

# ChiMei

## ABS

### PA-747H

#### Product information

|                   |  |
|-------------------|--|
| Part Marking Code | ABS  |
| Color             | NC   |
| Material Shape    | Pellets  |
| Process           | Extrusion molding、 Vacuum Molding Forming  |
| FR                | HB   |
| Specification     | RoHS、 UL   |
| Features          | High strength, high impact, high rigidity, chemical resistance   |
| Application       | Home appliance applications, refrigerators, industrial applications, modified materials, substrate panels, structural parts, shoe applications |
| Additives         | Lubricant Mold Releases  |
| UL File NO.       | E56070   |

| UL             | Condition            | Standard  | Value | Unit |
|----------------|----------------------|-----------|-------|------|
| CTI            |                      | IEC 60112 | 0     | PLC  |
| HAI            | All Color 1.5mm      | UL 746A   | 0     | PLC  |
| HAI            | All Color 3.0mm      | UL 746A   | 0     | PLC  |
| HVTR           |                      | UL 746A   | 0     | PLC  |
| HWI            | All Color 1.5mm      | UL 746A   | 4     | PLC  |
| HWI            | All Color 3.0mm      | UL 746A   | 3     | PLC  |
| RTI            | Elec All Color 1.0mm | UL 746B   | 60    | °C   |
| RTI            | Elec All Color 1.5mm | UL 746B   | 60    | °C   |
| RTI            | Elec All Color 3.0mm | UL 746B   | 60    | °C   |
| RTI            | Imp All Color 1.0mm  | UL 746B   | 60    | °C   |
| RTI            | Imp All Color 1.5mm  | UL 746B   | 60    | °C   |
| RTI            | Imp All Color 3.0mm  | UL 746B   | 60    | °C   |
| RTI            | Str All Color 1.0mm  | UL 746B   | 60    | °C   |
| RTI            | Str All Color 1.5mm  | UL 746B   | 60    | °C   |
| RTI            | Str All Color 3.0mm  | UL 746B   | 60    | °C   |
| Arc Resistance |                      | ASTM D495 | 6     | PLC  |
| Flame Rating   | All Color 1.0mm      | UL94      | HB    |      |
| Flame Rating   | All Color 1.5mm      | UL94      | HB    |      |
| Flame Rating   | All Color 3.0mm      | UL94      | HB    |      |

| Mechanical behavior | Condition  | Standard  | Value   | Unit              |
|---------------------|------------|-----------|---------|-------------------|
| Elongation          | 6mm/min    | ASTM D638 | 50      | %                 |
| Elongation          | 50mm/min   | ISO 527   | 25      | %                 |
| Flexural Strength   | 2.0mm/min  | ISO 178   | 63      | MPa               |
| Flexural Strength   | 2.8mm/min  | ASTM D790 | 68.62   | MPa               |
| Flexural Modulus    | 2.0mm/min  | ISO 178   | 1800    | MPa               |
| Flexural Modulus    | 2.8mm/min  | ASTM D790 | 2352.94 | MPa               |
| Izod Notch Impact   | 23°C       | ISO 180   | 33      | kJ/m <sup>2</sup> |
| Izod Notch Impact   | 23°C 3.2mm | ASTM D256 | 45      | kJ/m <sup>2</sup> |
| Izod Notch Impact   | 23°C 6.4mm | ASTM D256 | 32      | kJ/m <sup>2</sup> |
| Izod Notch Impact   | -30°C      | ISO 180   | 22      | kJ/m <sup>2</sup> |

| Tensile Strength            | Break 50mm/min    | ISO 527    | 35      | MPa                    |
|-----------------------------|-------------------|------------|---------|------------------------|
| Tensile Strength            | Yield 50mm/min    | ASTM D638  | 47.05   | MPa                    |
| Tensile Strength            | Yield 50mm/min    | ISO 527    | 46      | MPa                    |
| Charpy Notch Impact         | 23°C              | ISO 179    | 35      | kJ/m <sup>2</sup>      |
| Charpy Notch Impact         | -30°C             | ISO 179    | 24      | kJ/m <sup>2</sup>      |
| Thermal                     | Condition         | Standard   | Value   | Unit                   |
| HDT                         | Annealed 1.8MPa   | ASTM D648  | 95      | °C                     |
| HDT                         | Annealed 1.8MPa   | ISO 75     | 100     | °C                     |
| HDT                         | Unannealed 1.8MPa | ASTM D648  | 85      | °C                     |
| HDT                         | Unannealed 1.8MPa | ISO 75     | 84      | °C                     |
| CLE                         |                   | ISO 11359  | 8.7E-5  | cm/cm/°C               |
| Vicat Softening Temperature | 50°C/hr 10N       | ASTM D1525 | 106     | °C                     |
| Vicat Softening Temperature | 50°C/hr 10N       | ISO 306    | 106     | °C                     |
| Vicat Softening Temperature | 50°C/hr 50N       | ISO 306    | 101     | °C                     |
| Physical property           | Condition         | Standard   | Value   | Unit                   |
| Shrinkage                   |                   | ISO 294    | 0.4~0.7 | %                      |
| Density                     | 23°C              | ASTM D792  | 1.05    | g/cm <sup>3</sup>      |
| Density                     | 23°C              | ISO 1183   | 1.05    | g/cm <sup>3</sup>      |
| Melt Index                  | 200°C 5kg         | ASTM D1238 | 0.2     | g/10min                |
| Melt Index                  | 220°C 10kg        | ISO 1133   | 3       | cm <sup>3</sup> /10min |
| Hardness                    | Condition         | Standard   | Value   | Unit                   |
| Rockwell Hardness           | R(Scale)          | ASTM D785  | 112     |                        |
| Flammability                | Condition         | Standard   | Value   | Unit                   |
| Flame Rating                | All Color 1.0mm   | UL94       | HB      |                        |
| Flame Rating                | 1.5mm             | UL94       | HB      |                        |
| Flame Rating                | 3.0mm             | UL94       | HB      |                        |