QUALITY PERFORMS.

Urethane Systems
Thermoplastic Polyurethane Elastomers

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Ultralast® TPUs offer premium performance versus standard TPUs and other high grade elastomers in the most extreme applications. Characterized by their excellent physical and dynamic properties, they provide enhanced cut and tear strength, compression set and chemical and temperature resistance. These specialty elastomers have a better molecular structure, resulting in improved processing advantages and performance in end applications.

Superior Capabilities

In the oil & gas, mining and construction industries, seals, pumps, valves and mining screens require heat resistance, cold temperature toughness, chemical resistance and superior dynamic mechanical properties.

Ultralast® TPUs not only enhance performance, but help to extend the life of these demanding components.

Applications that are not served by standard TPUs or that currently use more exotic elastomers, such as polyether block amine elastomer (PEBA), copolyester ether (COPE), Fluoroelastomers (FKM) and hydrogenated nitrile butadiene rubber (HNBR), can greatly benefit from Ultralast® TPUs.

Morphology Matters

LANXESS’s Low Free (LF) prepolymer technology provides a more structured morphology, that delivers a combination of thermoset-like performance properties with the ease of processing, using all traditional thermoplastic methods.

Performance Advantages

- Increased durability in harsh use conditions
- Longer component life
- Higher temperature performance
- Cold temperature toughness
- Better chemical resistance
- Superior dynamic properties
- Better abrasion, tear resistance and wear

Processing Advantages

- Lower required processing temperatures compared to conventional TPUs, while providing higher in use temperatures
- Improved thermal stability for reduced cycle times, easier de-molding and better aesthetics.
- Can be injection molded and extruded into complex geometries.

Ultralast® TPU Product Range

<table>
<thead>
<tr>
<th>M-Series</th>
<th>P-Series</th>
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<tbody>
<tr>
<td>- Based on LF MDI</td>
<td>- Based on LF pPDI</td>
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<tr>
<td>- Excellent abrasion resistance</td>
<td>- Excellent abrasion and tear resistance</td>
</tr>
<tr>
<td>- High cut and tear strength</td>
<td>- Extreme temperature capabilities</td>
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<tr>
<td>- Superior dynamic properties</td>
<td>- Performance in harsh chemical environments</td>
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<tr>
<td>- Available in a range of polyol backbones</td>
<td>- Available in a range of polyol backbones</td>
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Please refer to technical data sheets for performance attributes. LANXESS scientists can help you select the best product to achieve your ideal performance.