Datasheet

Durethan T40 000000

PA 6I, non-reinforced, injection molding, extrusion

ISO Shortname: ISO 16396-PA 6I,,GT,S12-030

Property	Test Condition	Unit	Standard	guide value [1] dry as molded	guide value [1] conditioned
Mechanical properties (23 °C/50 % r. h.)					
Tensile modulus	1 mm/min	lb/in²	ASTM D 638	435000	478000
Tensile elongation at break	-	%	ASTM D 638	> 50	> 50
Tensile stress at break	-	lb/in²	ASTM D 638	9400	8000
Izod notched impact strength	73 °F, 0.125 in	ft·lb/in	ASTM D 256	1.5	1.1
Izod notched impact strength	-40 °F; 0.125 in	ft·lb/in	ASTM D 256	0.9	0.9
Flexural modulus	-	lb/in²	ASTM D 790	420000	478000
Flexural stress at 5 % strain		lb/in²	ASTM D 790	21800	18800
Thermal properties					
Deflection temperature under load, Unannealed	66 psi; 0.157 in	°F	ASTM D 648	244	
Deflection temperature under load, Unannealed	264 psi; 0.157 in	°F	ASTM D 648	225	
Other properties (23 °C)					
Density		lb/in³	ASTM D 792	0.043	
Specific gravity		-	ASTM D 792	1.18	

Notes

1 Typical properties: these are not to be construed as specifications

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Disclaimer

Standard Disclaimer

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale. All information and technical assistance is given without warranty or guarantee, and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use. No license is implied or in fact granted under the claims of any patent.

Typical Properties

Property data is provided as general information only. Property values are approximate and are not part of the product specifications.

Flammability

Flammability results are based on small-scale laboratory tests for purposes of relative comparison and are not intended to reflect the hazards presented by this or any other material under actual fire conditions.

Health and Safety

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling Envalior products mentioned in this publication. Before working with these products, you must read and become familiar with the available information on their hazards, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., material safety data sheets (MSDS) and product labels. Consult your Envalior representative or contact the Product Safety and Regulatory Affairs Department. For materials that are not Envalior products, appropriate industrial hygiene and other safety precautions recommended by their manufacturer(s) must be followed.

Regulatory Compliance

Some of the end uses of the products described in this brochure must comply with applicable regulations, such as the FDA, NSF, USDA and CPSC. If you have any questions on the regulatory status of any Envalior engineering thermoplastic, consult your Envalior representative or contact the Regulatory Affairs Manager.

Medical

Medical BIOCOMPATIBILITY INFORMATION: All LANXESS resins (hereinafter "Product(s)") designated as "medical grade" have met the requirements of the FDA-Modified ISO 10993, Part I "Biological Evaluation of Medical Devices" tests with human tissue contact time of 30 days or less. ONLY THESE PRODUCTS MAY BE CONSIDERED CANDIDATES FOR APPLICATIONS REQUIRING BIOCOMPATIBILITY. No "medical grade" Product will be made available for sale until successful completion of the above testing by LANXESS. Regrind resins must not be used in medical applications requiring biocompatibility. MANUFACTURER'S RESPONSIBILITY: 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 any LANXESS Product, used in its final product in order to ensure safety and compliance with FDA requirements. This determination must include, as applicable, testing for suitability as an implant device and suitability as to contact with and/or storage of human tissue and liquids including, without limitation, medication, blood or other bodily fluids. Under no circumstances may any LANXESS Product be used in any implant applications (cosmetic, reconstructive or reproductive). Nor may any LANXESS Product 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 the FDA-Modified ISO 10993 tests. The suitability of a LANXESS Product in a given end-use environment is dependent upon various conditions including, without limitation, chemical compatibility, temperature, part design, sterilization method, residual stresses 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 a LANXESS Product 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. STERILIZATION INFORMATION: The sterilization method and the number of sterilization cycles a medical device made from a LANXESS Product can withstand will vary depending upon type/grade of product, part design, processing parameters, sterilization temperature and chemical environment. Therefore, the Manufacturer must evaluate each device to determine the sterilization method and the number of permissible sterilization cycles appropriate for actual end-use requirements and must adequately advise and warn purchasers and users thereof.

Color and Visual Effects

Type and quantity of pigments or additives used to obtain certain colors and special visual effects can affect mechanical properties.