

MANTOVA

FLEXIBLE TUBES

TUBING FOR AUTOMOTIVE
AND INDUSTRIAL SYSTEMS





MANTOVA operates in the sector of processing thermoplastic polymers by continuous extrusion since 1999. It is established in Caxias do Sul (Rio Grande do Sul, Brazil) and it has manufacturing and commercialization of tubes and hoses as its business.

The name MANTOVA is a tribute to the family of the founders whom migrated to Brazil from the Mantova region in Italy.

MANTOVA sells through all Brazilian market and exports its products to countries like Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay and Venezuela.

Since the beginning of the activities, management is committed to achieve high quality levels. Aware of it, in 2002 MANTOVA certified its quality system according to ISO 9001 and in 2011 according to ISO/TS 16949.

MANTOVA's products and processes are produced according to strict standards and are adequate to meet international standards, such as SAE J844, ISO 7628, DIN 74324 and DIN 73378.

Our product portfolio is diverse enough to tackle the challenges. Our team of engineers and technicians puts their polymer science experience and skills to work to meet your specific needs.



PNEUMATIC SYSTEMS

POLYURETHANE TUBING

APPLICATIONS: Polyurethane (TPU) tubing is usually the best choice for applications that require extensive flexing, a small bend radius or where kinking can be a problem. It is used especially in automation and automotive industries, pneumatic systems, low-pressure hydraulic systems, robotic, lubrication lines and panel of distribution.

TEMPERATURE RANGE: -20°C to +60°C (-4°F to 140°F)

FEATURES:

- Excellent flexibility even in low temperatures
- Excellent abrasion resistance
- Excellent bend radius
- Good mechanical resistance
- Good hydrolysis resistance
- Good tolerance to compression



COLORS:



FLAME RETARDANT TUBING

CONSTRUCTION: Nylon 12 tubing in natural color covered with an external PVC jacket.

APPLICATIONS: Flame retardant tubing is used in automation and automotive industries, pneumatic systems, automotive paint systems, lubrication lines and fuel and oil conduction. It is suitable for aggressive applications, where the jacket offers an additional protection to the main tube in nylon 12, working as a sacrificial layer.

TEMPERATURE RANGE: -20°C to +70°C (-4°F to 158°F)

FEATURES:

- Flame resistance rating of UL 94 V0 (PVC cover)
- Excellent incandescent projections resistance
- High abrasion resistance
- Good flexibility
- Low moisture absorption



COLORS:

Inner (PA12) Outer (PVC)

POLYURETHANE COIL

APPLICATIONS: Polyurethane coil can be used in many applications, especially in pneumatic systems, low-pressure hydraulic systems, compressed air connections, robotic, pneumatic tools, air cleaning systems and machine cleaning systems.

TEMPERATURE RANGE: -20°C to +60°C (-4°F to 140°F)

FEATURES:

- Excellent flexibility even in low temperatures
- Excellent abrasion resistance
- Excellent bend radius
- Good mechanical resistance
- Good hydrolysis resistance
- Good tolerance to compression
- Easy to handle
- Fast to install



COLORS:



CLUTCH AND AUTOMOTIVE SYSTEMS

NYLON TUBING FOR MEDIUM PRESSURE

APPLICATIONS: Nylon tubing for medium pressure is made of nylon 12 type HL and it is used where the passage of viscous fluids as lubricant, greases and oils is necessary. It is also used in hydraulic lines with medium pressure, conduction of fuel, refrigeration and clutch systems.

TEMPERATURE RANGE: -40°C to +90°C (-40°F to 194°F)

FEATURES:

- Excellent mechanical resistance
- High impact resistance
- High abrasion resistance
- Good mechanical strength
- Good barrier property
- Low moisture absorption
- Low friction coefficient



COLOR:



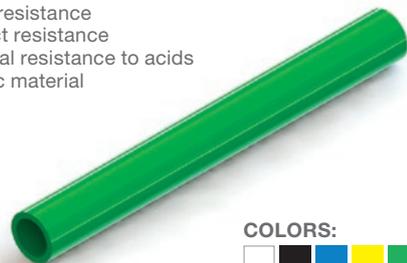
NYLON 6 TUBING

APPLICATIONS: Nylon 6 tubing can be used in several applications, especially in automation lines, instrumentation, pneumatic accessories, lubrication lines, hydraulic lines with low pressure and refrigeration.

TEMPERATURE RANGE: 0°C to +90°C (32°F to 194°F)

FEATURES:

- Excellent mechanical resistance
- Good scuff resistance
- Good impact resistance
- Low chemical resistance to acids
- Hygroscopic material



COLORS:



AIR BRAKE SYSTEMS

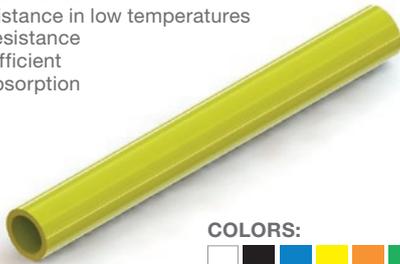
NYLON 12 TUBING

APPLICATIONS: Tubing produced in Polyamide 12 type HIPHL, PHL or PHL, also known as Nylon 12 or PA12, can be used in air brake systems, low-pressure hydraulic systems, chemical transfer service and pneumatic systems.

TEMPERATURE RANGE: -40°C to +93°C (-40°F to 199°F)

FEATURES:

- Excellent chemical resistance
- Good mechanical resistance
- High impact resistance in low temperatures
- High abrasion resistance
- Low friction coefficient
- Low moisture absorption



COLORS:



MULTILAYER AIR BRAKE TUBING

APPLICATIONS: Multilayer air brake tubing is used in truck and trailer air brake systems, auxiliary air systems, thermoformed and straight air brake harness assemblies and thermoformed tubes.

TEMPERATURE RANGE: -40°C to +93°C (-40°F to 199°F)

FEATURES:

- Excellent chemical resistance
- Excellent barrier property
- High impact resistance in low temperatures
- High fatigue resistance
- High abrasion resistance
- Good mechanical resistance
- Low friction coefficient
- Low moisture absorption



COLORS:



AIR BRAKE COIL

APPLICATIONS: Air brake coil is used in articulating connections for air brake systems (connections between towed and towing motor vehicle). It is also used in tractor-to-trailer air connections even in low temperatures.

TEMPERATURE RANGE: -40°C to +93°C (-40°F to 199°F)

FEATURES:

- Excellent return and coil memory
- Enhanced flexibility and extension
- High fatigue resistance
- High abrasion resistance



COLORS:



REINFORCED NYLON 12 TUBING

CONSTRUCTION: Inner tubing in nylon 12 (natural color) reinforced with polyester yarn coextruded with one more layer of nylon 12 available in different colors.

APPLICATIONS: Reinforced nylon 12 tubing has the same applications as nylon 12 tubing, but they are more suitable for air brake systems, according to SAE J844 standard. It is also used in automation lines, pneumatic accessories, lubrication lines, conduction of fuel and oils and conduction of chemicals.

TEMPERATURE RANGE: -40°C to +93°C (-40°F to 199°F)

FEATURES:

- Excellent chemical resistance
- Excellent mechanical resistance
- High fatigue resistance
- High impact resistance in low temperatures
- High abrasion resistance
- Low friction coefficient
- Low moisture absorption



COLORS:



FUEL SYSTEMS

MULTILAYER FUEL TUBING

APPLICATIONS: Multilayer fuel tubing is used in the transference of liquid fuel from the tank to the engine of cars, buses, trucks and off-highway vehicles. It is also used in marine, boats and yachts.

TEMPERATURE RANGE: -40°C to +90°C (-40°F to 194°F)

FEATURES:

- Excellent chemical resistance to acids and bases
- Excellent thermal resistance
- Excellent mechanical strength
- High impact resistance at low temperatures
- High abrasion resistance
- Good resistance to fatigue
- Good flexibility even at low temperatures
- Low permeability with excellent barrier property
- Low moisture absorption



COLORS:



CHEMICAL AND THERMAL RESISTANT TUBING

CHEMICAL RESISTANT TUBING

LOW DENSITY POLYETHYLENE (LDPE) TUBING

APPLICATIONS: Low density polyethylene tubing has been used in a wide variety of applications. It is suitable for conduction of fluids under low pressure including potable water, conduction of chemicals, food, pharmaceutical and beverage industries.

TEMPERATURE RANGE: 0°C to +60°C (32°F to 140°F)

FEATURES:

- Excellent chemical resistance
- Excellent water barrier
- Good flexibility
- Inherent lubricity
- Non-toxic (meets FDA requirements)



COLORS:



HIGH DENSITY POLYETHYLENE (HDPE) TUBING

APPLICATIONS: High density polyethylene tubing is one type of polyolefin whose physical and chemical characteristics qualify itself as one of the best materials for a direct contact with the food. It is suitable for conduction of fluids under low pressure including potable water, conduction of chemicals, conduction of corrosive products, irrigation, food, pharmaceutical and beverage industries.

TEMPERATURE RANGE: -20°C to +60°C (-4°F to 140°F)

FEATURES:

- Excellent chemical resistance
- Excellent water barrier
- Good flexibility
- Good thermal insulator
- Good abrasion resistance
- Inherent lubricity
- Non-toxic (meets FDA requirements)



COLORS:



FEP (FLUOROPOLYMER) TUBING

APPLICATIONS: FEP tubing is usually chosen for its excellent attributes, which makes it ideal for a diverse range of applications from environmental monitoring equipment to medical devices and electronics. It can be also used in chemical, oil & gas, aerospace, automotive, pharmaceutical, fiber optics and medical industries.

TEMPERATURE RANGE: FEP: -80°C to +200°C (-112°F to 392°F)

FEATURES:

- Excellent chemical resistance
- Excellent lubricity, clarity and flexibility
- High hydrolysis resistance
- High dielectric resistance
- Maintains mechanical strength at high temperatures
- Low gas permeability
- Low absorption of solvents
- Flame resistance rating of UL 94 V0



COLOR:



P.S. Other colors on request.

PFA (FLUOROPOLYMER) TUBING

APPLICATIONS: PFA tubing can be used in numerous applications, especially where high chemical resistance and high temperature resistance are required. This versatility has led to PFA being a popular material selection in the semiconductor, chemical, oil & gas, aerospace, automotive, pharmaceutical, fiber optics and medical industries.

TEMPERATURE RANGE: PFA: -80°C to +260°C (-112°F to 500°F)

FEATURES:

- Excellent chemical resistance
- Chemically resistant to all common solvents
- Excellent lubricity, clarity and flexibility
- High hydrolysis resistance
- High dielectric resistance
- Maintains mechanical strength at high temperatures
- Low gas permeability
- Flame resistance rating of UL 94 V0



COLOR:



P.S. Other colors on request.

MANTOVA

www.mantova.ind.br



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