



GITA MARKETING CO.

TECHNICAL DATA SHEET

TDS PA / NYLON TUBING

PA11 / PA12 Polyamide Tubing | Pneumatic and Control Systems

Gita Marketing Co.

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Issued 2026



PA / NYLON TUBING

Technical Data Sheet -- PA11 and PA12 Polyamide Tubing

Polyamide (PA) tubing -- commonly known as nylon tubing -- is used in pneumatic circuits, hydraulic pilot lines, instrumentation, and control systems where higher strength, chemical resistance, and temperature capability are required compared to standard PU tubing. Two grades are supplied: PA12 (the more common, with excellent hydrolysis resistance) and PA11 (superior flexibility and impact resistance at low temperatures). Gita Marketing Co. supplies PA tubing as part of its pneumatic components range.

Grade Comparison -- PA11 vs PA12

PA11 Base Material	Polyamide 11 -- derived from castor oil (bio-based)
PA12 Base Material	Polyamide 12 -- petroleum-derived
PA11 Temp Range	-40 degrees C to +120 degrees C continuous
PA12 Temp Range	-40 degrees C to +100 degrees C continuous
PA11 Advantage	Better flexibility and impact resistance at low temperatures; bio-based
PA12 Advantage	Lower moisture absorption, better dimensional stability; more widely available
Pressure Rating	Up to 20 bar at 20 degrees C for standard sizes
Chemical Resistance	Both grades: good resistance to fuels, oils, hydraulic fluids, and aliphatic solvents

Size Range & Pressure Ratings

OD x ID format. Ratings at 20 degrees C -- de-rate at elevated temperatures.

OD x ID (mm)	Wall (mm)	W.P. (bar) @ 20C	Burst (bar)	Min. Bend Radius (mm)
4 x 2.5	0.75	20	80	20
6 x 4	1.0	20	80	30
8 x 6	1.0	17	68	40
10 x 8	1.0	14	56	50
12 x 9	1.5	17	68	65
12 x 10	1.0	12	48	65
16 x 12	2.0	17	68	90

Technical Specifications

PA12 Temperature	-40 degrees C to +100 degrees C continuous +120 degrees C brief
PA11 Temperature	-40 degrees C to +120 degrees C continuous
Working Pressure	Up to 20 bar at 20 degrees C





Moisture Absorption	PA12: very low (0.3%) PA11: low (0.8%) -- both superior to PA6/PA66
Chemical Resistance	Excellent -- fuels, oils, hydraulic fluids, aliphatic hydrocarbons, dilute acids
UV Resistance	Good with UV-stabilised grade (specify on order)
Flexibility	Semi-rigid; flexible enough for push-to-connect fittings without inserts
Sizes	Available in various diameters for pneumatic and control systems

Applications

- Pneumatic circuits -- actuators, valves, sensors, and pilot lines
- Hydraulic pilot and return lines up to 20 bar
- Instrumentation and control system tubing
- Automotive and mobile equipment -- fuel, brake, and air lines
- Chemical dosing lines (check compatibility for specific media)
- Wind turbine control and pitch system air lines

Fluid Compatibility

Suitable	Compressed air Nitrogen Mineral and synthetic hydraulic oils Diesel, petrol, and kerosene fuels Aliphatic hydrocarbons Dilute acids
Not Suitable	Concentrated mineral acids (HCl, H2SO4) Concentrated alkalis Aromatic hydrocarbons Ketones Chlorinated solvents Steam

Important

PA tubing absorbs moisture over time -- particularly in humid environments. High moisture absorption can slightly reduce burst pressure in PA11 compared to PA12. For outdoor or high-humidity installations, specify PA12 or use moisture-resistant jacketed variants. Contact Gita Marketing Co. to confirm the correct grade for your application.

Standards & Compliance

Tubing Standard	DIN 73378 (PA tubing for pneumatics) ISO 10619
PA Material	ISO 1874 -- Plastics: PA moulding and extrusion materials
Distributor ISO	ISO 9001:2015 ISO 14001:2015 ISO 45001:2018 -- Gita Marketing Co.

Ordering & Supply

Grades	PA12 (standard) PA11 on request
Distributor	Gita Marketing Co., Bangalore
Supply	Standard coils (25 m / 100 m) Cut lengths Multiple colours
Fittings	Push-to-connect pneumatic fittings available to match all sizes
Contact	+91-89040-35515 info@gitamarketing.com





Website

www.gitamarketing.com

Sources: DIN 73378 | ISO 1874 | ISO 10619 | www.gitamarketing.com