



**TSE Industries, Inc.**  
**Millathane® Millable Polyurethane Division**  
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## Thanecure® ZM (formerly known as Caytur® 4\*)

### *An Activator/Accelerator for Sulfur Curable Polyurethane Rubber*

Thanecure ZM is a cure activator for sulfur cured Millathane® polyurethane rubber. It consists of a partial complex of zinc chloride and MBTS. The improvement in the physical properties of Millathane® HT is shown in the table below. Increasing the amount of Thanecure ZM increases the rate and state of cure and improves the compression set resistance.

For the most practical applications, 1.0 part of Thanecure ZM provides a good balance between cure rate and processing safety. As the concentration of Thanecure ZM increases above 1.0 part, cure rate improves only slightly with reduced processing safety. If it becomes necessary to increase scorch time for greater processing safety, MBT level can be reduced to 1.0 phr without changing the amount of Thanecure ZM.

Zinc oxide is not compatible with some polyester polyurethane rubber. Thanecure ZM, which contains active zinc, needs to be incorporated to insure proper state of cure. Thanecure ZM is used to cure both polyester (e.g., Millathane 76, Millathane HT) and polyether (e.g., Millathane E34, Millathane CM) and other types of sulfur curable polyurethane rubber.

Millathane® HT	100.0
Stearic Acid	0.5
N550 Black	35.0
TP95 (DBEEA)	5.0
Vanfre AP 2	1.0
AC617A Polyethylene	1.0
Zinc Stearate	0.5
MBTS	4.0
MBT	2.0
Sulfur	1.5
Thanecure® ZM	As indicated

<b>Parts Thanecure® ZM</b>	<b>0</b>	<b>0.5</b>	<b>1.0</b>	<b>1.5</b>	<b>2.0</b>
Press cured 320°F (160°C), minutes	34	19	13	10	8
Hardness, Durometer A	81	80	82	81	81
100% Modulus, psi	580	747	797	842	811
MPa	4.0	5.2	5.5	5.8	5.6
300% Modulus, psi	1767	2222	2346	2385	2301
MPa	12.2	15.3	16.2	16.4	15.9
Tensile Strength, psi	2400	2667	2683	2698	2595
MPa	16.6	18.4	18.5	18.6	17.9
Elongation, %	464	437	408	406	410
Tear Die C, lb/in	236	230	223	208	216
kN/m	41	40	39	36	38
DIN Abrasion, mm <sup>3</sup> loss	107	112	113	118	123
Compression Set, %, 22 hr/70°C	68	64	59	62	60

**Contact Customer Service at 800-237-7634, ext. 1348 or 1-727-540-1348**  
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\*Caytur 4 is a registered trademark of Chemtura Corporation.

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