

mediprene®



MEDICAL TUBING

BRIDANT TPE



Introduction

Our Mediprene® TPE tubing compounds were developed in response to the growing demand among hospitals and medical institutions for PVC free medical devices. Mediprene® TPE compounds are completely PVC, silicone and latex free, making them allergen free and a viable alternative to PVC based compounds.

Transparent & Non-kinking

The Mediprene® tubing compounds have been designed to address a number of key requirements for medical tubing. These include a high level of transparency, allowing for clear visibility of the passage of liquids and anti-kinking properties to ensure the free flow of liquids and gasses through the tubing.

Catheter Tubing

Mediprene® TPE tubing grades also display good damping properties, thereby slowly recovering after deformation like PVC, an important element in catheter tubing design. For catheter applications, the tubing is often coated in order to achieve a low-friction surface, Mediprene® TPE compounds have been successfully modified for better wettability and adhesion of such coatings.

Oil Free Grades

Grades that do not contain any paraffinic oil are available which minimize the risk of leaching and extractables. Mediprene® TPE compounds are resistant to many fluids used in the healthcare environment and are sterilizable with gamma, EtO and steam.

Regulatory compliance

Representative Mediprene® grades have passed cytotoxicity tests according to ISO 10993-5 and are compliant with USP Class VI.

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Applications

Mediprene® TPE compounds are suitable for multi and single lumen tubing for catheters, IV, drug delivery, gas supply, respiration, inhalation, anaesthesia and tube based medical devices.

They are also an optimum choice for multilayer tubing via coextrusion. Coextrusion is a powerful technique involving the simultaneous extrusion of two or more materials to form distinct layers in one tube. The layers can be different materials with each material bringing a set of distinct properties to the tube. For example, the application may require a flexible TPE midlayer between stiffer inside and outside functional layers. Mediprene TPEs bond very well to polyolefins like polyethylene and polypropylene in coextrusion.



A selection of Mediprene® Tubing grades

Weather resistance: Good

Chemical resistance: Good, excluding organic solvents and oils

Service temperature: From -50°C to max +125°C, depending on hardness

Material	Hardness Shore A	Colour	Specific Gravity g/cm ³	Tensile Strength MPa	Elongation at Break %	Tear Strength kN/mm	Modulus 100% MPa	Modulus 300% MPa	MFR 5 kg/190°C g/10 min
Test Method	ASTM D 2240 ¹		ASTM D 792	ASTM D 638	ASTM D 638	ASTM D 624	ASTM D 638	ASTM D 638	ASTM D 1238
500753M	75	Transparent	0.91	12	550	62	4.0	6.0	1.5
500803M	80	Transparent	0.91	13	600	70	5.0	7.0	1.5
500853M	85	Transparent	0.91	14	600	74	5.5	7.5	1.5

¹⁾ 4mm

Processing

The material has excellent processing characteristics and can be processed using conventional thermoplastic fabricating methods, including injection moulding and extrusion.

Processing Temperatures

Barrel Temperatures °C

Extrusion

150 - 210

Service Temperature Range

-50 to +125°C (unstressed material)

Presentation

Free flowing pellets that can be processed without predrying, when stored under normal conditions.

The above information is, to the best of our knowledge, true and accurate, but any recommendations or suggestions which may be made are without guarantee, since the conditions of use are beyond our control.

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