

Elastomer Compatibility



DE128224

SIGNIFICANCE AND USE

This method is aimed at determining the degree of compatibility of lubricating oils and cured elastomers used in the automotive industry.

TEST METHOD/SUMMARY

Rectangular and dumbbell shaped specimens are cut from slabs of elastomer material of the appropriate type. Initial measurements such as the hardness and the specific gravity are taken on the rectangular specimens. The specimens are then placed in the test oil and aged for the specified time at the specified temperature. At the end of the aging period, the elastomer specimens are removed from the test oil. The excess oil is removed from the specimens before the final measurements are made. The specific gravity and hardness are measured on the aged rectangular specimens. The tensile strength and percent elongation are measured on the aged dumbbell specimens as well as on a new set of dumbbell specimens.

REPORT

- % volume change
- points hardness change
- % tensile strength change
- % elongation change

Properties	Elastomer Type				
	CEC L-39-T-96				AEM (VAMAC) VDA 67530 I
	RE1	RE2-99	RE3	RE4	
Max variation of characteristics after immersion for 7 days in fresh oil without pre-aging					
Hardness DIDC, POINTS	-1/+5	-5/+8	-25/+1	-5/+5	As per Daimler- Chrysler
Tensile strength, %	-40/+10	-15/+18	-45/+10	-20/+10	
Elongation at rupture, %	-50/+10	-35/+10	-20/+20	-50/+10	
Volume variation, %	-1/+5	-7/+5	-1/+30	-5/+5	

