

# Taitalac® 6003

Acrylonitrile Butadiene Styrene

Taita Chemical Company, Ltd.

## Message:

Taitalac® 6003 is an acrylonitrile butadiene styrene (ABS) material. This product is available in North America or Asia Pacific region. The processing method is injection molding.

Taitalac®The main features of the 6003 are:

- flame retardant/rated flame
- low gloss
- high liquidity
- Impact resistance

Taitalac®The typical application field of 6003 is: consumer goods

| General Information                                    |                          |                   |             |
|--------------------------------------------------------|--------------------------|-------------------|-------------|
| UL YellowCard                                          | E50263-241895            |                   |             |
| Features                                               | Gloss, low               |                   |             |
|                                                        | High liquidity           |                   |             |
|                                                        | Medium impact resistance |                   |             |
| Uses                                                   | Toys                     |                   |             |
| UL File Number                                         | E50263                   |                   |             |
| Forms                                                  | Particle                 |                   |             |
| Processing Method                                      | Injection molding        |                   |             |
| Physical                                               | Nominal Value            | Unit              | Test Method |
| Specific Gravity                                       | 1.05                     | g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR)                              |                          |                   | ASTM D1238  |
| 200°C/5.0 kg                                           | 1.0                      | g/10 min          | ASTM D1238  |
| 220°C/10.0 kg                                          | 10                       | g/10 min          | ASTM D1238  |
| Molding Shrinkage - Flow                               | < 0.40                   | %                 | ASTM D955   |
| Water Absorption (24 hr)                               | 0.30                     | %                 | ASTM D570   |
| Hardness                                               | Nominal Value            | Unit              | Test Method |
| Rockwell Hardness (R-Scale)                            | 105                      |                   | ASTM D785   |
| Mechanical                                             | Nominal Value            | Unit              | Test Method |
| Tensile Strength <sup>1</sup>                          |                          |                   | ASTM D638   |
| Yield, 23°C, 3.18mm                                    | 37.9                     | MPa               | ASTM D638   |
| Fracture, 23°C, 3.18mm                                 | 31.7                     | MPa               | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Break, 23°C, 3.18 mm) | 30                       | %                 | ASTM D638   |
| Flexural Modulus <sup>3</sup> (23°C)                   | 2210                     | MPa               | ASTM D790   |
| Flexural Strength <sup>4</sup> (Yield, 23°C)           | 58.6                     | MPa               | ASTM D790   |
| Impact                                                 | Nominal Value            | Unit              | Test Method |
| Notched Izod Impact                                    |                          |                   | ASTM D256   |
| 23°C, 3.18 mm                                          | 200                      | J/m               | ASTM D256   |

| 23°C, 12.7 mm                                                    | 170           | J/m    | ASTM D256               |
|------------------------------------------------------------------|---------------|--------|-------------------------|
| Thermal                                                          | Nominal Value | Unit   | Test Method             |
| Deflection Temperature Under Load (1.8 MPa, Unannealed, 12.7 mm) | 81.1          | °C     | ASTM D648               |
| Vicat Softening Temperature                                      | 96.1          | °C     | ASTM D1525 <sup>5</sup> |
| RTI Elec (1.57 mm)                                               | 60.0          | °C     | UL 746                  |
| RTI Imp (1.57 mm)                                                | 60.0          | °C     | UL 746                  |
| RTI (1.57 mm)                                                    | 60.0          | °C     | UL 746                  |
| Electrical                                                       | Nominal Value | Unit   | Test Method             |
| High Amp Arc Ignition (HAI) (1.57 mm)                            | 10.0          |        | UL 746                  |
| High Voltage Arc Tracking Rate (HVTR) (1.57 mm)                  | 0.00          | mm/min | UL 746                  |
| Hot-wire Ignition (HWI) (1.57 mm)                                | 12            | sec    | UL 746                  |
| Flammability                                                     | Nominal Value | Unit   | Test Method             |
| Flame Rating (1.59 mm)                                           | HB            |        | UL 94                   |
| Additional Information                                           |               |        |                         |
| Water Absorption, ASTM D570: <0.3%                               |               |        |                         |
| NOTE                                                             |               |        |                         |
| 1.                                                               | 5.0 mm/min    |        |                         |
| 2.                                                               | 5.0 mm/min    |        |                         |
| 3.                                                               | 2.8 mm/min    |        |                         |
| 4.                                                               | 2.8 mm/min    |        |                         |
| 5.                                                               | 压力1 (10N)     |        |                         |

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