

# DuPont™ Delrin®

acetal resin

PRELIMINARY DATA

## Delrin® 570 NC000

Delrin® 570 NC000 is a medium viscosity acetal homopolymer containing 20% glass fiber filler for injection molding. Delrin® 570 has very high stiffness, low warpage, and good creep resistance.

| Property                         | Test Method    | Units             | Value      |
|----------------------------------|----------------|-------------------|------------|
| <b>Identification</b>            |                |                   |            |
| Resin Identification             | ISO 1043       |                   | POM-GF20   |
| Part Marking Code                | ISO 11469      |                   | >POM-GF20< |
| <b>Mechanical</b>                |                |                   |            |
| Stress at Break                  | ISO 527        | MPa (kpsi)        | 55 (8.0)   |
| Strain at Break                  | ISO 527        | %                 | 12         |
| Tensile Modulus                  | ISO 527        | MPa (kpsi)        | 5000 (725) |
| Flexural Modulus                 | ISO 178        | MPa (kpsi)        | 4600 (667) |
| Notched Charpy Impact Strength   | ISO 179/1eA    | kJ/m <sup>2</sup> |            |
| -30°C (-22°F)                    |                |                   | 3          |
| 23°C (73°F)                      |                |                   | 4          |
| Unnotched Charpy Impact Strength | ISO 179/1eU    | kJ/m <sup>2</sup> |            |
| -30°C (-22°F)                    |                |                   | 50         |
| 23°C (73°F)                      |                |                   | 54         |
| <b>Thermal</b>                   |                |                   |            |
| Deflection Temperature           | ISO 75-1/-2    | °C (°F)           |            |
| 0.45MPa                          |                |                   | 163 (325)  |
| 1.80MPa                          |                |                   | 124 (255)  |
| Melting Temperature              | ISO 11357-1/-3 | °C (°F)           |            |
| 10°C/min                         |                |                   | 178 (352)  |

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.

ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.

Test temperatures are 23°C unless otherwise stated.

**The above data are preliminary and are subject to change as additional data are developed on subsequent lots.**

The DuPont Oval Logo, DuPont™, The miracles of science™ and Delrin® are trademarks or registered trademarks of DuPont Company. Copyright© 2006.

060508/060508

The information provided in this data sheet corresponds to our knowledge on the subject at the date of its publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such material used in combination with any other materials, additives or pigments or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specification limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to conduct to determine for yourself the suitability of a specific material for your particular purposes. Since DuPont cannot anticipate all variations in actual end-use conditions DuPont makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent rights. DuPont advises you to seek independent counsel for a freedom to practice opinion on the intended application or end-use of our products. Caution: Do not use this product in medical applications involving permanent implantation in the human body. For other medical applications see "DuPont Medical Caution Statement", H-50102.

## Delrin® 570 NC000

| Property                    | Test Method     | Units | Value |
|-----------------------------|-----------------|-------|-------|
| <b>Electrical</b>           |                 |       |       |
| Surface Resistivity         | IEC 60093       | ohm   | >1E15 |
| Volume Resistivity          | IEC 60093       | ohm m | 1E13  |
| Relative Permittivity       | IEC 60250       |       |       |
| 1E2 Hz                      |                 |       | 3.9   |
| 1E6 Hz                      |                 |       | 3.9   |
| Dissipation Factor          | IEC 60250       | E-4   |       |
| 1E6 Hz                      |                 |       | 50    |
| <b>Flammability</b>         |                 |       |       |
| Flammability Classification | IEC 60695-11-10 |       |       |
| 1.5mm                       |                 |       | HB    |
| Flammability Classification | UL94            |       |       |
| 1.5mm                       |                 |       | HB    |
| <b>Temperature Index</b>    |                 |       |       |
| RTI, Electrical             | UL 746B         | °C    |       |
| 1.5mm                       |                 |       | 105   |
| 3.0mm                       |                 |       | 105   |
| RTI, Impact                 | UL 746B         | °C    |       |
| 1.5mm                       |                 |       | 85    |
| 3.0mm                       |                 |       | 85    |
| RTI, Strength               | UL 746B         | °C    |       |
| 1.5mm                       |                 |       | 90    |
| 3.0mm                       |                 |       | 90    |

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.

ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.

Test temperatures are 23°C unless otherwise stated.

**The above data are preliminary and are subject to change as additional data are developed on subsequent lots.**

The DuPont Oval Logo, DuPont™, The miracles of science™ and Delrin® are trademarks or registered trademarks of DuPont Company. Copyright© 2006.

060508/060508

The information provided in this data sheet corresponds to our knowledge on the subject at the date of its publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such material used in combination with any other materials, additives or pigments or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specification limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to conduct to determine for yourself the suitability of a specific material for your particular purposes. Since DuPont cannot anticipate all variations in actual end-use conditions DuPont makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent rights. DuPont advises you to seek independent counsel for a freedom to practice opinion on the intended application or end-use of our products. Caution: Do not use this product in medical applications involving permanent implantation in the human body. For other medical applications see "DuPont Medical Caution Statement", H-50102.

## Delrin® 570 NC000

| Property                        | Test Method        | Units                                  | Value             |
|---------------------------------|--------------------|--|-------------------|
| <b>Other</b>                    |                    |  |                   |
| Density                         | ISO 1183           | kg/m <sup>3</sup> (g/cm <sup>3</sup> ) | 1560 (1.56)       |
| Water Absorption                | ISO 62, Similar to | %                                      |                   |
| Equilibrium 50%RH               |                    |  | 0.1               |
| Saturation, immersed            |                    |  | 0.8               |
| Molding Shrinkage               | ISO 294-4          | %                                      |                   |
| Normal, 2.0mm                   |                    |  | 1.6               |
| Parallel, 2.0mm                 |                    |  | 1.2               |
| <b>Processing</b>               |                    |  |                   |
| Melt Temperature Range          |                    | °C (°F)                                | 210-220 (410-430) |
| Melt Temperature Optimum        |                    | °C (°F)                                | 215 (420)         |
| Mold Temperature Range          |                    | °C (°F)                                | 80-100 (175-210)  |
| Mold Temperature Optimum        |                    | °C (°F)                                | 90 (195)          |
| Drying Time, Dehumidified Dryer |                    | h                                      | 2-4               |
| Drying Temperature              |                    | °C (°F)                                | 80 (175)          |
| Hold Pressure Range             |                    | MPa (kpsi)                             | 80-100 (12-15)    |

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.

ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.

Test temperatures are 23°C unless otherwise stated.

**The above data are preliminary and are subject to change as additional data are developed on subsequent lots.**

The DuPont Oval Logo, DuPont™, The miracles of science™ and Delrin® are trademarks or registered trademarks of DuPont Company. Copyright© 2006.

060508/060508

The information provided in this data sheet corresponds to our knowledge on the subject at the date of its publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such material used in combination with any other materials, additives or pigments or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specification limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to conduct to determine for yourself the suitability of a specific material for your particular purposes. Since DuPont cannot anticipate all variations in actual end-use conditions DuPont makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent rights. DuPont advises you to seek independent counsel for a freedom to practice opinion on the intended application or end-use of our products. Caution: Do not use this product in medical applications involving permanent implantation in the human body. For other medical applications see "DuPont Medical Caution Statement", H-50102.