

ASTAMID™ POLYAMIDE

ENGINEERING THERMOPLASTIC

ASTAMID™ IS A REGISTERED TRADEMARK OF MARPLEX AUSTRALIA PTY. LTD.

ASTAMID™ N-3020X7

ASTAMID™ N-3020X7 is a heat and UV stabilized Polyamide 12 based compound used for termite resistant jackets for communication cables. The hard surface of the Nylon 12 resists attack from termites in areas where they may be a problem. This material conforms to the requirements of the AS1049 standard.

| | <u>CONDITIONS</u> | <u>UNITS</u> | <u>TYPICAL VALUES</u> | <u>TESTING METHODS</u> |
|---|------------------------------|-------------------|-----------------------|------------------------|
| <u>1. Mechanical Properties</u> | | | | |
| Notched Izod Impact Strength | 12.7 mm x 3.2 mm [DryM] | J/m | 65 | ASTM D256 |
| Notched Charpy Impact Strength | 10.0 mm x 4.0 mm [DryM] | kJ/m ² | 4.0 | ISO 179 |
| Tensile Strength | 12.7x3.2mm @50mm/min [DryM] | MPa | 45 | ASTM D638 |
| Elongation to Fail | 12.7x3.2mm @5.0mm/min [DryM] | % | 200 | ASTM D638 |
| Flexural Strength | 12.7x3.2mm @1.3mm/min [DryM] | MPa | 59 | ASTM D790 |
| Flexural Modulus | 12.7x3.2mm @1.3mm/min [DryM] | MPa | 1500 | ASTM D790 |
| <u>2. Thermal Properties</u> | | | | |
| Heat Deflection Temperature | 12.7 mm x 3.2 mm @ 1.82 MPa | °C | 47 | ASTM D648 |
| | 12.7 mm x 3.2 mm @ 0.455 MPa | °C | 92 | ASTM D648 |
| Coefficient of Linear Thermal Expansion | | cm/cm/°C | 1.30E-04 | ASTM D696 |
| <u>3. Physical Properties</u> | | | | |
| Melt Flow Rate | 235°C, 2.16 kg | g/10 min | 20 | ASTM D1238 |
| Rockwell Hardness | | M | 105 | ASTM D785 |
| UL Flammability | 1.6 mm | Rating | HB | UL 94 |
| Water Absorption | 24 hours | % | 0.70 | ISO 62 |
| Mould Shrinkage | | % | 1.0 | ASTM D955 |
| Specific Gravity | | - | 1.02 | ASTM D792 |

[DryM] indicates "Dry-As-Moulded" and [Cond] indicates "Conditioned at 23°C and 50% RH"
 All test results were obtained using uncoloured material.

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Material Safety Data Sheet (MSDS): Code 33037501

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TYPICAL PROCESSING CONDITIONS

ASTAMID™ N-3020X7

The following typical guidelines are offered as initial processing conditions for **ASTAMID™ N-3020X7**. In practice, processing parameters may need to be varied to give commercially acceptable performance in conjunction with optimum physical properties. For specific technical advice on part design or processing conditions, contact the Marplex Technical Service Department.

| | |
|--|-----------------|
| Temperature of pellet bed in dehumidifying drier | 75 - 85 °C |
| Minimum drying time at desired pellet bed temp | Minimum 2 hours |
| Barrel Zone 2 | 180 - 185°C |
| Barrel Zone 1 | 170 - 180°C |
| Barrel Zone 3 | 185 - 190°C |
| Barrel Zone 4 | 190 - 195°C |
| Crosshead | 195 - 205°C |
| Die | 160 - 220°C |
| Melt | 170 - 180°C |

Comment(s):

- 2 ASTAMID™ N-3020X7 is not compatible with other polymers.
- 3 ASTAMID™ N-3020X7 absorbs moisture once the original packaging is opened. Ensure adequate drying of the material to avoid moisture related processing problems.

Conversions:

- 1 MPa = 145 psi
- = 10.2 kg/cm²
- = 10 bar
- °C = 5(F-32)/9
- 1 kN/cm² = 0.65 ton/in²