

# PC 1303EP-22

## Description

It is designed for Auto related products with good weatherability, molding property and transparency.

## Application

Vacuum Cleaner, E&E Others

## Key Features

Good Mold Release, High Flow, High Transparency, Weather Resistance

| Properties  | Method      | Unit              | PC 1303EP-22          |
|---|-------------|-------------------|-----------------------|
| <b>Physical</b>   |             |                   |                       |
| Melt Flow Rate (300 °C /1.2 kg)   | ASTM D1238  | g/10min           | 22                    |
| Density   | ASTM D792   | kg/m <sup>3</sup> | 1200                  |
| Mold Shrinkage  | ASTM D955   | mm/mm             | 0.005~0.007           |
| Water Absorption @ 24 hrs, 23°C   | ASTM D570   | %                 | 0.15                  |
| Water Absorption @ equilibrium, 50%RH, 23°C                                   | ASTM D570   | %                 | 0.32                  |
| <b>Optical</b>  |             |                   |                       |
| Refractive Index, nD  | ASTM D542   |                   | 1.586                 |
| Light Transmittance   | ASTM D1003  | %                 | 89                    |
| Haze  | ASTM D1003  | %                 | 0.7~1.5               |
| <b>Thermal</b>  |             |                   |                       |
| Deflection Temperature Under Load (DTUL) @ 4 mm 66 psi (0.45 MPa), annealed   | ASTM D648   | °C                | 142                   |
| Deflection Temperature Under Load (DTUL) @ 4 mm 264 psi (1.8 MPa), annealed   | ASTM D648   | °C                | 139                   |
| Deflection Temperature Under Load (DTUL) @ 4 mm 264 psi (1.8 MPa), unannealed | ASTM D648   | °C                | 126                   |
| Vicat Softening Point, 50°C /hr, 50N Load                                     | ASTM D1525  | °C                | 147                   |
| Coefficient of Linear Thermal Expansion, @ -40 to 82°C                        | ASTM D696   | mm/mm/°C          | 68 x 10 <sup>-6</sup> |
| <b>Mechanical</b>   |             |                   |                       |
| Tensile Yield Strength  | ASTM D638   | MPa               | 60                    |
| Ultimate Tensile Strength   | ASTM D638   | MPa               | 66                    |
| Elongation at Yield   | ASTM D638   | %                 | 6                     |
| Elongation at Break   | ASTM D638   | %                 | 120                   |
| Tensile Modulus   | ASTM D638   | MPa               | 2340                  |
| Flexural Strength   | ASTM D790   | MPa               | 96                    |
| Flexural Modulus  | ASTM D790   | MPa               | 2410                  |
| Notched Izod Impact @ 23 °C   | ASTM D256   | J/m               | 750                   |
| Unnotched Izod Impact @ 23 °C   | ASTM D256   |                   | No break              |
| Instrumented Dart Impact, Total Energy @ 23 °C                                | ASTM D3763  | J                 | 72                    |
| Rockwell Hardness @ R Scale   | ASTM D785   | R Scale           | 118                   |
| Rockwell Hardness @ M Scale   | ASTM D785   | M Scale           | 72                    |
| Taber Abrasion Resistance (D Haze)  | ASTM D1044  | %                 | 45                    |
| <b>Ignition Resistance</b>  |             |                   |                       |
| Limiting Oxygen Index   | ASTM D2863  | %                 | 26                    |
| Ball Indentation Temperature  | IEC 598-1   | °C                | >125                  |
| Average Extent of Burning   | ASTM D635   | mm                | 25                    |
| <b>Electrical</b>   |             |                   |                       |
| GWT 2.0 mm, 5 second  | IEC 695-2-1 | °C                | 850                   |

|                                     |           |       |                        |
|-------------------------------------|-----------|-------|------------------------|
| Comparative Tracking Index @ 2.0 mm | IEC 112   | V     | 250                    |
| Dielectric Strength                 | ASTM D149 | kV/mm | 17                     |
| Dielectric Constant @ 60 Hz         | ASTM D150 |       | 3                      |
| Dissipation Factor @ 60 Hz          | ASTM D150 |       | 0.001                  |
| Volume Resistivity @ 23 °C, dry     | ASTM D257 | W-cm  | 2.0 x 10 <sup>17</sup> |

### Note

1. The addition of an UV stabilizer to a resin does not completely eliminate the effects of UV exposure but to slow down the rate at which the effects occur. These effects may include color shift, decreased mechanical properties, and/or optical properties. Actual results may vary depending on application and other factors such as resin color, transparency and additives. Therefore, actual end-use testing is recommended.
2. Typical properties; not to be construed as specifications.
3. 0.125 in; 10 mil notch (3.2 mm; 0.25 mm notch).
4. 0.125 in; 8000 ipm (3.2 mm; 203 m/min).
5. 1,000 g; CS-10 F wheel; 500 cycles.
6. These numerical flame spread ratings are small-scale test values and are not intended to reflect hazards presented by these or any other materials under actual fire conditions. UL 94 file: E67171.

※ Typical values are only for material selection purpose, and variation within normal tolerances are for various colors.

Values given should not be interpreted as specification and not be used for part or tool design.

All properties, except melt flow rate are measured on injection molded specimens and after 48 hours storage at 23°C, 50% relative humidity.

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