

| Property                                        | Test Condition | Test Method ISO | Units                 | Standard                                                                              |
|-------------------------------------------------|----------------|-----------------|-----------------------|---------------------------------------------------------------------------------------|
|                                                 |                |                 |                       | Middle impact                                                                         |
|                                                 |                |                 |                       | 700-314                                                                               |
|                                                 |                |                 |                       | >ABS<                                                                                 |
| Physical property                               |                |                 |                       |                                                                                       |
| Density                                         | 23℃            | ISO1183         | kg/m <sup>3</sup>     | 1050                                                                                  |
| Specific Gravity                                |                | ASTM D792       | -                     | 1.05                                                                                  |
| Mechanical property                             |                |                 |                       |                                                                                       |
| Tensile strength                                | 23℃            | ISO527-1,2      | MPa                   | 54                                                                                    |
| Tensile strength                                |                | ASTM D638       | MPa                   | 50                                                                                    |
| Tensile elongation at Break                     |                | ASTM D638       | %                     | 35                                                                                    |
| Elongation at Break                             | 23℃            | ISO527-1,2      | %                     | 18                                                                                    |
| Flexural Strength                               | 23℃            | ISO178          | MPa                   | 81                                                                                    |
| Flexural Strength                               |                | ASTM D790       | MPa                   | 76                                                                                    |
| Flexural Modulus                                | 23℃/50%RH      | ISO 178         | MPa                   | 2540                                                                                  |
| Flexural Modulus                                |                | ASTM D790       | MPa                   | 2450                                                                                  |
| Rockwell Hardness                               | 23℃            | ISO2039-2       | R Scale               | 115                                                                                   |
| Rockwell Hardness                               | 23℃/50%RH      | ASTM D785       | Rスケール                 | 115                                                                                   |
| Charpy Impact Strength (V-notched)              | 23℃            | ISO179          | kJ/m <sup>2</sup>     | 17                                                                                    |
| Ball Pressure Temp./0.1mm Vicat Softening Temp. |                |                 | ℃                     | 95~95                                                                                 |
| Izod Impact Strength (V-notched)                | 23℃ 12.7mm     | ASTM D256       | J/m                   | 186                                                                                   |
| Izod Impact Strength (V-notched)                | 0℃ 12.7mm      | ASTM D256       | J/m                   | 108                                                                                   |
| Izod Impact Strength (V-notched)                | -30℃ 12.7mm    | ASTM D256       | J/m                   | 78                                                                                    |
| Izod Impact Strength (V-notched)                | 23℃ 3.2mm      | ASTM D256       | J/m                   | 196                                                                                   |
| Izod Impact Strength (V-notched)                | 0℃ 3.2mm       | ASTM D256       | J/m                   | 157                                                                                   |
| Izod Impact Strength (V-notched)                | -30℃ 3.2mm     | ASTM D256       | J/m                   | 118                                                                                   |
| Heat property                                   |                |                 |                       |                                                                                       |
| Coef of Linear Thermal Expansion                | —              | ASTM D696       | ℃ <sup>-1</sup>       | 0.000071                                                                              |
| Heat Deflection Temp High Load                  | 1.80MPa        | ISO75-1,2       | ℃                     | 82                                                                                    |
| Heat Deflection Temp(Unannealed)High Load       | 6.4mm/1.82MPa  | ASTM D648       | ℃                     | 87                                                                                    |
| Flammability                                    |                | UL94            | rank/thickness<br>mmt | HB                                                                                    |
| Molding property                                |                |                 |                       |                                                                                       |
| Mold shrinkage                                  | 23℃/50%RH      | Toray Method    | %                     | 0.4-0.6                                                                               |
| Melt Flow Rate                                  | 220℃/98N       | ISO 1133        | g/10min               | 23                                                                                    |
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#### Applications of toyolac

|                   |                         |             |                              |
|-------------------|-------------------------|-------------|------------------------------|
| housing equipment | Digital home appliance  | Special use | Generic Component/Livingware |
| Automobile        | Electric home appliance |             |                              |