

# UNITIKA Nylon 6 CX-2500

Polyamide 6

UNITIKA Plastics Division

## Message:

UNITIKA Nylon 6 CX-2500 is a Polyamide 6 (Nylon 6) material. It is available in Asia Pacific or North America. Primary attribute of UNITIKA Nylon 6 CX-2500: Flame Rated.

Typical applications include:

Automotive

Construction Applications

Housings

| General Information              |      |                                                                                                                                   |                   |             |
|----------------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------|
| UL YellowCard                    |      | E47924-239953                                                                                                                     |                   |             |
| Uses                             |      | Automotive Applications<br>Automotive Electronics<br>Automotive Under the Hood<br>Construction Applications<br>Electrical Housing |                   |             |
| Appearance                       |      | Clear/Transparent                                                                                                                 |                   |             |
| Forms                            |      | Pellets                                                                                                                           |                   |             |
| Physical                         | Dry  | Conditioned                                                                                                                       | Unit              | Test Method |
| Density                          | 1.11 | 1.11                                                                                                                              | g/cm <sup>3</sup> | ISO 1183    |
| Molding Shrinkage                |      |                                                                                                                                   |                   | ISO 294-4   |
| Across Flow : 3.20 mm            | 1.3  | 1.3                                                                                                                               | %                 |             |
| Flow : 3.20 mm                   | 0.70 | 0.70                                                                                                                              | %                 |             |
| Water Absorption                 |      |                                                                                                                                   |                   | ISO 62      |
| 23°C, 24 hr                      | 0.70 | 0.70                                                                                                                              | %                 |             |
| Equilibrium, 23°C, 50% RH        | 1.3  | 1.3                                                                                                                               | %                 |             |
| Mechanical                       | Dry  | Conditioned                                                                                                                       | Unit              | Test Method |
| Tensile Modulus                  | 3000 | 2700                                                                                                                              | MPa               | ISO 527-2   |
| Tensile Stress (Break)           | 90.0 | 67.0                                                                                                                              | MPa               | ISO 527-2   |
| Tensile Strain                   |      |                                                                                                                                   |                   | ISO 527-2   |
| Yield                            | 6.0  | 6.0                                                                                                                               | %                 |             |
| Break                            | 60   | 60                                                                                                                                | %                 |             |
| Flexural Modulus                 | 2900 | 2600                                                                                                                              | MPa               | ISO 178     |
| Flexural Stress                  | 126  | 113                                                                                                                               | MPa               | ISO 178     |
| Impact                           | Dry  | Conditioned                                                                                                                       | Unit              | Test Method |
| Charpy Notched Impact Strength   | 2.0  | 2.0                                                                                                                               | kJ/m <sup>2</sup> | ISO 179     |
| Charpy Unnotched Impact Strength | 80   | 80                                                                                                                                | kJ/m <sup>2</sup> | ISO 179     |

| Thermal                     | Dry     | Conditioned | Unit     | Test Method |
|-----------------------------|---------|-------------|----------|-------------|
| Heat Deflection Temperature |         |             |          |             |
| 0.45 MPa, Unannealed        | 100     | 85.0        | °C       | ISO 75-2/B  |
| 1.8 MPa, Unannealed         | 90.0    | 70.0        | °C       | ISO 75-2/A  |
| CLTE - Flow                 | 7.7E-5  | 7.7E-5      | cm/cm/°C | ISO 11359-2 |
| Electrical                  | Dry     | Conditioned | Unit     | Test Method |
| Volume Resistivity          | 1.0E+15 | --          | ohms·cm  | IEC 60093   |
| Electric Strength (1.00 mm) | 33      | --          | kV/mm    | IEC 60243-1 |
| Dielectric Constant (1 MHz) | 3.30    | --          |          | IEC 60250   |
| Dissipation Factor (1 MHz)  | 0.060   | --          |          | IEC 60250   |
| Flammability                | Dry     | Conditioned | Unit     | Test Method |
| Flame Rating (0.750 mm)     | V-2     | V-2         |          | UL 94       |

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