

Aliphatic TPU

Overview

Lubrizol's aliphatic TPU (thermoplastic polyurethane) range is designed to combine durability and aesthetic properties in one single material. This innovative product series is perfect for colored or transparent applications that will be exposed to UV light, and where nonyellowing, durability and weatherability performance are key requirements.

For both light- and dark-color parts and a high-class aesthetic finish, manufacturers, designers and OEMs (original equipment manufacturers) can rely on our aliphatic TPU range to make their products a bit more amazing.

Benefits

- Color stability upon UV exposure
- Can be processed via extrusion or injection molding
- Excellent staining/blooming resistance
- Nonyellowing appearance
- Long-term performance for superior abrasion and scratch resistance
- Cost-effective manufacturing solutions (fast-cycling, high-flow or low-density grades)
- Superior chemical resistance
- Excellent flexibility, elastic/rebound and resilience properties
- Hypoallergenic and odorless

Top Product Selections

Aliphatic TPU innovations listed per applications / grades include:

Product	Hardness	Density	Tensile Strength	Application
Pearlthane™ D91T80	81 Shore A	1.11	25	Molded Parts
Pearlthane™ 91T85	88 Shore A	1.11	27	Molded Parts
Pearlthane™ D91T86	88 Shore A	1.12	34	Molded Parts
Estane® ALR CL87AV	87–90	1.10	62	Protection Film
Estane® ALR E87AV	87 Shore A	1.08	53	Protection Film
Estane® ALR E77AV	77 Shore A	1.05	43	Protection Film
Estane® AG-8451	80 Shore A	1.08	48	Ballistic Glass
Estane® AG-4950	N/A	1.06	24	Ballistic Glass
Pearlcoat™ Activa D198K	70 Shore A	1.10	25	Low-Gloss Molded and Extruded Parts



Applications

Industrial

Surface protection films
Cast/Blown film
Ballistic glass
Automotive interiors
Textile
Various molded parts
Consumer goods and appliances
Housing/Overmolded grips

Sports & Recreation

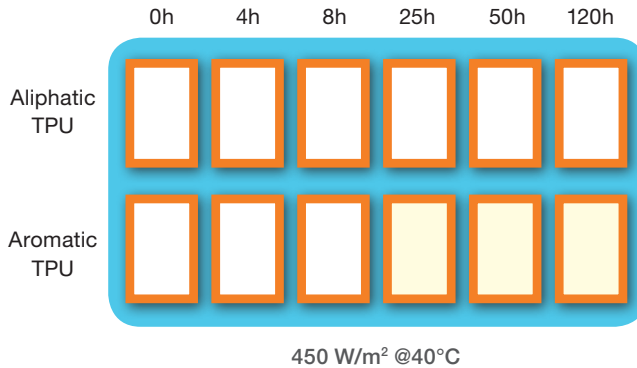
Goggles
Watchbands

Electronics

Smartphones
Headphones



Aliphatic TPUs provide excellent UV resistance for light colors as shown below:



More Amazing

What our customers do every day is exciting. And what we do at Lubrizol Engineered Polymers is help our customers perfect whatever *they* do—whether it's overcoming challenges, taking advantage of opportunities or bringing stronger, sometimes-amazing products and services to market.

We work alongside companies, providing the back-end support needed to ensure better outcomes. That support can include spirited teamwork, chemical expertise, unique resources, an efficient network and much more. Lubrizol is, in fact, built to be a catalyst to our customers' success. Our engineered polymers and the people who develop them allow OEMs and processors to go beyond. To do more. To expect more.

How far away is amazing? It's much closer when you have a partner such as Lubrizol.



The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained. The information often is based on laboratory work with small-scale equipment and does not necessarily indicate end-product performance or reproducibility. Formulations presented may not have been tested for stability and should be used only as a suggested starting point. Because of the variations in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the products for the applications disclosed. Full-scale testing and end-product performance are the responsibility of the user. Lubrizol Advanced Materials, Inc., shall not be liable for and the customer assumes all risk and liability for any use or handling of any material beyond Lubrizol Advanced Materials, Inc.'s direct control. THE SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Nothing contained herein is to be considered as permission, recommendation nor as an inducement to practice any patented invention without permission of the patent owner.

Lubrizol Advanced Materials, Inc. / 9911 Brecksville Road, Cleveland, Ohio 44141-3247 / 216.447.5000

Lubrizol

www.lubrizol.com/engineeredpolymers

© 2016 The Lubrizol Corporation. All rights reserved.
All marks are the property of The Lubrizol Corporation.
16-42332