

## Technical Data Sheet ( ASTM )

### ABS(Acrylonitrile Butadiene Styrene)

### ABS 745HM

**Features** Super impact strength  
**Applications** Helmets, Hard hat

| Physical  | Test Method | Value                      |
|---|-------------|----------------------------|
| Density   | ASTM D792   | 1.03 g/cm <sup>3</sup>     |
| Melt Flow Index (220°C, 10kg)                         | ASTM D1238  | 11 g/10min                 |
| Melt Flow Index (200°C, 21.6kg)                       | ASTM D1238  | 16 g/10min                 |
| Mold Shrinkage  | ASTM D955   | 0.5 ~ 0.8 %                |
| Water absorption                                      | ASTM D570   | - %                        |
| Mechanical  | Test Method | Value                      |
| Tensile Strength                                      | ASTM D638   | 380 kgf/cm <sup>2</sup>    |
| Elongation  | ASTM D638   | 30 %                       |
| Flexural Strength                                     | ASTM D790   | 510 kgf/cm <sup>2</sup>    |
| Flexural Modulus                                      | ASTM D790   | 16,900 kgf/cm <sup>2</sup> |
| Izod Impact Strength(3.2mm, 23°C)                     | ASTM D256   | 52 kgf-cm/cm               |
| Izod Impact Strength(6.4mm, 23°C)                     | ASTM D256   | 42 kgf-cm/cm               |
| Rockwell Hardness(R scale)                            | ASTM D785   | 94                         |
| Thermal   | Test Method | Value                      |
| Heat Deflection Temperature(18.6kgf/cm <sup>2</sup> ) | ASTM D648   | 82 °C                      |
| Vicat Softening Temperature(5kg, 50°C/h)              | ASTM D1525  | 92 °C                      |
| Flammability  | Test Method | Value                      |
| Flame Rating - UL (1.6mm)                             | UL 94       | HB                         |

#### Notes

These are just typical properties, not specifications. Users should confirm results by their own test.