



TSE Industries, USA is the world's largest manufacturer of millable polyurethane rubbers, sold under the Millathane brand. These rubbers possess a combination of physical and mechanical properties not found in any other rubber, including excellent abrasion resistance, load bearing ability, low temperature flexibility, outstanding oil and ozone resistance and resistance to nitrogen permeability.

Millathane is used in many industrial markets such as business machines, railways, automotive, aerospace, textile, footwear, etc. Typical high performance applications include roller coverings, belts, o-rings, gaskets, diaphragms, seals, vibration isolators, bumpers, impellers, hose tubes & covers and shoe soles.

TSE produces Millathane millable urethanes in both polyester and polyether grades. Polyester grades feature excellent resistance to oil, heat and compression set and are better in sliding abrasion resistance. Polyether types are more hydrolytically stable and resistant to impingement abrasion.

Most Millathane grades are available in a range of viscosities, and are available as dense bales or premilled sheets. All grades are peroxide curable. Sulfur curable grades are Millathane CM, E34, E40, 55, 76.

Millathane	Key Properties	Typical applications
Polyether grades		
Millathane CM	Excellent strength, abrasion resistance and low temperature properties	Military and aerospace parts requiring excellent strength and low temperature resistance
Millathane E34	Abrasion and hydrolysis resistance	Rubber covered rollers for paper and printing industries, footwear
Millathane E40	Outstanding low temperature properties	Military and aerospace parts requiring the optimum in low temperature properties
Millathane 97	Transparency and high abrasion resistance	Transparent shoe soles and shoe components, and brightly colored parts
Millathane 26	Compliance with FDA regulation 1CFR177.2600	Rollers, belting and molded parts, for food and non-food handling applications
Millathane 55	High hardness with good processing	Rubber covered rollers and molded parts
Polyester grades		
Millathane 66	Excellent heat, oil and compression set resistance	Seals, gaskets, belts, rollers needing optimum heat and compression set resistance
Millathane 76	Excellent oil and abrasion resistance	Rollers, O-rings, gaskets, suction cups, vibration isolators, wheels
Millathane 5004	Oil and solvent resistance	Suction cups, diaphragms, rollers for printing and paper handling

Thanecure®

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

Thanecure ZM	Thanecure ZM is a cure activator/accelerator for sulfur cured millable polyurethanes. It is typically used at 1 phr level which gives a good balance of cure speed and processing safety.
Thanecure T9 SF	Thanecure T9 is dimerized TDI and is used as a vulcanization agent for isocyanate cured millable urethanes. It is also used as an adhesion promoter for rubber to textile bonding.