Mediprene® OF

Oil free medical TPE compounds

HEXPOL TPE

CONTENTS

INTRODUCTION →

SPECIAL FEATURES →

REGULATORY COMPLIANCE →

TYPICAL APPLICATIONS →

GRADE TABLE →

PROCESSING →

CONTACTS →

INTRODUCTION

The Mediprene oil free compounds were developed to address demands for transparent medical thermoplastic elastomer (TPE) grades with a minimum of potential extractables and leachables. The Mediprene OF range helps to prevent the possibility of oil migrating or leaching out of the material, a key requirement for medical and healthcare-related devices.

The right TPE formulation is the key to a safe and successful medical product. When a standard formulation does not meet the needs of a unique application, we will apply our expertise in formulating a custom solution. In this guide we show typical properties for our most common grades, these tables do not list all available properties and materials.

Please use this guide as an introduction to our Mediprene OF series and contact us to discuss your specific requirements.

SPECIAL FEATURES

- Minimum of potential extractables and leachables
- PVC, silicone and latex free
- Soft-touch appeal
- 40 to 90 Shore A
- Transparent
- Anti-kinking
- Production site accredited to ISO 13485
- Sterilizable with gamma, ethylene oxide (EtO) and steam
- Flexibility over broad temperature range
- Excellent sealing and adhesion

REGULATORY COMPLIANCE

All Mediprene OF Series TPE compounds fulfil a strict raw material selection policy. The raw materials are food contact compliant (FDA 21CFR and Commission Regulation (EU) No 10/2011) and have a proven level of biocompatibility:

- The styrenic block copolymer is selected from a series of rubbers where representative grades have passed USP Class VI
- The polypropylene has passed the USP Class VI tests

Note: Mediprene grades are not to be used in any devices or materials intended for implantation in the human body.

A SELECTION OF MEDIPRENE OIL FREE GRADES

Material	Hardness ASTM D2240 (4mm) Shore A or D	Colour	Density ASTM D792 g/cm3	Tensile Strength ASTM D638 MPa	Stress at 100% Strain ASTM D638 MPa	Stress at 300% Strain ASTM D638 MPa	Elongation at Break ASTM D638 %	Tear Strength ASTM D624 N/mm	MFR 190°C/5kg ASTM D1238 g/10 min
Mediprene OF 400M	40 A	Transparent	0.89	8	0.8	1.3	700	14	2
Mediprene OF 500M	50 A	Transparent	0.89	10	1.1	1.9	700	20	2
Mediprene OF 600M	60 A	Transparent	0.89	11	1.9	3.2	650	37	2
Mediprene OF 700M	70 A	Transparent	0.89	11	2.5	4.0	600	41	2
Mediprene OF 800M	80 A	Transparent	0.89	13	4.5	6.4	600	58	2
Mediprene OF 900M	90 A	Transparent	0.89	18	5.8	7.5	600	69	2
Mediprene OF 551M	55 A	Transparent	0.89	12	1.1	2.8	600	35	8
Mediprene OF 601M	60 A	Transparent	0.89	14	1.4	3.1	650	40	9
Mediprene OF 701M	70 A	Transparent	0.89	15	2.4	4.6	650	46	10
Mediprene OF 801M	80 A	Transparent	0.89	15	3.7	5.9	650	55	11
Mediprene OF 901M	90 A	Transparent	0.89	15	5.0	7.1	650	63	12
Mediprene OF 753M	75 A	Transparent	0.91	12	4.0	6.0	550	62	1.5
Mediprene OF 803M	80 A	Transparent	0.91	13	5.0	7.0	600	70	1.5
Mediprene OF 853M	85 A	Transparent	0.91	14	5.5	7.5	600	74	1.5
Mediprene OF 903M	90 A	Transparent	0.90	17	5.8	7.4	650	72	1.5
Mediprene OFD 403M	40 D	Transparent	0.90	19	7.4	8.9	650	88	2

TYPICAL APPLICATIONS

Hot melt adhesives (for example for connections) adhere well to the Mediprene OF range. These compounds also show excellent performance with double-coated tapes for “stick to skin” applications such as patches for fixation of tubing or other medical components to skin.

TUBING

The high level of transparency combined with good anti-kinking properties make Mediprene oil free compounds highly suitable for medical tubing applications. Mediprene OF 753M, OF 803M and OF 853M also show a PVC like behaviour, with slow recovery after deformation.

EASY FLOWING GRADES

Mediprene OF 601M, OF 701M, OF801M and OF 901M are grades with higher melt-flow rates, suitable for injection moulding of applications with thinner walls such as patches or connectors.

PROCESSING

Mediprene OF grades have excellent processing characteristics and can be processed using conventional thermoplastic processing methods, including injection moulding and extrusion.

Service Temperature Range	-50 to +80°C (for 40 and 50 Shore A OF grades, unstressed material) -50 to +125°C (for 60 to 90 Shore A OF grades, unstressed material)
Presentation	Free flowing pellets that can be processed without predrying, when stored under normal conditions

Processing Temperatures	Injection Moulding	Extrusion
Barrel Temperatures °C	180 - 230	150 - 210
Mould Temperatures °C	20 - 50	

Further TPE processing, sterilization & problem solving information is available to download from our website →

WANT TO LEARN MORE?

Email the medical team at
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or visit www.mediprene.com

Other Mediprene Product Series →

Mediprene 500M : Standard Series

Mediprene 500M : Transparent Series

Mediprene 500M : Syringe Plunger Seal Series

Mediprene Sterilization Guide

Mediprene 2 Year Supply Guarantee

ABOUT HEXPOL TPE



HEXPOL TPE is a global compounding group specialising in Thermoplastic Elastomers (TPE) for key industries such as consumer, medical, packaging, automotive and construction. We have a core belief in being the easiest company to do business with. That's why we invest in our operations, teams and technologies to offer our customers the most reliable, relevant and cost-effective TPE compounds, backed by highly responsive support, technical know-how and application expertise. Our teams work together, across boundaries, applying the knowledge, experience and talents we have all around the world to meet the needs of our customers.

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