



**MATERIAL
WIZARD™**

MAGIC SOLUTIONS REAL RESULTS

Exaflex® TPU 80A

Product DataSheet | Supplied by Material Wizard



Exaflex® TPU 80A

Exaflex TPU 80A is a thermoplastic polyurethane elastomer (TPU) celebrated for its exceptional abrasion resistance, dynamic load-bearing capabilities, and notably excellent flexibility. This elastomer excels in both low and high-temperature environments. A distinctive feature of Exaflex TPU 80A is its inherent resistance to hydrolysis, microbial growth, and many mineral-based oils. Moreover, this polyurethane elastomer demonstrates superior melt flow properties, facilitating easy processing and efficient recyclability of well-segregated production waste. Thermoplastic polyurethane offers a unique balance of flexibility, durability, and resilience. Its Shore Hardness indicates a relatively high rigidity while still maintaining a significant degree of flexibility, making it suitable for various applications

Product Type

TPU > TPU - ARES

Applications/ Recommended for

Injection Molding >

Footwear
Seals and Gaskets
Sporting Goods
Consumer Electronics
Agriculture

Extrusion >

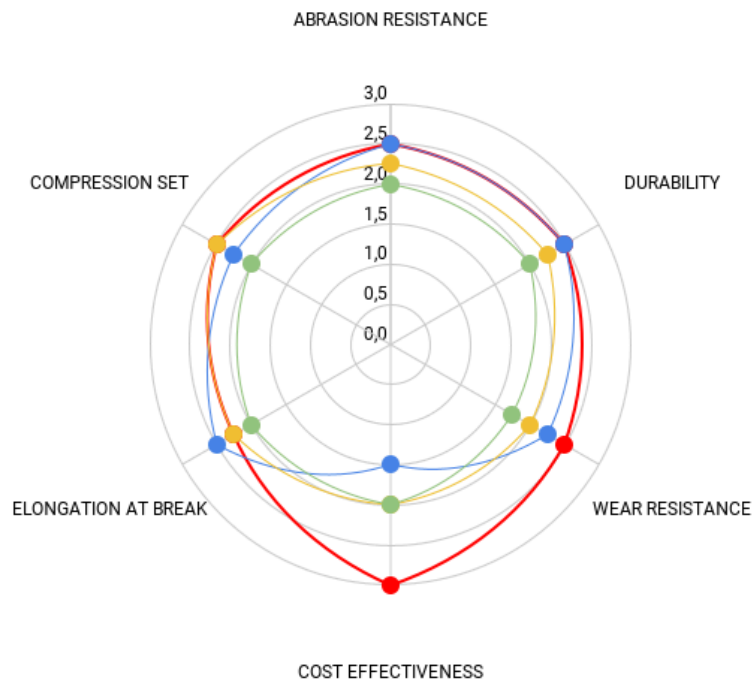
Automotive Components
Industrial Hoses and Tubes
Medical Devices
Conveyor Belts
Wire and Cable Sheathing
Specialty Adhesives and Films

Key Features

Superior durability and wear resistance
High tensile and tear strength
Flexibility across a broad temperature range
Excellent resistance to oils, greases, and various chemicals
Outstanding abrasion resistance
Recyclable and environmentally friendly

Comparative Material Analysis

- **Exaflex TPU 80A**
- **Elastollan 1180A**
- **Desmopan DP 9380A**
- **Pellethane 2103-80AE**



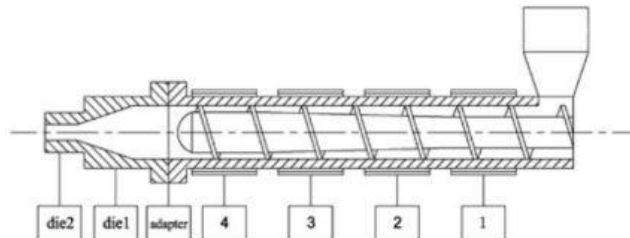
Exaflex® TPU 80A Typical Properties

Physical	Value & Unit	Test Condition	Test Method
Hardness	80	Shore A	ASTM D2240
Specific Gravity	1.21 g/cm ³	At 23°C	ASTM D792
Melt Volume-Flow Rate (MVR)	30	200°C/5kg	ASTM D3418
Hydrolysis Resistance		80°C, 95%RH	

Mechanical	Value & Unit	Test Condition	Test Method
Elongation At Break	550%		ASTM D412
Tensile Strength at Break	32 MPa		ASTM D412
Mod.of Elasticity at 300%	11 MPa		ASTM D412
Tear Strength	112 kN/m	(Die C)	ASTM D624
Abrasion	36 mm ³	(Method A: non-rotate)	ASTM D5963

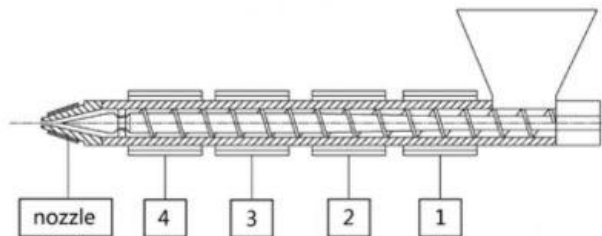
Processing Recommendations

Processing Conditions > Injection Molding:



	Zone1	Zone2	Zone3	Zone4	Adaptor	Die1	Die2
°C	175	180	185	190	195	200	200

Processing Conditions > Extrusion:



	Zone1	Zone2	Zone3	Zone4	Nozzle
°C	185	190	195	200	195

Processing Recommendations > Drying:

Our materials are supplied pre-dried in moisture-guarded bags. However, dry materials will rapidly absorb moisture when exposed to the atmosphere. For recyclable products, it must be dried before processing. It is recommended to dry the material at 90-100 °C for 3-4 h in a circulating air or dehumidified air dryer. The moisture content must be lower than 0.02% before and during processing.

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 are subject to change without notice. It is expressly understood and agreed that you assume and hereby 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 data is provided as general information only. Property values are approximate and are not part of the product specifications.

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