

**MATERIAL  
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## **Exaflex® TPU 83A**

Technical DataSheet | Supplied by Material Wizard



*Technical DataSheet*

# Exaflex® TPU 83A

Exaflex TPU 83A is a thermoplastic polyurethane elastomer (TPU) recognized for its remarkable abrasion resistance, flexibility, and dynamic load-bearing capabilities. Exaflex TPU 83A elastomer exhibits outstanding performance in both low and high-temperature environments. Additionally, this polyurethane elastomer exhibits excellent melt flow properties, facilitating easy processing and efficient recycling of well-separated production waste. Thermoplastic polyurethane Exaflex TPU 83A offers high economic practicability with a unique balance of flexibility, durability, and resilience.

**Product Type** ISO 16365-1:2014 TPU > TPU - ARES

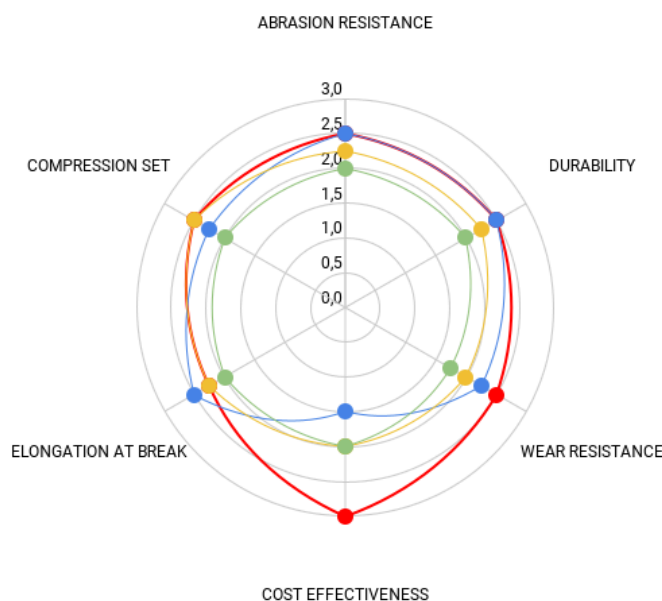
**Applications/ Recommended for** Injection Molding, Extrusion

**Key Features**

- Superior durability and wear resistance
- High tensile and tear strength
- Excellent resistance to oils, greases, and various chemicals
- Outstanding abrasion resistance

## Comparative Material Analysis

- **Exaflex TPU 83A**
- **Elastollan C 83A**
- **Desmopan DP 9383A**
- **Pellethane® 2102-83AE**

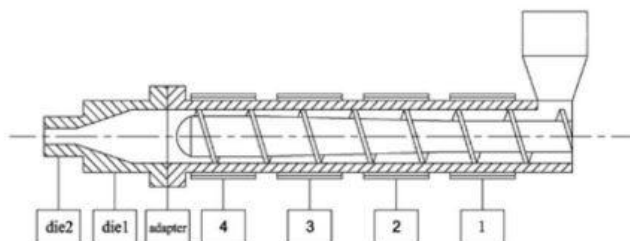


## Exaflex® TPU 83A Typical Properties

Physical	Value & Unit	Test Condition	Test Method
Hardness	83	Shore A	ASTM D2240
Specific Gravity	1.21 g/cm <sup>3</sup>	At 23°C	ASTM D792
Melt Volume-Flow Rate (MVR)	30	200°C/5kg	ASTM D3418
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 <sup>3</sup>	(Method A: non-rotate)	ASTM D5963

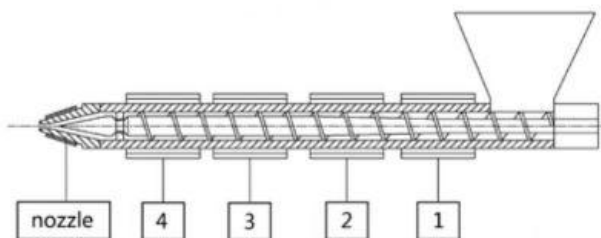
## Processing Recommendations

### Processing Conditions > Injection Molding:



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

### Processing Conditions > Extrusion:



	Zone1	Zone2	Zone3	Zone4	nozzle
°C	180	185	190	195	190

### 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 hours 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.

## Contact Information

**Email:** [yyekimov@gmail.com](mailto:yyekimov@gmail.com)

**Website:** [materialwizard.com.ua](http://materialwizard.com.ua)

**Marketplace:** [polyamide.prom.ua](http://polyamide.prom.ua)

**Phone:** + 38 050 323 23 21

