

PA12 Semi-Rigid Nylon Tubing



General product description PA12 Semi-Rigid is manufactured from a high viscosity grade of Polyamide 12 (PA12). PA12 is the polyamide with the lowest water absorption and also the lightest commercially available.

The main features of PA12 Semi-Rigid are:

- Very tasteless
- High toughness, even at low temperatures
- Good resistance to weathering
- Good chemical resistance
- Mechanical properties only slightly dependant on relative humidity
- Significantly lower water absorption than polyamide 6



Application examples:

PA12 is suitable for applications requiring low temperature impact strength for use in automotive and industrial applications. Motor vehicles, chemical transport, fuel and oil transfer, compressed air, hydraulics, manufacturing equipment, pneumatic controls, beverage transfer, pneumatic ring main etc.



Operating Temperatures:

Constant from minus -40°C to +110°C
Intermittent to plus +140 °C

Colours

Natural, Black

Further colours and specific colour matches available on request, minimum order quantity dependant.

Chemical Resistance

Please contact us direct for this information.

PA12 Semi-Rigid conforms to;

FDA and EU approvals for direct contact with non-alcoholic foodstuffs.

Shore-D Hardness = 70

UL 94 Flame Rating = HB

The information provided here is to the best of our knowledge true and accurate. Conditions under which our products may be used are beyond our control, recommendations are made without warranty or guarantee.

| PA12 Semi Rigid Metric Sizes | Wall mm | W/P bar | B/P bar | kgs 30m | kgs 100m | Bend Radius |
|------------------------------|---------|---------|---------|---------|----------|-------------|
| 4mm od x 2mm id | 1 | 100 | 400 | 0.29 | 0.95 | - |
| 4mm od x 2.5mm id | 0.75 | 60 | 240 | 0.23 | 0.77 | 12mm |
| 5mm od x 3mm id | 1 | 67 | 266 | 0.38 | 1.27 | 13mm |
| 5mm od x 3.3mm id | 0.85 | 52 | 210 | 0.33 | 1.12 | 14mm |
| 6mm od x 3mm id | 1.5 | 100 | 400 | 0.64 | 2.14 | - |
| 6mm od x 4mm id | 1 | 50 | 200 | 0.48 | 1.59 | 22mm |
| 8mm od x 5mm id | 1.5 | 60 | 240 | 0.93 | 3.09- | - |
| 8mm od x 5.5mm id | 1.25 | 45 | 181 | 0.80 | 2.68 | 28mm |
| 8mm od x 6mm id | 1 | 33 | 133 | 0.67 | 2.22 | 38mm |
| 10mm od x 7mm id | 1.5 | 43 | 17 | 1.2 | 4.05 | 40mm |
| 10mm od x 7.5mm id | 1.25 | 33 | 133 | 1.04 | 3.47 | - |
| 10mm od x 8mm id | 1 | 25 | 100 | 0.86 | 2.86 | 60mm |
| 12mm od x 8.5mm id | 1.75 | 41 | 165 | 1.71 | 5.69 | - |
| 12mm od x 9mm id | 1.5 | 33 | 133 | 1.50 | 5 | 49mm |
| 12mm od x 10mm id | 1 | 20 | 80 | 1.05 | 3.49 | 85mm |
| 14mm od x 11mm id | 1.5 | 27 | 109 | 1.79 | 5.95 | 88mm |
| 15mm od x 12mm id | 1.5 | 25 | 100 | 1.93 | 6.43 | - |



Maximum Working Pressure:

This figure is based on the theoretical burst pressure at 20°C, using a safety factor 4:1. Any increase in temperature above 20°C will result in pressure capabilities.

N.B.

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| PA12 Semi Rigid Imperial Sizes | W/P bar | B/P bar | kgs 30m | kgs 100m | Bend Radius |
|--------------------------------|---------|---------|---------|----------|-------------|
| 8" od x .062" id | 102 | 406 | 0.18 | 0.60 | - |
| 1/8" od x .075" id | 67 | 266 | 0.15 | 0.51 | 3/8" |
| 5/32" od x .096" id | 62 | 249 | 0.23 | 0.78 | - |
| 3/16" od x .107" id | 75 | 300 | 0.36 | 1.21 | - |
| 3/16" od x .117" id | 60 | 241 | 0.33 | 1.10 | - |
| 3/16" od x .137" id | 37 | 147 | 0.25 | 0.84 | 3/4" |
| 1/4" od x .150" id | 67 | 266 | 0.61 | 2.05 | 3/4" |
| 1/4" od x .170" id | 47 | 188 | 0.52 | 1.72 | - |
| 1/4" od x .190" id | 32 | 126 | 0.41 | 1.35 | 1.1/8" |
| 5/16" od x .182" id | 72 | 286 | 0.99 | 3.30 | - |
| 5/16" od x .212" id | 47 | 189 | 0.81 | 2.70 | 1.1/8" |
| 5/16" od x .242" id | 29 | 116 | 0.60 | 2.00 | 1.1/4" |
| 3/8" od x .225" id | 67 | 266 | 1.38 | 4.60 | - |
| 3/8" od x .250" id | 50 | 200 | 1.20 | 3.99 | 1.1/4" |
| 3/8" od x .265" id | 42 | 166 | 1.08 | 3.60 | - |
| 3/8" od x .295" id | 27 | 108 | 0.82 | 2.74 | 1.1/2" |
| 1/2" od x .340" id | 47 | 188 | 2.06 | 6.88 | - |
| 1/2" od x .375" id | 33 | 133 | 1.68 | 5.60 | - |
| 5/8" od x .500" id | 25 | 100 | 2.16 | 7.19 | 2.1/2" |

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SUPPLIER COMPLIANCE STATEMENT FOR APPLICATIONS IN FOOD CONTACT

EMS-CHEMIE AG, Business Unit **EMS-GRIVORY Europe**, hereby declares that its product

Grilamid L 25 natural

chemically consisting of PA 12 (designation according to ISO 1043), is regulated in contact with foodstuff in the European Union, in Germany and in the USA as follows:

European Union

Grilamid L 25 natural meets the relevant requirements laid down in Regulation (EC) No. 1935/2004 as amended and is in compliance with Regulation (EC) No. 10/2011 of 14. January 2011, which is consolidating the EU-Directives 2002/72 of 6. August 2002, 2004/01 of 6. January 2004, 2004/19 of 1. March 2004, 2005/79 of 18. November 2005, 2007/19 of 2. April 2007, 2008/39 of 6. March 2008 and Regulation (EC) No. 975/2009 of 19. October 2009.

Requirements:

| | |
|--|-----------|
| Global migration limit (OML): | 60 mg/kg |
| Specific migration limit (SML): | |
| Lauro lactam (Ref. No. 19490, CAS No. 947-04-6): | 5.0 mg/kg |

Germany

Grilamid L 25 natural is in compliance with the Consumer Goods Ordinance (Bedarfsgegenstände-Verordnung) of December 23, 1997, published in Bundesgesetzblatt 1998, part I, page 5, as currently amended, which corresponds to the Directive 2002/72/EC as amended.

The requirements are the same as in the European Union.

USA

Grilamid L 25 natural is in compliance with FDA regulations 21 CFR 177.1500 (9) for the nylon grade. This product does not contain additives.

Restrictions: For direct food contact the thickness must not exceed 41 µm. For indirect or repeated food contact also higher thickness is possible. Use only with non-alcoholic food and beverages.

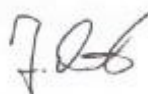
General requirements for all countries

Producers of the final articles coming into contact with food have to perform migration tests to control that the migration limits and other requirements are fulfilled. Furthermore it must be assured that the composition and organoleptic characteristics of the food are not changed to an unacceptable extent.

Domat/Ems, 04 February 2011



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Regulatory Affairs



Dr. Jürgen Müller
Quality Assurance / Material Testing

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