

**CLAREX****PHYSICAL PROPERTIES****【Normal Grade】 · 【Hard Coat Grade;RH】**

| Properties                          | Test Method |        | Unit              | Normal Grade       | Hard Coat Grade |
|-------------------------------------|-------------|--------|-------------------|--------------------|-----------------|
|                                     | JIS         | ASTM   |                   |                    |                 |
| <b>OPTICAL</b>                      |             |        |                   |                    |                 |
| Refractive Index                    | K7142       | D-542  | -                 | 1.49               | 1.53 (Surface)  |
|                                     |             |        |                   |                    | 1.49 (Material) |
| Total Light Transmittance           | K7361-1     | D-1003 | %                 | 93                 | 92              |
| Haze                                | K7136       | D-1003 | %                 | 0.1                |                 |
| <b>MECHANICAL</b>                   |             |        |                   |                    |                 |
| Elongation                          | K7162       | D-638  | %                 | 5                  | 3               |
| Tensile Rupture Strength            | K7162       | D-638  | MPa               | 75                 | 50              |
| Flexural Rupture Strength           | K7171       | D-790  | MPa               | 118                | 60              |
| Flexural Modulus                    | K7171       | D-790  | MPa               | $3.2 \times 10^3$  |                 |
| Impact Strength (Izod)              | K7110       | D-256  | KJ/m <sup>2</sup> | 2.0                | -               |
| Rockwell Hardness                   | K7202       | D-785  | M scale           | 100                | -               |
| Charpy Impact Strength              | K7111       | D-256  | KJ/m <sup>2</sup> | 17                 | -               |
| Pencil Hardness                     | K5600       | -      | H                 | 2~3                | 6~8             |
| <b>THERMAL</b>                      |             |        |                   |                    |                 |
| Heat Distortion Temperature         | K7191-2(A)  | D-648  | °C                | 108                | 110             |
| Coefficient of Thermal Expansion    | K7197       | D-696  | cm/cm°C           | $7 \times 10^{-5}$ |                 |
| Coefficient of Thermal Conductivity | A1412       | C-177  | W/m°C             | 0.17               |                 |
| <b>ELECTRICAL</b>                   |             |        |                   |                    |                 |
| Volume Resistivity                  | K6911       | D-257  | Ω·cm              | >10 <sup>16</sup>  |                 |
| Surface Resistivity                 | K6911       | D-257  | Ω                 |                    |                 |
| <b>MISCELLANEOUS</b>                |             |        |                   |                    |                 |
| Specific Gravity (23°C)             | K7112       | D-792  | -                 | 1.19               |                 |
| Water Absorption                    | K7209       | D-570  | %                 | 0.3                |                 |

These are our experimental measured values in Flat 001 transparent sheet.

Specifications are subject to change at any time.

(If not otherwise specified, values measured in 3.0mm thick)

Please ask for consultation in any doubt.