

# Ultraform® N 2640 Z6 UNC

## Polyoxymethylene



### Product Description

Ultraform N 2640 Z6 UNC is an elastomer-modified injection molding POM grade with excellent impact strength.

### Applications

Typical applications include toys components such as bicycle frames, automotive parts such as cladding elements and windshield wiper units, and clips, snap and fastening elements, and other components subject to impact stress.

| PHYSICAL                                             | ASTM Test Method | Property Value  |
|------------------------------------------------------|------------------|-----------------|
| Specific Gravity                                     | D-792            | 1.33            |
| Mold Shrinkage (1/8" bar, in/in)                     |                  | 0.019           |
| Moisture, %                                          | D-570            |                 |
| (50% RH)                                             |                  | 0.25            |
| (Saturation)                                         |                  | 1.1             |
| MECHANICAL                                           | ASTM Test Method | Property Value  |
| Tensile Strength, Yield, MPa (psi)                   | D-638            |                 |
| 23C (73F)                                            |                  | 37 (5,360)      |
| Elongation, Yield, %                                 | D-638            |                 |
| 23C (73F)                                            |                  | 17              |
| Flexural Modulus, MPa (psi)                          | D-790            |                 |
| 23C (73F)                                            |                  | 1,320 (191,000) |
| IMPACT                                               | ASTM Test Method | Property Value  |
| Notched Izod Impact, J/M (ft-lbs/in)                 | D-256            |                 |
| -40C (-40F)                                          |                  | 59 (1.1)        |
| 23C (73F)                                            |                  | 155 (2.9)       |
| THERMAL                                              | ASTM Test Method | Property Value  |
| Melting Point, C(F)                                  | D-3418           | 166 (330)       |
| Heat Deflection @ 264 psi (1.8 MPa) C(F)             | D-648            | 71 (159)        |
| Heat Deflection @ 66 psi (.45 MPa) C(F)              | D-648            | 129 (264)       |
| Coef. of Linear Thermal Expansion, mm/mm C (in/in F) | E-831            | 0.8 X10-4       |
| UL RATINGS                                           | UL Test Method   | Property Value  |
| Flammability Rating, 1.5mm                           | UL94             | HB              |
| Relative Temperature Index, 1.5mm                    | UL746B           |                 |
| Mechanical w/o Impact, C                             |                  | 50              |
| Mechanical w/ Impact, C                              |                  | 50              |
| Electrical, C                                        |                  | 50              |
| ELECTRICAL                                           | ASTM Test Method | Property Value  |
| Volume Resistivity, 1.5 mm                           | D-257            | 1E11            |
| Surface Resistivity, 1.5 mm                          | D-257            | 1E12            |

### Processing Guidelines



## Material Handling

Max. Water content: 0.15%

Product is supplied in polyethylene bags and drying prior to molding is not required. However, after relatively long storage or when handling material from previously opened containers, preliminary drying is recommended in order to remove any moisture which has been absorbed. If drying is required, a dehumidifying or desiccant dryer operating at 80 - 110 degC (176 - 230 degF) is recommended. Drying time is dependent on moisture level, but 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet. Alternatively, please contact your BASF representative.

## Typical Profile

Melt Temperature 190-230 degC (375-446 degF)

Mold Temperature 60-120 degC (140-248 degF)

Injection and Packing Pressure 35-70 bar (500-1000psi)

## Mold Temperatures

A mold temperature of 80-90 degC (176-194 degF) is recommended, but temperatures of as low as 45 degC (113 degF) and as high as 105 degC (221 degF) can be used where applicable.

## Pressures

Injection speed must be optimized. A filling rate which is too high results in anisotropic mechanical properties, while a filling rate which is too low yields parts with poor surface finish. The tool must be vented to avoid burn marks and prevent mold deposits. Injection pressure controls the filling of the part and should be applied for 90% of ram travel. Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

Back pressure can be utilized to provide uniform melt consistency and reduce trapped air and gas. Minimal back pressure should be utilized to prevent glass breakage. recommended.

## Fill Rate

Injection speed must be optimized. A filling rate which is too high results in anisotropic mechanical properties, while a filling rate which is too low yields parts with poor surface finish. The tool must be vented to avoid burn marks and prevent mold deposits.

## Note

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