



## MillaMed™: TSE’s Millable Polyurethane Compounds for Medical Applications

### USP Class VI

*MillaMed compounds are solid, millable polyurethane compounds, based upon aliphatic polyether polyurethanes, designed for medical applications. MillaMed compounds are molded and cured (vulcanized) like other rubber compounds, and they have excellent physical properties and abrasion resistance, along with good radiation and gas permeability resistance.*

*MillaMed PU2055 (55 Shore A) and MillaMed PU2075 (75 Shore A) are transparent compounds that can be blended in any proportion to get intermediate hardnesses.*

**Sterilization:** Autoclave, Gamma radiation or ETO (ethylene oxide gas) can be used for sterilization:

**Autoclave:** Up to 10 cycles, however slight yellowing may result.

**ETO Gas:** Modulus (tensile stress) of the product may increase slightly.

**Gamma Radiation:** Up to 60 kGy can be used; the modulus may increase slightly.

	MillaMed PU2075	MillaMed PU2055
Rheometer at 160°C, tc90, min.	2.7	3.5
<b>Physical Properties (Typical)</b>		
Samples Press Cured 4 min./160°C and Post-Cured 4 hr/100°C		
<b>Hardness, Shore A</b>	<b>75</b>	<b>55</b>
TSE-100*, psi (MPa)	390 (2.7)	165 (1.1)
TSE-300*, psi (MPa)	1150 (7.9)	490 (3.4)
Tensile Strength, psi (MPa)	4770 (32.9)	2170 (15.0)
Elongation, %	565	540
Tear Die B, lb/in (kN/m)	344 (60.2)	176 (30.8)
Tear Die C, lb/in (kN/m)	221 (38.7)	118 (20.6)
Bashore Resilience, %	52	58
Compression Set, 22h/70°C, %	37	24
DIN Abrasion, mm <sup>3</sup> loss	87	88
<b>Cytotoxicity**</b>	<b>Pass</b>	<b>Pass</b>
<b>Class VI Testing**</b>	<b>Pass</b>	<b>Pass</b>

\*TSE-XXX = Tensile Stress ('modulus') at XXX% elongation

\*\* Cytotoxicity per ISO 10993-5 Elution Method. Tests conducted by NAMS A September-November 2014

### Notes

1. These materials are not intended for long term implant (>29 days).
2. These materials have passed screening tests that are applicable to products intended for use up to 29 days, but TSE makes no end-use representation based on the testing.
3. It is the users responsibility to independently test and verify the safety and suitability of the material performance in the intended application.

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The recommendations for the use of our products are based on tests believed to be reliable. However, we do not guarantee the results to be obtained by others under different conditions. Nothing in this literature is intended as a recommendation to use our products so as to infringe on any patent. MillaMed™ is a trademark and Millathane® is a registered trademark of TSE Industries, Inc.