



# Delrin®

acetal resin

## Delrin® 500 NC010

### Medium Viscosity Acetal

Delrin® 500 is a medium viscosity resin for general purpose use. Delrin® 500 provides optimum mechanical performance.

| Property                | Test Method  | Units    | Value |
|-------------------------|--------------|----------|-------|
| <b>Mechanical</b>       |              |          |       |
| Yield Stress            | ISO 527-1/-2 | MPa      | 72    |
| Yield Strain            | ISO 527-1/-2 | %        | 15    |
| Nominal Strain at Break | ISO 527-1/-2 | %        | 30    |
| Strain at Break         | ISO 527-1/-2 | %        | 45    |
| Tensile Modulus         | ISO 527-1/-2 | MPa      | 3200  |
| Flexural Modulus        | ISO 178      | MPa      | 3000  |
| Notched Izod Impact     | ISO 180/1A   | kJ/m2    |       |
| -40C                    |              |          | 9     |
| 23C                     |              |          | 9     |
| Notched Charpy Impact   | ISO 179/1eA  | kJ/m2    |       |
| -30C                    |              |          | 8     |
| 23C                     |              |          | 9     |
| Unnotched Charpy Impact | ISO 179/1eU  | kJ/m2    |       |
| -30C                    |              |          | 300   |
| 23C                     |              |          | 340   |
| <b>Thermal</b>          |              |          |       |
| Deflection Temperature  | ISO 75-1/-2  | °C       |       |
| 0.45MPa                 |              |          | 165   |
| 1.80MPa                 |              |          | 100   |
| Melting Temperature     | ISO 3146C    | °C       | 178   |
| <b>Flow</b>             |              |          |       |
| Melt Flow Rate          | ISO 1133     | g/10 min |       |
| 190C, 2.16kg            |              |          | 14    |

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.  
Mechanical properties measured at 23°C (73°F) unless otherwise stated.

Delrin® is a DuPont registered trademark.

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# Product Information

## Delrin® 500 NC010

| Property                                 | Test Method        | Units  | Value   |
|--|--------------------|--------|---------|
| <b>Electrical</b>                        |                    |        |         |
| Surface Resistivity<br>1mm               | IEC 60093          | ohm    | >1E15   |
| Relative Permittivity<br>1E2 Hz, 1mm     | IEC 60250          |        | 3.4     |
| 1E6 Hz, 1mm                              |                    |        | 3.3     |
| Volume Resistivity<br>1mm                | IEC 60093          | ohm cm | 1E15    |
| Dissipation Factor<br>1E2 Hz, 1mm        | IEC 60250          | E-4    | 100     |
| 1E6 Hz, 1mm                              |                    |        | 70      |
| Electric Strength<br>1mm                 | IEC 60243-1        | kV/mm  | 32      |
| <b>Other</b>                             |                    |        |         |
| Density                                  | ISO 1183           | kg/m3  | 1420    |
| Hardness, Rockwell                       | ISO 2039/2         |        | R120    |
| Humidity Absorption<br>Equilibrium 50%RH | ISO 62, Similar to | %      | 0.22    |
| Water Absorption<br>Saturation, immersed | ISO 62, Similar to | %      | 0.9     |
| Molding Shrinkage<br>Normal              | ISO 294-4          | %      | 2       |
| Parallel                                 |                    |        | 2.1     |
| <b>Processing</b>                        |                    |        |         |
| Melt Temperature Range                   |                    | °C     | 210-220 |
| Mold Temperature Range                   |                    | °C     | 80-100  |
| Hold Pressure Range                      |                    | MPa    | 80-100  |

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