

## Azoty Tarnow™ Tarnamid® T-27 GF30 I Polyamide 6 - Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Glass Filled, Impact Grade

### Material Notes:

30% Glass fiber reinforced, impact modified, medium viscosity injection molding grade, also used for compounding, for production of monofilament, bristles and fibers. Tarnamid® has the following main properties: High mechanical strength, rigidity and hardness High impact strength High vibration damping capacity Good fatigue strength Very good sliding properties, abrasion resistance, low coefficient of friction High thermal resistance, admissible temperature of continuous operation from -60°C to +150°C High chemical resistance, particularly to organic solvents, oils, lubricants and fuels Considerable moisture absorption influencing mechanical and electrical properties Self-extinguishing properties (fire retardant properties) Good electro-insulating properties Good optical properties, relatively good transparency of molded pieces with thickness below 3.2 mm made from natural Tarnamid® (not dyed and not compounded) Can be used for the production of goods coming into contact with food (grades fulfilling requirement of European Union Directive No 2002/72/EEC) with latest amendments Information provided by Azoty Tarnow™.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Azoty-Tarnow-Tarnamid-T-27-GF30-I-Polyamide-6-Glass-Fiber-Reinforced.php](http://www.lookpolymers.com/polymer_Azoty-Tarnow-Tarnamid-T-27-GF30-I-Polyamide-6-Glass-Fiber-Reinforced.php)

| Physical Properties               | Metric                            | English                           | Comments  |
|-----------------------------------|-----------------------------------|-----------------------------------|-----------|
| Specific Gravity                  | 1.32 g/cc                         | 1.32 g/cc                         | ISO 1183  |
| Water Absorption                  | 2.0 %                             | 2.0 %                             | ISO 62    |
|                                   | @Time 86400 sec                   | @Time 24.0 hour                   |           |
| Linear Mold Shrinkage, Flow       | 0.0030 cm/cm                      | 0.0030 in/in                      | ISO 294-4 |
| Linear Mold Shrinkage, Transverse | 0.014 cm/cm                       | 0.014 in/in                       | ISO 294-4 |
| Melt Flow                         | 30 g/10 min                       | 30 g/10 min                       | ISO 1133  |
|                                   | @Load 5.00 kg, Temperature 275 °C | @Load 11.0 lb, Temperature 527 °F |           |

| Mechanical Properties     | Metric        | English       | Comments          |
|---------------------------|---------------|---------------|-------------------|
| Ball Indentation Hardness | 120 MPa       | 17400 psi     | cond.; ISO 2039-1 |
|                           | @Load 36.5 kg | @Load 80.5 lb |                   |
| Tensile Strength          | 160 MPa       | 23200 psi     | dry; ISO 2039-1   |
|                           | @Load 36.5 kg | @Load 80.5 lb |                   |
| Elongation at Break       | 105 MPa       | 15200 psi     | cond.; ISO 527    |
|                           | 150 MPa       | 21800 psi     |                   |
| Elongation at Break       | 4.0 %         | 4.0 %         | dry; ISO 527      |
|                           | 9.5 %         | 9.5 %         |                   |

| Mechanical Properties   | Metric                 | English                    | Comments                     |
|-------------------------|------------------------|----------------------------|------------------------------|
|                         | 8.50 GPa               | 1230 ksi                   | dry; ISO 527                 |
| Flexural Strength       | <= 150 MPa             | <= 21800 psi               | cond., 3.5% flexure; ISO 178 |
|                         | <= 215 MPa             | <= 31200 psi               | dry, 3.5% flexure; ISO 178   |
| Flexural Modulus        | 5.70 GPa               | 827 ksi                    | cond.; ISO 178               |
|                         | 7.50 GPa               | 1090 ksi                   | dry; ISO 178                 |
| Charpy Impact Unnotched | 10.0 J/cm <sup>2</sup> | 47.6 ft-lb/in <sup>2</sup> | dry; ISO 179 1eU             |
|                         | 12.0 J/cm <sup>2</sup> | 57.1 ft-lb/in <sup>2</sup> | cond.; ISO 179 1eU           |
| Charpy Impact, Notched  | 2.00 J/cm <sup>2</sup> | 9.52 ft-lb/in <sup>2</sup> | dry; ISO 179 1eA             |
|                         | 3.00 J/cm <sup>2</sup> | 14.3 ft-lb/in <sup>2</sup> | cond.; ISO 179 1eA           |

| Thermal Properties                          | Metric             | English              | Comments         |
|---|--------------------|----------------------|------------------|
| Melting Point                               | 221 °C             | 430 °F               |                  |
| Deflection Temperature at 1.8 MPa (264 psi) | 195 °C             | 383 °F               | cond.; ISO 75    |
|   | 200 °C             | 392 °F               | dry; ISO 75      |
| Vicat Softening Point                       | 200 °C             | 392 °F               | cond.; ISO 306   |
|   | @Load 5.10 kg      | @Load 11.2 lb        |                  |
|   | 210 °C             | 410 °F               | dry; ISO 306     |
|   | @Load 5.10 kg      | @Load 11.2 lb        |                  |
| Flammability, UL94                          | HB                 | HB                   |                  |
|   | @Thickness 1.60 mm | @Thickness 0.0630 in |                  |
| Glow Wire Test                              | 550 °C             | 1020 °F              | PN-EN-60695-2-12 |
|   | @Thickness 2.00 mm | @Thickness 0.0787 in |                  |

| Electrical Properties      | Metric          | English         | Comments  |
|----------------------------|-----------------|-----------------|-----------|
| Volume Resistivity         | 1.00e+15 ohm-cm | 1.00e+15 ohm-cm | IEC 93    |
| Surface Resistance         | 1.00e+16 ohm    | 1.00e+16 ohm    | IEC 93    |
| Dielectric Strength        | 31.0 kV/mm      | 787 kV/in       | IEC 243-1 |
| Comparative Tracking Index | 600 V           | 600 V           | IEC 112   |

| Processing Properties | Metric                                     | English                                | Comments                 |
|-----------------------|--|--|--------------------------|
| Melt Temperature      | 230 - 290 °C                               | 446 - 554 °F                           |                          |
| Mold Temperature      | 60.0 - 120 °C                              | 140 - 248 °F                           | 80 - 90°C is recommended |
| Drying Temperature    | 75.0 - 100 °C<br>@Time 7200 - 14400<br>sec | 167 - 212 °F<br>@Time 2.00 - 4.00 hour |                          |
| Moisture Content      | <= 0.10 %                                  | <= 0.10 %                              |                          |
| Injection Pressure    | 80.0 - 130 MPa                             | 11600 - 18900 psi                      | 80 MPa is recommended    |

## Contact Songhan Plastic Technology Co.,Ltd.

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