SAINT-GOBAIN MEDICAL

TYGON® ND 100-80

Tubing for Medical Device Manufacturers

Tygon® ND 100-80 tubing was engineered for optimal performance in medical device applications. This tubing is clear for easy visualization of fluid flow, has good kink resistance, and is easy to bond and weld.

This thermoplastic tubing has a durometer rating of 80 Shore A, which is relatively high compared to other Tygon ND offerings. The higher durometer rating enables manufacturing at small diameters (<0.03”/1 mm OD) and wall thicknesses. During the extrusion process, individual product dimensions are maintained and monitored through in-line micrometers and off-line verification with computerized imaging equipment. A harder material rating also means this tubing is well suited for both high pressure and vacuum applications.

BIOCOMPATIBILITY CHARACTERISTICS

Tygon ND 100-80 tubing has met the requirements of Biological Test for Plastics Class VI, as described in USP <88> (2017, fluid path). The tubing formulation undergoes regular evaluations to ensure REACH compliance. Tygon ND 100-80 is designed and manufactured without the intentional addition of animal-derived materials or DEHP.

EASY TO BOND/WELD

Consistent with many medical tubing market requirements, Tygon ND 100-80 can be effectively bonded/welded using the following methods: heat, electronic (RF)/ultrasonic, solvent and adhesive. Factors to be considered when selecting the components include: security of the bond required, effect on the integrity of the materials to be joined, and presence of residues or extractables that may affect biocompatibility. When bonding procedures are not used, mechanical clamps are recommended to provide secure attachment.

FEATURES/BENEFITS

- Clear for easy visualization of fluid flow
- Kink resistant
- High pressure and vacuum resistance
- USP <88>, Class VI
- Regular evaluations to ensure REACH compliance

TYPICAL APPLICATIONS

- Cannulas or protective sheaths
- Diagnostic equipment
- Drug delivery
- External drainage system
- Pressurized fluid transfer

Product recommendations are based on a combination of industry knowledge, material science expertise, and/or material testing data. Contact Saint-Gobain Medical for further tubing recommendation information.

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Tygon® ND 100-80 tubing

IDEAL CHOICE FOR MEDICAL APPLICATIONS

The characteristics and physical properties of Tygon ND 100-80 tubing make it an ideal choice for drug delivery, cannulas or protective sheaths, external drainage systems (e.g., cerebral spinal fluid drainage), diagnostic equipment (e.g., reagent manufacturing, waste transfer in IVD), and pressurized fluid transfer.

TYGON® ND 100-80 TUBING MANUFACTURED SIZES AND PRESSURES

Part Number	I.D.		O.D.		Wall Thickness		Length		French Size	Needle Gauge
	inches	mm	inches	mm	inches	mm	feet	meters		
AAD04091	0.01	0.25	0.03	0.75	0.01	0.25	500	150	3	30
AAD04103	0.02	0.51	0.06	1.53	0.02	0.51	500	150	5	23
AAD04119	0.03	0.76	0.09	2.29	0.03	0.76	500	150	7	20-21
AAD04127	0.04	1.02	0.07	1.78	0.015	0.38	500	150	6	18-20
AAD04133	0.05	1.27	0.09	2.29	0.02	0.51	500	150	7	17-18

Custom sizes available

TYGON® ND 100-80 TYPICAL PHYSICAL PROPERTIES*

Property	ASTM Method	Value or Rating
Durometer Hardness, 15 sec.	D2240	80
Tensile Strength, psi (MPa)	D412	2,625 (18.1)
Ultimate Elongation, %	D412	350
Tear Resistance, lbf/inch (kN/m)	D1004	275 (48.2)
Specific Gravity	D792	1.22
Water Absorption, % 24 hrs at 73°F (23°C)	D570	0.10
Compression Set Under Constant Deflection, % at 158°F (70°C) for 22 hours	D395 Method B	59
Maximum Recommended Operating Temperature, °F (°C)	-	185 (85)
Brittleness by Impact Temperature, °F (°C)	D746	-31 (-35)
Tensile Modulus at 100% Elongation, psi (MPa)	D412	1,450 (10.0)

*Unless otherwise noted, all tests were conducted at room temperature (73°F). Values shown were determined on 0.075" thick extruded strips, 0.075" thick molded ASTM plaques or molded ASTM durometer buttons.

TYGON® ND 100-80 TUBING CHARACTERISTICS

Tygon ND 100-80 has met the following test requirements:

- Plastic Class VI, as described in USP <88> (2017; fluid path)
- Genotoxicity, as described in ISO 10993-3 (2014)**
- Hemolysis, as described in ISO 10993-4 (2017)**
- Cytotoxicity as described in ISO 10993-5 (2009)**
- Intrasmuscular implant as described in ISO 10993-6 (2016, after steam and EtO)
- Systemic toxicity as described in ISO 10993-11 (2017, after steam and EtO)
- Irritation as described in ISO 10993-23 (2021, after steam and EtO)

** Tested after gamma, EtO and steam sterilization

TYGON® ND 100-80 TUBING STERILIZATION METHODS

Physical properties are not significantly impacted by the following sterilization methods:

- Autoclavable (steam 30 min at 15 psi, 250°F/121°C)
- EtO (Ethylene Oxide)
- Radiation (25 kGy/2.5 Mrad)

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