Covestro Texin® 5590 Thermoplastic Polyurethane, Polyether-based, Medical (discontinued **)

Category : Polymer , Thermoplastic , Polyurethane, TP , Thermoplastic Polyurethane (TPUR), Polyether Grade

Material Notes:

This grade is in chemical compliance with 21 CFR 177.1680 (Polyurethane Resins) and 177.2600 (Rubber articles intended for repeated use) subject to the limitations of this regulation and any other regulations.It is the responsibility of the medical device, biological product, or pharmaceutical manufacturer (Manufacturer) to determine the suitability of all component parts and raw materials, including the Bayer Corporation product identified in this electronic database, used in its final product in order to ensure safety and compliance with FDA regulations. This determination must include, as applicable, testing for suitability as an implant device and suitability as to contact with and/or storage of solutions/liquids, including, without limitation, blood, medication, or other bodily fluids. Under no circumstances, however, may the Bayer Corporation product be used in any cosmetic, reconstructive or reproductive implant applications. Nor may any Bayer Corporation resin be used in any other bodily implant applications or any applications involving contact with or storage of human tissue, blood or other bodily fluids for greater than 30 days, based on FDA modified ISO 10993, Part 1 Biological Evaluation of Medical Devices tests. Furthermore, for aromatic grades of Texin TPU resins, longer term uses are not permissible because possible hydrolysis of solid urethane may produce aromatic amines, such as methylene dianiline (MDA). The suitability of a Bayer product in a given end-use environment is dependent upon various conditions including, without limitation, chemical compatibility, temperature, part design, sterilization method, residual stress, or external loads. It is the responsibility of the Manufacturer to evaluate its final product under actual end-use requirements and to adequately advise and warn purchasers and users thereof. Single use medical devices made from Bayer products are not suitable for multiple uses. If the medical device is designed for multiple uses, it is the responsibility of the Manufacturer to determine the appropriate number of permissible uses by evaluating the device under actual sterilization and end-use conditions and to adequately advise and warn purchasers and users thereof. If you have any questions on the regulatory status of any of Bayer Corporation products identified in this electronic database, please contact your local Bayer Corporation representative or the Bayer Corporation Regulatory Affairs Manager in the Health, Environment, and Safety Department in Pittsburgh, Pa. Biocompatibility Information The medical grades of the Bayer Corporation products identified in this electronic database have met the FDA modified ISO 10993, Part 1 Biological Evaluation of Medical Devices tests with human tissue contact time of 30 days or less. ONLY THESE PRODUCTS MAY BE CONSIDERED AS CANDIDATES FOR APPLICATIONS REQUIRING BIOCOMPATIBILITY. No medical grade products will be available for sale until successful completion of testing. Regrind resins must not be used in medical applications requiring biocompatibility. Sterilization Information The sterilization method and the number of sterilization cycles a part made from a Bayer Corporation product identified in this electronic database can withstAs of 1 September 2015, Bayer MaterialScience was separated from Bayer AG and has officially adopted its new name – Covestro. This product was discontinued prior to the separation.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Covestro-Texin-5590-Thermoplastic-Polyurethane-Polyether-based-Medical-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.04 g/cc	0.0376 lb/in³	ASTM D792
Linear Mold Shrinkage	0.0080 cm/cm	0.0080 in/in	ASTM D955
Linear Mold Shrinkage, Transverse	0.0080 cm/cm	0.0080 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	90	90	ASTM D2240
Tensile Strength, Ultimate	26.0 MPa	3770 psi	ASTM D412
Tensile Strength, Yield	5.40 MPa	783 psi	50% Elongation; ASTM D412
Elongation at Break	570 %	570 %	ASTM D412
Flexural Modulus	0.0700 GPa	10.2 ksi	ASTM D790
Resilience	39	39	% Bayshore Resilience; ASTM D2632
Tear Strength	80.0 kN/m	456 pli	Die C; ASTM D624
Taber Abrasion, mg/1000 Cycles	195	195	H-18 Wheel, 1000 g load, ASTM D3489
Compression Set	70 %	70 %	22 hours at RT (Postcured); ASTM D395-B
	100 % @Temperature 70.0 °C	100 % @Temperature 158 °F	22 hours (Postcured); ASTM D395-B

Thermal Properties	Metric	English	Comments
Vicat Softening Point	46.0 °C	115 °F	Rate A; ASTM D1525
Glass Transition Temp, Tg	-76.0 °C	-105 °F	DMA

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