

SANTOPRENE™ 8281-45MED - TPV
Product Description

A soft, colorable, specialty, non-hygroscopic thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. It is designed for use in medical and healthcare applications. This grade of Santoprene™ TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding. It is polyolefin based and recyclable within the manufacturing stream.

Characteristics

Applications	Seals and Gaskets, Soft Touch Grips
Uses	Medical applications
Color	Natural color
Delivery Form	Pellets
Processing	Injection molding, Multi injection molding

Physical properties	Value	Unit	Test Standard
Density	0.91	g/cm ³	ASTM D792
Density	910	kg/m ³	ISO 1183

Hardness	Value	Unit	Test Standard
Shore A hardness-TPE, 15s	49		ISO 868

Mechanical properties	Value	Unit	Test Standard
Tensile stress at 100%, perpendicular	1.3	MPa	ASTM D412
Tensile stress at 100%, perpendicular	1.3	MPa	ISO 37
Tensile strength at break elast, perpendicular	3.6	MPa	ASTM D412
Tensile stress at break, perpendicular	3.6	MPa	ISO 37
Elongation at break elast, perpendicular	440	%	ASTM D412
Tensile strain at break, perpendicular	440	%	ISO 37
Compression set, 23 °C, 168h, Type 1, Method B	12	%	ASTM D395
Compression set, 23 °C, 168h, Type A	12	%	ISO 815

Injection	Value	Unit
Necessary low maximum residual moisture content	0.08	%
Suggested maximum regrind	20	%
Rear temperature	177 - 191	°C
Middle temperature	179 - 193	°C
Front temperature	185 - 199	°C
Nozzle temperature	185 - 210	°C
Melt temperature	143 - 216	°C
Mold temperature	24 - 52	°C
Injection speed	fast	-
Back pressure	0.345 - 0.689	MPa
Screw Speed	100 - 200	RPM
Clamp tonnage	41 - 69	MPa
Cushion	3.18 - 6.35	mm
Screw L/D	20:1/*	-
Screw compression ratio	2.5:1/*	-
Vent depth	0.025	mm

Other text information

Processing Notes

Desiccant drying for 3 hours at 80°C (180°F) can be performed if desired. Santoprene™ TPV has a wide temperature processing window from 175 to 230°C (350 to 450°F) and is incompatible with acetal and PVC.

Contact

Americas

8040 Dixie Highway
Florence, KY 41042 USA
Product Information Service
t: +1-800-833-4882
t: +1-859-372-3244
Customer Service
t: +1-800-526-4960
t: +1-859-372-3214
e: info-engineeredmaterials-am@celanese.com

Asia

4560 Jinke Road
Zhang Jiang Hi Tech Park
Shanghai 201210 PRC
Customer Service
t: +86 21 3861 9288
e: info-engineeredmaterials-asia@celanese.com

Europe

Am Unisys-Park 1
65843 Sulzbach, Germany
Product Information Service
t: +49-800-86427-531
t: +49-(0)-69-45009-1011
e: info-engineeredmaterials-eu@celanese.com

General Disclaimer

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data values. Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products. The products mentioned herein are not intended for use in medical or dental implants.

Trademark

© 2021 Celanese or its affiliates. All rights reserved. Celanese®, registered C-ball design and all other trademarks identified herein with ®, TM, SM, unless otherwise noted, are trademarks of Celanese or its affiliates. Fortron is a registered trademark of Fortron Industries LLC.