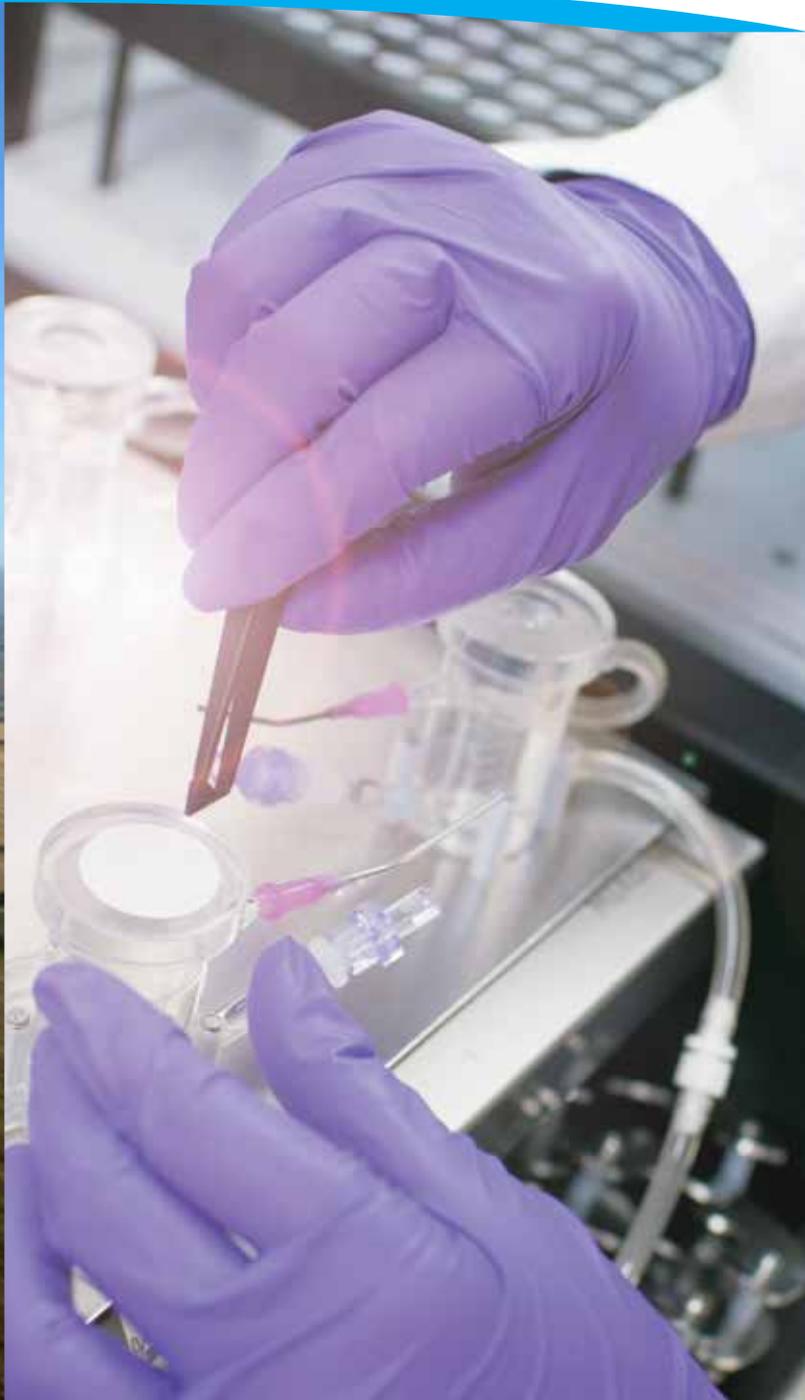


Sustainable TPU Solutions





Lubrizonol thermoplastic polyurethane (TPU) is recyclable* and can also improve the recyclability ratio of other polymers, for instance, some synthetic textiles.



ESTANE® RNW TPU portfolio is now commercially available for various end applications.

ESTANE TPU			
Trade Name	Hardness (Shore A/D)	% Sustainable Share	% PCF Reduction**
ESTANE® RNW90 58300 NAT036	82A	92	51
ESTANE® RNW90 58887 NAT055	89A	91	57
ESTANE® RNW60 ZHF90AT2 NAT055	91A	60	34
ESTANE® RNW85 GP52DT NAT055	52D	86	55

* Recyclability is based on access to a readily available standard recycling program that supports such materials.

Products may not be available in all areas.

**This value may be subject to changes in the future, please consult your sales representative.



ESTANE® ECO Bio-Based Series

ESTANE® ECO bio-based series is very versatile and can be applied in a world of applications from footwear to industrial parts.

Lubrizol Engineered Polymers are designed to improve the performance and aesthetics of products across a wide range of consumer and industrial applications – from performance apparel to footwear to hoses and beyond. More recently, our polymers have been used in EV charging system cables, electronics and 3D printing. The possibilities are virtually endless.





At Lubrizol, we are committed to developing environmentally responsible, sustainable solutions for our customers, employees and communities. We are always seeking new opportunities to expand our impact and are eager to collaborate with our customers and partners on new applications.



Sustainable Solution	Description
ESTANE® ECO TPU	Bio TPU product series applied in extrusion, molding and coextrusion processes with bio-based content ranging from 20 to 69*% according to ASTM D6866.
ESTANE® PIR** TPU	Specialty TPU that comes from Post Industrial Recycled material originating from the use of post-industrial scrap through our partner network. Formulated to be used in high performing applications.
ESTANE® RNW TPU	Specialty TPU, with the same performance as our ESTANE TPU, but with bio carbon attribution.
ESTANE® 3D TPU F95A-030 BR ECO TPU	Lubrizol's Bio TPU resin for additive manufacturing grade used for fused filament fabrication with a broad 3D printing window.
PEARLBOND™ ECO TPU	Part of Lubrizol's Bio TPU product family, suitable for hot melt adhesives and reactive hot melts with 59% and 67% biobased content, respectively, providing high thermoplasticity and improving crystallization.

*This maximum value corresponds to a new development.

**This is defined as the result of a recovery operation or of a reprocessing of byproducts as described in the CPA Guidance on waste definitions. It does not necessarily contribute to recycled content claims. Please contact your sales manager representative for more details.



ESTANE[®]
PIR TPU

Our customized high-performing post-industrial recycled (PIR) materials are backed by Lubrizol's technical expertise, value chain partners and certified product data. All of which are designed to enable your circularity.



ESTANE[®]
RNW TPU

ESTANE[®] RNW TPU portfolio offers mass balance versions of several standard product grades. These materials provide the same high quality and performance while using bio and/ or mass balanced feedstocks.



bio
tpu

ESTANE[®] ECO and PEARLBOND ECO bio-based TPUs enable sustainably driven product design without compromising on material quality and performance.



Lubrizol Locations

AMERICAS

Lubrizol Advanced Materials, Inc.
9911 Brecksville Road
Cleveland, Ohio
44141-3201
USA
Phone:
+1 888-234-2436

ASIA

Lubrizol Specialty Chemicals Manufacturing (Shanghai) Co., Ltd., 6F - No.3, Building C, Lane 227 Dongyu Road, Shanghai PRC 200126
Phone:
+86 21-3866-0366

EUROPE, MIDDLE EAST, INDIA & AFRICA

Lubrizol Advanced Materials Spain S.L.
Gran Vial, no. 17
08160 Montmeló (Barcelona)
Spain
Phone:
+34 93-579-9522

Learn more about our existing sustainable solutions by watching our video at www.lubrizol.com/Engineered-Polymers/Sustainability



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