strength | MPa | ISO 178 | 195 |
| Flexural modulus | MPa | ISO 178 | 7,200 |
| Charpy notched impact strength (23°C) | kJ/m ² | ISO 179/1eA | 11 |
| Temperature of deflection under load (1.8MPa) | °C | ISO 75-1,2 | 205 |
| Coefficient of linear thermal expansion (23 - 55°C、Flow direction) | x10 ⁻⁵ /°C | Our standard | - |
| Coefficient of linear thermal expansion (23 - 55°C、Transverse direction) | x10 ⁻⁵ /°C | Our standard | - |
| Electric strength (3mmt) | kV/mm | IEC 60243-1 | - |
| Volume resistivity | Ω·cm | IEC 60093 | - |
| Volume resistivity (Our standard) | Ω·cm | | - |
| Tracking resistance (CTI) | V | IEC 60112 | - |
| Rockwell hardness | M(Scale) | ISO2039-2 | - |
| Flammability | | UL94 | HB |
| The yellow card File No. | | | E213445 |
| Appropriate List number of Ministerial Ordinance for Export Trade Control | | | Item 16 of Appendix -1 |

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

2. Strength

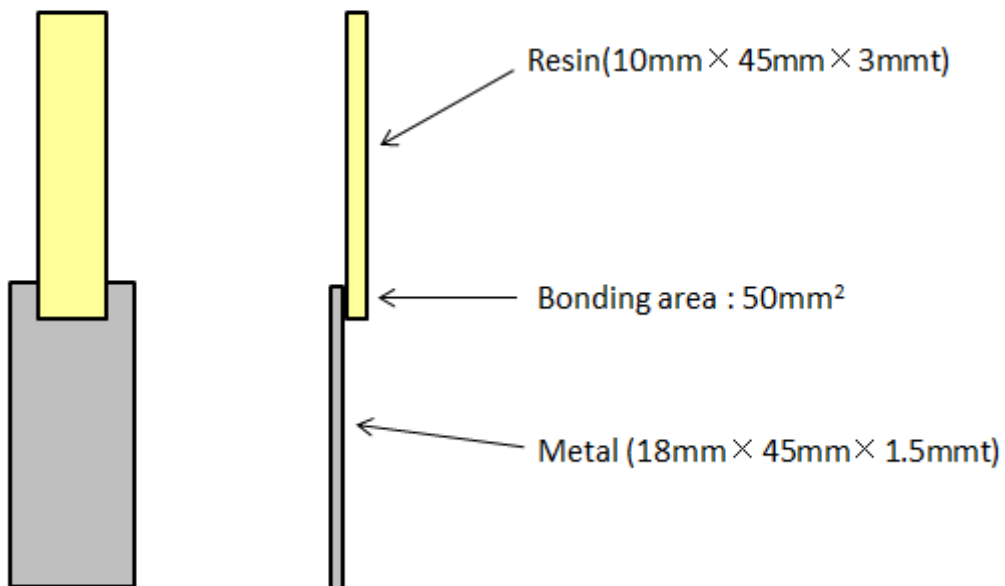
2-1 Bonding strength

Table-2 Bonding strength *

| Test method | Unit | 930MA | GF reinforced,standard |
|-------------|------|-------|------------------------|
| ISO19095 | Mpa | 34 | 20-30 |

*Insert molded with surface treated metal

<Test Method of bonding strength>



3. Moldability

3-1 Mold conditions

Table-3 Recommended molding conditions*

| Item | | Recommended condition |
|----------------------|--------------------|-----------------------|
| Pre-drying | | 140℃×3hr or 120℃×5hr |
| Cylinder temperature | No.1 (Hopper-side) | 230～250 ℃ |
| | No.2 | 240～270 ℃ |
| | No.3 | 250～275 ℃ |
| | No.4 (Nozzle-side) | 260～275 ℃ |
| Nozzle temperature | | 260～275 ℃ |
| Mold temperature | | 140～150 ℃ |
| Screw speed | | 100～150rpm |
| Injection speed | | Middle |
| Back pressure | | 1～5MPa |
| Holding pressure | | 60～100MPa |

*Injection molding parameter for metal bonding

3-2 Mold Shrinkage

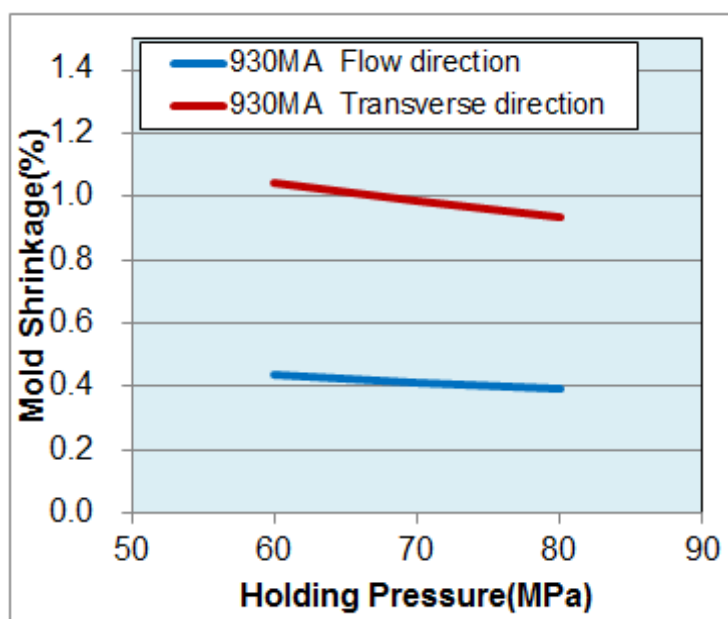


Fig. 3-1 Mold shrinkage (60□×2mmt)

3-3 Coefficient of linear expansion

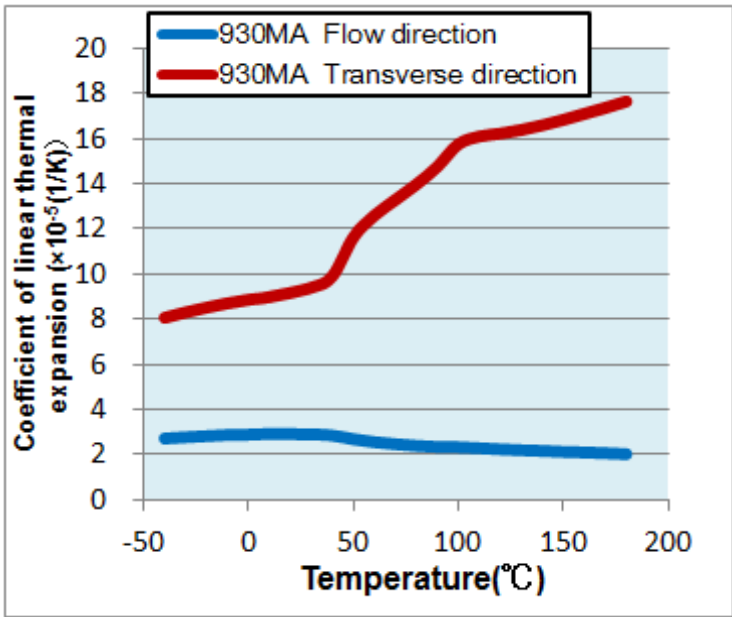


Fig. 3-2 Coefficient of linear thermal expansion



NOTES TO USERS

- All property values shown in this brochure are the typical values obtained under conditions prescribed by applicable standards and test methods.
- 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.
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- For safe handling of materials we supply, it is advised to refer to the Safety Data Sheet "SDS" of the proper material.
- This brochure is edited based on reference literature, information and data available to us at the time of creation. The contents of this brochure are subject to change without notice upon achievement of new data.
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