

## Millathane® Millable Polyurethanes Polymer Selector Guide

Compounds based upon Millathane solid (millable) urethanes have excellent abrasion resistance and physical properties, along with excellent oil and ozone resistance. Polyester types are generally better for oil resistance and heat aging, while polyether types are generally better for water resistance and low temperature properties.

Most Millathane grades are available in a range of viscosities and are available as dense bales or Premilled sheets. Premilled polyester grades contain 1.5 phr of hydrolysis stabilizer. All grades are peroxide curable; sulfur curable grades are Millathane E34, E40, CM, 76 and HT.

### Typical Properties

	Density g/cc	Mooney Viscosity at 100°C*		Comments
		ML(1+4)	MS(1+10)	
<b>Polyether Grades</b>				
Millathane 26	1.03	30 – 60	_____	Compliant with USA FDA regulation 177.2600; peroxide and isocyanate-curable
Millathane 55	1.04	25-45	_____	Lower viscosity but higher hardness than E34 for good processing, high hardness compounds
Millathane 97	1.02	30-70	_____	Peroxide curable only; best for transparent or colored compounds (e.g., for footwear)
Millathane E34	1.04	35-60	_____	Easy processing, excellent abrasion resistance; best overall Millathane grade for roller applications.
Millathane E 40	1.07	35-55	_____	Best for low temperature properties, lower viscosity than CM
Millathane CM	1.06	(approx. 60-120)	30-60	Higher viscosity than E34 and better low temp properties
<b>Polyester grades</b>				
Millathane 76**	1.22	25-55	_____	Excellent for oil resistance and strength properties; best for high damping
Millathane 66**/66R**	1.19	40-60	_____	Peroxide curable only; best for heat and compression set resistance
Millathane 5004**	1.21	50-70	_____	Peroxide curable only; best for oil and solvent resistance

\* Viscosity values shown are the lower and upper edges of the viscosity ranges of the lowest and highest viscosity grades sold.

\*\* PreMilled polyester Millathane grades, which contain 1.5 phr of a hydrolysis stabilizer, are recommended

### Thanecure® Curatives

TSE produces two Thanecure products for that are used for vulcanization of millable urethane rubbers:

**Thanecure ZM** is a cure activator/accelerator for sulfur cured millable urethanes

**Thanecure T9** is a curative for isocyanate cured millable urethanes.

For additional information, visit our web site [www.tse-industries.com](http://www.tse-industries.com) or [www.millathane.com](http://www.millathane.com), or email us at [millathaneInfo@tseind.com](mailto:millathaneInfo@tseind.com)