

# TORZEN® U4801 NC01

Polyamide 66  
INVISTA Engineering Polymers

Message:

TORZEN® U4801 NC01 is a general purpose, natural PA66 resin suitable for compounding injection molding, and extrusion applications where ease of processing, good color and physical property retention are desired.

| General Information |                      |
|---------------------|----------------------|
| Features            | General Purpose      |
|                     | Good Color Stability |
|                     | Good Processability  |
| Uses                | Compounding          |
|                     | General Purpose      |
| Agency Ratings      | EC 1907/2006 (REACH) |
| RoHS Compliance     | RoHS Compliant       |
| Appearance          | Natural Color        |
| Processing Method   | Compounding          |
|                     | Extrusion            |
|                     | Injection Molding    |

| Physical                         | Nominal Value | Unit              | Test Method  |
|----------------------------------|---------------|-------------------|--------------|
| Density                          | 1.14          | g/cm <sup>3</sup> | ISO 1183     |
| Molding Shrinkage                |               |                   | ISO 294-4    |
| Across Flow : 2.00 mm            | 1.5           | %                 |              |
| Flow : 2.00 mm                   | 1.4           | %                 |              |
| Mechanical                       | Nominal Value | Unit              | Test Method  |
| Tensile Modulus                  | 2800          | MPa               | ISO 527-2/1  |
| Tensile Stress (Yield)           | 82.0          | MPa               | ISO 527-2/50 |
| Tensile Strain                   |               |                   | ISO 527-2    |
| Yield                            | 4.4           | %                 |              |
| Break                            | 50            | %                 |              |
| Flexural Modulus                 | 2800          | MPa               | ISO 178      |
| Flexural Stress                  | 94.0          | MPa               | ISO 178      |
| Impact                           | Nominal Value | Unit              | Test Method  |
| Charpy Notched Impact Strength   |               |                   | ISO 179      |
| -30°C                            | 3.9           | kJ/m <sup>2</sup> |              |
| 23°C                             | 4.6           | kJ/m <sup>2</sup> |              |
| Charpy Unnotched Impact Strength |               |                   | ISO 179      |

| -30°C                                     | No Break        |                   |                |
|-------------------------------------------|-----------------|-------------------|----------------|
| 23°C                                      | No Break        |                   |                |
| Notched Izod Impact Strength (23°C)       | 5.0             | kJ/m <sup>2</sup> | ISO 180        |
| Thermal                                   | Nominal Value   | Unit              | Test Method    |
| Heat Deflection Temperature               |                 |                   |                |
| 0.45 MPa, Unannealed                      | 192             | °C                | ISO 75-2/B     |
| 1.8 MPa, Unannealed                       | 71.0            | °C                | ISO 75-2/A     |
| Melting Temperature                       | 261             | °C                | ISO 11357-3    |
| CLTE                                      |                 |                   | DIN 53752      |
| Flow : 23 to 55°C, 2.00 mm                | 5.0E-5          | cm/cm/°C          |                |
| Transverse : 23 to 55°C, 2.00 mm          | 9.0E-5          | cm/cm/°C          |                |
| Electrical                                | Nominal Value   | Unit              | Test Method    |
| Surface Resistivity                       | 3.0E+14         | ohms              | IEC 60093      |
| Volume Resistivity (2.00 mm)              | 3.0E+15         | ohms·cm           | IEC 60093      |
| Electric Strength (1.00 mm)               | 33              | kV/mm             | IEC 60243-1    |
| Comparative Tracking Index (4.00 mm)      | 600             | V                 | IEC 60112      |
| Flammability                              | Nominal Value   | Unit              | Test Method    |
| Glow Wire Flammability Index (0.800 mm)   | 800             | °C                | IEC 60695-2-12 |
| Glow Wire Ignition Temperature (0.800 mm) | 700             | °C                | IEC 60695-2-13 |
| Injection                                 | Nominal Value   | Unit              |                |
| Drying Temperature                        | 80.0            | °C                |                |
| Drying Time                               | 16 to 20        | hr                |                |
| Suggested Max Moisture                    | 0.080 to 0.18   | %                 |                |
| Rear Temperature                          | 250 to 270      | °C                |                |
| Middle Temperature                        | 270 to 290      | °C                |                |
| Front Temperature                         | 270 to 290      | °C                |                |
| Nozzle Temperature                        | 270 to 290      | °C                |                |
| Processing (Melt) Temp                    | 280 to 300      | °C                |                |
| Mold Temperature                          | 50.0 to 90.0    | °C                |                |
| Back Pressure                             | 0.200 to 1.00   | MPa               |                |
| Screw Speed                               | 75 to 180       | rpm               |                |
| Cushion                                   | 4.00 to 6.00    | mm                |                |
| Vent Depth                                | 7.0E-3 to 0.040 | mm                |                |

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**Susheng Import & Export Trading Co.,Ltd.**

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: [sales@su-jiao.com](mailto:sales@su-jiao.com)

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

