Product Information

#### ISO 1043: PBT-HIFR(17)

Common features of Crastin® thermoplastic polyester resin include mechanical and physical properties such as stiffness and toughness, heat resistance, friction and wear resistance, excellent surface finishes and good colourability. Crastin® thermoplastic polyester resin has excellent electrical insulation characteristics and high arc-resistant grades are available. Many flame retardant grades have UL recognition (class V-0). Crastin® thermoplastic polyester resin typically has high chemical and heat ageing resistance.

The good melt stability of Crastin® thermoplastic polyester resin normally enables the recycling of properly handled production waste.

If recycling is not possible, DuPont recommends, as the preferred option, incineration with energy recovery (-24 kJ/g of base polymer) in appropriately equipped installations. For disposal, local regulations have to be observed.

Crastin® thermoplastic polyester resin typically is used in demanding applications in the electronics, electrical, automotive, mechanical engineering, chemical, domestic appliances and sporting goods industry.

Crastin® ST830FRUV NC010 is an unreinforced, Super Tough, flame retardant polybutylene terephthalate resin for injection molding. It contains a UV light stabilizer and is recognized as UL94V-0 at 0.85mm (0.033in).

| Resin Identification         PBT-HIFR(17)         -         ISO 1043           Part Marking Code         PBT-HIFR(17)         -         ISO 11469           Resin Identification         PBT-HIFR(17)         -         ISO 1133           Mel mass-flow rate, Temperature         250         °C         ISO 1133           Melt mass-flow rate, Load         5         kg         ISO 1133           Molding shrinkage, parallel         2.0         %         ISO 294-4, 2577           Medantification         4         Medantification         ISO 527-1/-2           Yield strain         9         %          | General information            | Value | Unit              | Test Standard  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------|-------------------|----------------|
| Part Marking Code         PBT-HIFR(17)         -         ISO 11469           Rhecological properties         Value         Unit         Test Standard           Melt mass-flow rate         3 g/10min         ISO 1133           Melt mass-flow rate, Load         5 kg         ISO 1133           Molding shrinkage, parallel         2.0 %         ISO 294-4, 2577           Molding shrinkage, normal         1.6 %         ISO 294-4, 2577           Mechanical properties         Value         Unit         Test Standard           Tensile Modulus         2200         MPa         ISO 527-17-2           Yield stress         41 MPa         ISO 527-17-2           Yield strain at break         45 %         ISO 527-17-2           Nominal strain at break         45 %         ISO 527-17-2           Flexural Modulus         2100 MPa         ISO 178           Charpy impact strength         ISO 179/1eU           73 °F         N kJ/m²           -40 °F         350 kJ/m²           Charpy notched impact strength         ISO 179/1eA           73 °F         65 kJ/m²           -40 °F         10 kJ/m²           -22 °F         10 kJ/m²           -40 °F         10 kJ/m²    IsO 180/1A  Type  IsO 180/1                                     |                                |       |                   |                |
| Rheological properties         Value         Unit         Test Standard           Melt mass-flow rate, Temperature         25 °C         ISO 1133           Melt mass-flow rate, Load         5 kg         ISO 1133           Molding shrinkage, parallel         2.0 %         ISO 294-4, 2577           Molding shrinkage, normal         1.6 %         ISO 294-4, 2577           Mechanical properties         Value         Unit         Test Standard           Tensile Modulus         2200 MPa         ISO 527-1/-2           Yield stress         41 MPa         ISO 527-1/-2           Yield stress         41 MPa         ISO 527-1/-2           Yield strain         9 %         ISO 527-1/-2           Nominal strain at break         45 %         ISO 527-1/-2           Nominal strain at break         45 %         ISO 527-1/-2           Flexural Modulus         2100 MPa         ISO 178           Charpy impact strength         ISO 179/1eU           73*F         N kJ/m²           -40*F         350 kJ/m²           -22*F         10 kJ/m²           -40*F         10 kJ/m²           Izod notched impact strength         ISO 180/1A           73*F         70 kJ/m²           -22*F         10 k                                         |                                |       | -                 |                |
| Melt mass-flow rate         3 g/10min         ISO 1133           Melt mass-flow rate, Temperature         250 °C         ISO 1133           Melt mass-flow rate, Load         5 kg         ISO 1133           Molding shrinkage, parallel         2.0 %         ISO 294-4, 2577           Molding shrinkage, normal         1.6 %         ISO 294-4, 2577           Mechanical properties         Value         Unit         Test Standard           Tensile Modulus         2200 MPa         ISO 527-1/-2         ISO 527-1/-2           Yield stress         41 MPa         ISO 527-1/-2         ISO 527-1/-2           Yield strain at break         45 %         ISO 527-1/-2         ISO 178           Charpy impact strength         ISO 179/1eU         T3 °F         ISO 179/1eU           73 °F         350 kJ/m²         ISO 179/1eA         T3 °F         ISO 179/1eA           73 °F         65 kJ/m²         ISO 179/1eA         T3 °F         ISO 179/1eA           73 °F         10 kJ/m²         ISO 180/1A         T3 °F         ISO 180/1A           73 °F         10 kJ/m²         ISO 180/1A         T3 °F         ISO 180/1A           73 °F         10 kJ/m²         ISO 180/1A         T3 °F         ISO 180/1A           73 °F         10 k |                                |       | 11.20             |                |
| Melt mass-flow rate, Temperature         250         °C         ISO 1133           Melt mass-flow rate, Load         5 kg         ISO 1133           Molding shrinkage, parallel         2.0 %         ISO 294-4, 2577           Molding shrinkage, normal         1.6 %         ISO 294-4, 2577           Mechanical properties         Value         Unit         Test Standard           Tensile Modulus         2200         MPa         ISO 527-1/-2           Yield stress         41 MPa         ISO 527-1/-2           Yield strain         9 %         ISO 527-1/-2           Nominal strain at break         45 %         ISO 527-1/-2           Flexural Modulus         2100 MPa         ISO 178           Charpy impact strength         ISO 179/1eU           73 °F         N kJ/m²           -22 °F         350 kJ/m²           -22 °F         350 kJ/m²           -22 °F         10 kJ/m²           -40 °F         10 kJ/m²           Izod notched impact strength         ISO 180/1A           73 °F         10 kJ/m²           Izod notched impact strength         ISO 180/1A           73 °F         10 kJ/m²           Izod notched impact strength         ISO 180/1A           72 °F                                                         | 3   1                          |       |                   |                |
| Melt mass-flow rate, Load       5 kg       ISO 1133         Molding shrinkage, parallel       2.0 %       ISO 294-4, 2577         Molding shrinkage, normal       1.6 %       ISO 294-4, 2577         Mechanical properties       Value Unit       Test Standard         Tensile Modulus       2200 MPa       ISO 527-1/-2         Yield stress       41 MPa       ISO 527-1/-2         Yield strain       9 %       ISO 527-1/-2         Nominal strain at break       45 %       ISO 527-1/-2         Flexural Modulus       2100 MPa       ISO 178         Charpy impact strength       ISO 179/1eU         73°F       N kJ/m²         -40°F       350 kJ/m²         Charpy notched impact strength       ISO 179/1eA         73°F       65 kJ/m²         -22°F       10 kJ/m²         -40°F       10 kJ/m²         Izod notched impact strength       ISO 180/1A         73°F       10 kJ/m²         -22°F       10 kJ/m²         -22°F       10 kJ/m²                                                                                                                                                                                                                                                                                                          |                                |       |                   |                |
| Molding shrinkage, parallel       2.0 %       ISO 294-4, 2577         Molding shrinkage, normal       1.6 %       ISO 294-4, 2577         Mechanical properties       Value Unit       Test Standard         Tensile Modulus       2200 MPa ISO 527-1/-2         Yield stress       41 MPa ISO 527-1/-2         Yield strain       9 % ISO 527-1/-2         Nominal strain at break       45 % ISO 527-1/-2         Flexural Modulus       2100 MPa ISO 178         Charpy impact strength       ISO 179/1eU         73°F       N kJ/m²         -40°F       350 kJ/m²         -40°F       10 kJ/m²         Izod notched impact strength       ISO 179/1eA         73°F       10 kJ/m²         Izod notched impact strength       ISO 180/1A         73°F       10 kJ/m²         Izod notched impact strength       ISO 180/1A         73°F       10 kJ/m²         -22°F       10 kJ/m²         -22°F       10 kJ/m²                                                                                                                                                                                                                                                                                                                                                 |                                |       |                   |                |
| Molding shrinkage, normal       1.6 %       ISO 294-4, 2577         Mechanical properties       Value       Unit       Test Standard         Tensile Modulus       2200 MPa       ISO 527-1/-2         Yield stress       41 MPa       ISO 527-1/-2         Yield strain       9 %       ISO 527-1/-2         Nominal strain at break       45 %       ISO 527-1/-2         Flexural Modulus       2100 MPa       ISO 178         Charpy impact strength       ISO 179/1eU         73 °F       N kJ/m²         -40 °F       350 kJ/m²         Charpy notched impact strength       ISO 179/1eA         73 °F       65 kJ/m²         -22 °F       10 kJ/m²         -40 °F       10 kJ/m²         Izod notched impact strength       ISO 180/1A         73 °F       70 kJ/m²         -22 °F       10 kJ/m²         -22 °F       10 kJ/m²         -22 °F       10 kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                | ,                              |       |                   |                |
| Mechanical properties         Value         Unit         Test Standard           Tensile Modulus         2200 MPa         ISO 527-1/-2           Yield stress         41 MPa         ISO 527-1/-2           Yield strain         9 % ISO 527-1/-2           Nominal strain at break         45 % ISO 527-1/-2           Flexural Modulus         2100 MPa         ISO 179           Charpy impact strength         ISO 179/1eU           73 °F         N kJ/m²           -40 °F         350 kJ/m²           Charpy notched impact strength         ISO 179/1eA           73 °F         65 kJ/m²           -22 °F         10 kJ/m²           Izod notched impact strength         ISO 180/1A           73 °F         10 kJ/m²           Izod notched impact strength         ISO 180/1A           73 °F         70 kJ/m²           -22 °F         10 kJ/m²           -22 °F         10 kJ/m²                                                                                                                                                                                                                                                                                                                                                                         |                                |       |                   | ,              |
| Tensile Modulus         2200 MPa         ISO 527-1/-2           Yield stress         41 MPa         ISO 527-1/-2           Yield strain         9 % ISO 527-1/-2           Nominal strain at break         45 % ISO 527-1/-2           Flexural Modulus         2100 MPa         ISO 178           Charpy impact strength         ISO 179/1eU           73°F         N kJ/m²         ISO 179/1eU           -22°F         350 kJ/m²         ISO 179/1eA           73°F         65 kJ/m²         ISO 179/1eA           -22°F         10 kJ/m²         ISO 180/1A           73°F         10 kJ/m²         ISO 180/1A           73°F         70 kJ/m²         ISO 180/1A           -22°F         10 kJ/m²         ISO 180/1A           -22°F         10 kJ/m²         ISO 180/1A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                |       |                   | ,              |
| Yield stress       41 MPa       ISO 527-1/-2         Yield strain       9 %       ISO 527-1/-2         Nominal strain at break       45 %       ISO 527-1/-2         Flexural Modulus       2100 MPa       ISO 178         Charpy impact strength       ISO 179/1eU         73°F       N kJ/m²         -40°F       350 kJ/m²         Charpy notched impact strength       ISO 179/1eA         73°F       65 kJ/m²         -22°F       10 kJ/m²         -40°F       10 kJ/m²         Izod notched impact strength       ISO 180/1A         73°F       70 kJ/m²         Izod notched impact strength       ISO 180/1A         73°F       70 kJ/m²         -22°F       10 kJ/m²         -22°F       10 kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | · ·                            | Value |                   |                |
| Yield strain       9 %       ISO 527-1/-2         Nominal strain at break       45 %       ISO 527-1/-2         Flexural Modulus       2100 MPa       ISO 178         Charpy impact strength       ISO 179/1eU         73 °F       N kJ/m²         -40 °F       350 kJ/m²         Charpy notched impact strength       ISO 179/1eA         73 °F       65 kJ/m²         -22 °F       10 kJ/m²         -40 °F       10 kJ/m²         Izod notched impact strength       ISO 180/1A         73 °F       70 kJ/m²         -22 °F       10 kJ/m²         -22 °F       10 kJ/m²         -40 °F       10 kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Tensile Modulus                | 2200  | MPa               | ISO 527-1/-2   |
| Nominal strain at break         45 %         ISO 527-1/-2           Flexural Modulus         2100 MPa         ISO 178           Charpy impact strength         ISO 179/1eU           73°F         N kJ/m²           -40°F         350 kJ/m²           Charpy notched impact strength         ISO 179/1eA           73°F         65 kJ/m²           -22°F         10 kJ/m²           -40°F         10 kJ/m²           Izod notched impact strength         ISO 180/1A           73°F         70 kJ/m²           -22°F         10 kJ/m²           -40°F         10 kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Yield stress                   | 41    |                   | ISO 527-1/-2   |
| Flexural Modulus         2100 MPa         ISO 178           Charpy impact strength         ISO 179/1eU           73°F         N kJ/m²           -40°F         350 kJ/m²           Charpy notched impact strength         ISO 179/1eA           73°F         65 kJ/m²           -22°F         10 kJ/m²           -40°F         10 kJ/m²           Izod notched impact strength         ISO 180/1A           73°F         70 kJ/m²           -22°F         10 kJ/m²           -40°F         10 kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yield strain                   | 9     | %                 | ISO 527-1/-2   |
| Charpy impact strength       ISO 179/1eU         73°F       N kJ/m²         -22°F       350 kJ/m²         -40°F       350 kJ/m²         Charpy notched impact strength       ISO 179/1eA         73°F       65 kJ/m²         -22°F       10 kJ/m²         Izod notched impact strength       ISO 180/1A         73°F       70 kJ/m²         -22°F       10 kJ/m²         -40°F       10 kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Nominal strain at break        | 45    | %                 | ISO 527-1/-2   |
| 73°F -22°F -350 kJ/m² -40°F  Charpy notched impact strength  73°F -22°F -40°F  150 179/1eA  150 179/1eA  73°F -10 kJ/m²  Iso 180/1A  73°F -22°F -2350 kJ/m² -22°F -2350 kJ/m² -2360 kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Flexural Modulus               | 2100  | MPa               | ISO 178        |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Charpy impact strength         |       |                   | ISO 179/1eU    |
| -40°F  Charpy notched impact strength  73°F  -22°F  -40°F  Izod notched impact strength  73°F  -22°F  10 kJ/m²  ISO 179/1eA  65 kJ/m²  10 kJ/m²  ISO 180/1A  Figure 10 kJ/m²  ISO 180/1A  10 kJ/m²  10 kJ/m²  10 kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 73°F                           | N     | kJ/m <sup>2</sup> |                |
| Charpy notched impact strength       ISO 179/1eA         73°F       65 kJ/m²         -22°F       10 kJ/m²         -40°F       10 kJ/m²         Izod notched impact strength       ISO 180/1A         73°F       70 kJ/m²         -22°F       10 kJ/m²         -40°F       10 kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -22°F                          | 350   | kJ/m²             |                |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -40°F                          | 350   | kJ/m²             |                |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Charpy notched impact strength |       |                   | ISO 179/1eA    |
| -40°F     10 kJ/m²       Izod notched impact strength     ISO 180/1A       73°F     70 kJ/m²       -22°F     10 kJ/m²       -40°F     10 kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 73°F                           | 65    | kJ/m <sup>2</sup> |                |
| Izod notched impact strength                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -22°F                          | 10    | kJ/m <sup>2</sup> |                |
| 73°F 70 kJ/m² -22°F 10 kJ/m² -40°F 10 kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -40°F                          | 10    | kJ/m²             |                |
| 73°F 70 kJ/m² -22°F 10 kJ/m² -40°F 10 kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Izod notched impact strength   |       |                   | ISO 180/1A     |
| -40°F 10 kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                | 70    | kJ/m²             |                |
| 17 17 17 17 17 17 17 17 17 17 17 17 17 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -22°F                          | 10    | kJ/m <sup>2</sup> |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -40°F                          | 10    | kJ/m²             |                |
| ····                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Izod impact strength           |       |                   | ISO 180/1U     |
| 73°F N kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                | N     | kJ/m²             |                |
| -22°F 220 kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                |       |                   |                |
| -40°F 220 kJ/m²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <del>== :</del>                |       |                   |                |
| Thermal properties Value Unit Test Standard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                |       |                   | Test Standard  |
| Melting temperature, 18°F/min 225 °C ISO 11357-1/-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                | 225   | °C                | ISO 11357-1/-3 |

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To find out more, visit DuPont Performance Polymers or contact nearest DuPont location.

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| Temp. of deflection under load                                                                                                                          |                                                  |                                  | ISO 75-1/-2           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------|-----------------------|
| 260 psi                                                                                                                                                 | 55                                               | °C                               |                       |
| 65 psi                                                                                                                                                  |                                                  | °C                               |                       |
| Coeff. of linear therm. expansion, parallel                                                                                                             | 190                                              | E-6/K                            | ISO 11359-1/-2        |
| Coeff. of linear therm. expansion, normal                                                                                                               |                                                  | E-6/K                            | ISO 11359-1/-2        |
| RTI, electrical                                                                                                                                         |                                                  | -                                | UL 746B               |
| 30mil                                                                                                                                                   | 130                                              | °C                               |                       |
| 60mil                                                                                                                                                   | 130                                              | °Č                               |                       |
| 120mil                                                                                                                                                  | 130                                              | °C                               |                       |
| RTI, impact                                                                                                                                             |                                                  |                                  | UL 746B               |
| 30mil                                                                                                                                                   | 130                                              | °C                               | 027105                |
| 60mil                                                                                                                                                   | 130                                              | °Č                               |                       |
| 120mil                                                                                                                                                  | 130                                              | °C                               |                       |
| RTI, strength                                                                                                                                           | 130                                              |                                  | UL 746B               |
| 30mil                                                                                                                                                   | 130                                              | °C                               | GE 7 10B              |
| 60mil                                                                                                                                                   | 130                                              | °C                               |                       |
| 120mil                                                                                                                                                  | 130                                              | °C                               |                       |
| Flammability                                                                                                                                            | Value                                            |                                  | Test Standard         |
| Burning Behav. at 60mil nom. thickn.                                                                                                                    | Value<br>V-0                                     | class                            | IEC 60695-11-10       |
| Thickness tested                                                                                                                                        | 1.5                                              | mm                               | IEC 60695-11-10       |
| UL recognition                                                                                                                                          |                                                  | -                                | UL 94                 |
|                                                                                                                                                         | yes                                              |                                  |                       |
| Burning Behav. at thickness h Thickness tested                                                                                                          | V-0                                              |                                  | IEC 60695-11-10       |
|                                                                                                                                                         | 0.85                                             | mm                               | IEC 60695-11-10       |
| UL recognition                                                                                                                                          | ,                                                | -                                | UL 94                 |
| Oxygen index                                                                                                                                            | 27                                               | %                                | ISO 4589-1/-2         |
| Glow Wire Flammability Index, 120mil                                                                                                                    | 960                                              | °C                               | IEC 60695-2-1/2       |
| FMVSS Class                                                                                                                                             |                                                  | -                                | ISO 3795 (FMVSS 302)  |
| Electrical properties                                                                                                                                   | Value                                            | Unit                             | Test Standard         |
| Relative permittivity                                                                                                                                   |                                                  |                                  | IEC 60250             |
| 100Hz                                                                                                                                                   | 5.5                                              | -                                |                       |
| 1MHz                                                                                                                                                    | 3.4                                              | -                                | 155 (2052)            |
| Dissipation factor                                                                                                                                      |                                                  |                                  | IEC 60250             |
| 100Hz                                                                                                                                                   | 10.9                                             |                                  |                       |
| 1MHz                                                                                                                                                    | 240                                              |                                  |                       |
| Volume resistivity                                                                                                                                      | >1E13                                            | Ohm*m                            | IEC 60093             |
| Surface resistivity                                                                                                                                     | 1E14                                             | Ohm                              | IEC 60093             |
| Electric strength                                                                                                                                       | 36                                               | kV/mm                            | IEC 60243-1           |
| Comparative tracking index                                                                                                                              | 600                                              | -                                | IEC 60112             |
| Other properties                                                                                                                                        | Value                                            |                                  | Test Standard         |
| Density                                                                                                                                                 | 1370                                             |                                  | ISO 1183              |
| Density of melt                                                                                                                                         | 1170                                             |                                  | •                     |
| Injection                                                                                                                                               | Value                                            | Unit                             | Test Standard         |
| Drying Recommended                                                                                                                                      | yes                                              | -                                | -                     |
| Drying Temperature                                                                                                                                      | 120                                              | °C                               | <u> </u>              |
| Drying Time, Dehumidified Dryer                                                                                                                         | 2 - 4                                            |                                  | <u> </u>              |
| Processing Moisture Content                                                                                                                             |                                                  | 0/                               | -                     |
|                                                                                                                                                         | ≤0.04                                            |                                  |                       |
| Melt Temperature Optimum                                                                                                                                | 250                                              | °C                               | -                     |
| Min. melt temperature                                                                                                                                   |                                                  | °C<br>°C                         | ·                     |
| Min. melt temperature  Max. melt temperature                                                                                                            | 250<br>240<br>260                                | °C<br>°C                         |                       |
| Min. melt temperature Max. melt temperature Mold Temperature Optimum                                                                                    | 250<br>240<br>260<br>80                          | °C °C °C                         | -                     |
| Min. melt temperature  Max. melt temperature  Mold Temperature Optimum  Min. mold temperature                                                           | 250<br>240<br>260                                | °C<br>°C<br>°C                   | -<br>-                |
| Min. melt temperature Max. melt temperature Mold Temperature Optimum                                                                                    | 250<br>240<br>260<br>80                          | °C °C °C                         | ·<br>·                |
| Min. melt temperature Max. melt temperature Mold Temperature Optimum Min. mold temperature Max. mold temperature Hold pressure range                    | 250<br>240<br>260<br>80<br>30<br>130             | °C<br>°C<br>°C                   | ·<br>·<br>·           |
| Min. melt temperature Max. melt temperature Mold Temperature Optimum Min. mold temperature Max. mold temperature                                        | 250<br>240<br>260<br>80<br>30<br>130             | °C<br>°C<br>°C<br>°C<br>C<br>MPa | -<br>-<br>-<br>-      |
| Min. melt temperature Max. melt temperature Mold Temperature Optimum Min. mold temperature Max. mold temperature Hold pressure range                    | 250<br>240<br>260<br>80<br>30<br>130<br>≥60<br>3 | °C °C °C °C °C MPa s/mm          | -<br>-<br>-<br>-<br>- |
| Min. melt temperature Max. melt temperature Mold Temperature Optimum Min. mold temperature Max. mold temperature Hold pressure range Hold pressure time | 250<br>240<br>260<br>80<br>30<br>130<br>≥60      | °C °C °C °C °C MPa s/mm          | -<br>-<br>-<br>-<br>- |

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| Characteristics         |                                                             |                                                                  |                                                   |
|-------------------------|-------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------|
| Processing              | <ul> <li>Injection Molding</li> </ul>                       |                                                                  |                                                   |
| Special characteristics | <ul> <li>Light stabilized or stable<br/>to light</li> </ul> | <ul> <li>U.V. stabilized or stable to<br/>weather</li> </ul>     |                                                   |
| Regional Availability   | <ul><li>North America</li><li>Europe</li></ul>              | <ul><li>Asia Pacific</li><li>South and Central America</li></ul> | <ul><li>Near East/Africa</li><li>Global</li></ul> |

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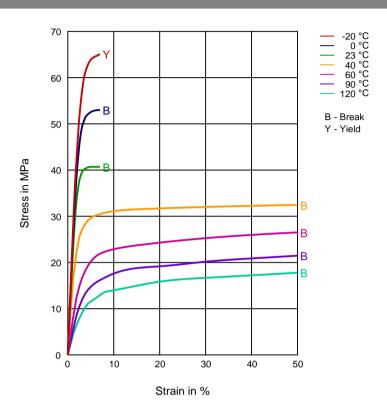
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Diagrams

Stress-strain



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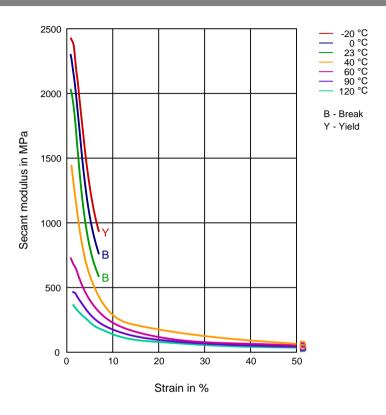
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Secant modulus-strain



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#### Chemical Media Resistance

#### Acids

Acetic Acid (5% by mass) (23°C)

Citric Acid solution (10% by mass) (23°C)

Lactic Acid (10% by mass) (23°C)

Hydrochloric Acid (36% by mass) (23°C)

Nitric Acid (40% by mass) (23°C)

Sulfuric Acid (38% by mass) (23°C)

Suttuite Acid (50% by 111833) (25 C)

Sulfuric Acid (5% by mass) (23°C)

Chromic Acid solution (40% by mass) (23°C)

#### Bases

Sodium Hydroxide solution (35% by mass) (23°C)

Sodium Hydroxide solution (1% by mass) (23°C)

✓ Ammonium Hydroxide solution (10% by mass) (23°C)

#### Alcohols

✓ Isopropyl alcohol (23°C)

✓ Methanol (23°C)

Ethanol (23°C)

#### Hydrocarbons

√ n-Hexane (23°C)

√ Toluene (23°C)

√ iso-Octane (23°C)

#### Ketones

✓ Acetone (23°C)

### Ethers

Diethyl ether (23°C)

#### Mineral oil

SAE 10W40 multigrade motor oil (23°C)

SAE 10W40 multigrade motor oil (130°C)

SAE 80/90 hypoid-gear oil (130°C)

Insulating Oil (23°C)

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### Standard Fuels

ISO 1817 Liquid 1 - E5 (60°C)

ISO 1817 Liquid 2 - M15E4 (60°C)

ISO 1817 Liquid 3 - M3E7 (60°C)

ISO 1817 Liquid 4 - M15 (60°C)

Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23°C)

Standard fuel with alcohol (pref. ISO 1817 Liquid 4) (23°C)

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Diesel fuel (pref. ISO 1817 Liquid F) (23°C)

Diesel fuel (pref. ISO 1817 Liquid F) (90°C)

Diesel fuel (pref. ISO 1817 Liquid F) (>90°C)

#### Salt solutions

Sodium Chloride solution (10% by mass) (23°C)

Sodium Hypochlorite solution (10% by mass) (23°C) Sodium Carbonate solution (20% by mass) (23°C)

Sodium Carbonate solution (2% by mass) (23°C)

Zinc Chloride solution (50% by mass) (23°C)

Ethyl Acetate (23°C)



Hydrogen peroxide (23°C)



DOT No. 4 Brake fluid (130°C)



Ethylene Glycol (50% by mass) in water (108°C)



1% nonylphenoxy-polyethyleneoxy ethanol in water (23°C)



50% Oleic acid + 50% Olive Oil (23°C)



Water (23°C)



Water (90°C)



Phenol solution (5% by mass) (23°C)

#### Symbols used:

✓ possibly resistant

Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).



not recommended - see explanation

Defined as: Not recommended for general use. However, short-term exposure under certain restricted conditions could be acceptable (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 160 mil (Hytrel® measured at 80 mil), IEC Electrical properties measured at 80 mil, all ASTM properties measured at 120 mil, and test temperatures are 73°F unless otherwise stated.

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