

Engineering Property - Tear Resistance

Tear resistance is a complex result of other basic properties, such as modulus and tensile strength. Many laboratory methods have been devised to measure this property. The tests now being used to measure the tear resistance of elastomers are useful for laboratory comparisons, but correlation between test results and service performance is often quite difficult. The various tests produce different results when used with Die-Thane urethane rubbers. The following tear tests for Die-Thane have been compared:

- ASTM D-470
- Instron Split Tear
- ASTM D-751-52t (Modified Trapezoid)
- ASTM D-624 Die C (Graves)
- ASTM D-624 Die B (Winkelmann)
- ASTM D-1938 (Trousers)

ASTM D-1938 and the Instron split tear tests are least dependent on tensile strength and give the most realistic evaluation of the tear strength of Die-Thane. Specimens used in each test are shown in Figure 1. The D-1938 is similar to the Instron Tear.

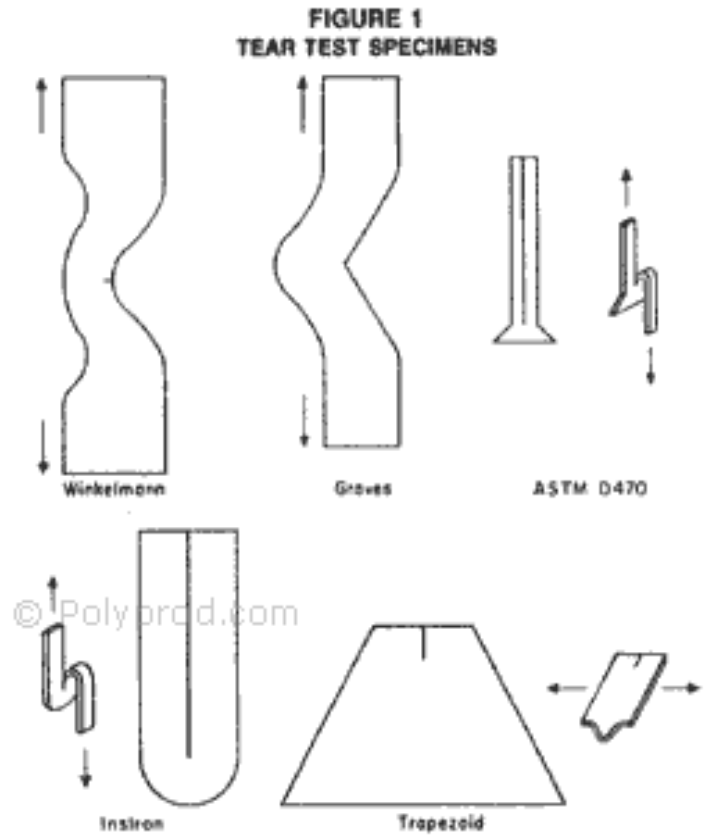


FIGURE 1 TEAR TEST SPECIMENS