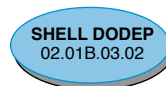
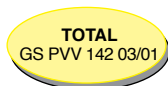


Material data sheets

Elast-O-Lion® 101



Material data sheet	Compound number	701	Revision: 4
	Polymer type:	HNBR	02/03/2009

General description: Elast-O-Lion® 101 is a hydrogenated acrylonitrile/butadiene-based synthetic rubber with nominally 36% ACN, reinforced with carbon black and peroxide cured. It has excellent rapid gas decompression resistance, making it ideal for high-pressure gas applications.

General properties: Elast-O-Lion 101 has the excellent oil/fuel resistance of conventional nitrile (NBR) elastomers, combined with superior mechanical properties, improved chemical resistance, better weatherability, better thermal capability and outstanding abrasion resistance.

Temperature capability: -29°C to +160°C or +177°C intermittent (-20°F to +320°F, or +350°F intermittent)

TYPICAL PROPERTIES

Property	Unit	Value
Hardness	IRHD	89
Tensile strength (TS)	MPa (psi)	32 (4641)
Modulus @ 50% elongation	MPa (psi)	6.9 (1001)
Modulus @ 100% elongation	MPa (psi)	13.5 (1958)
Elongation at break (E @ B)	%	210
Low temperature torsion modulus T₇₀	°C (°F)	-25 (-13)
Compression set: 24 hours @ 150°C (302°F)	%	16
Compression set: 70 hours @ 150°C (302°F)	%	32
Tear resistance	kN/m	41
Air ageing: 70 hours @ 150°C (302°F)		
Change in hardness	IRHD	+3
Change in TS	%	-10
Change in E @ B	%	-16
Fluid immersion testing: Oil No 1 (ASTM No 1), 70 hours @ 150°C (302°F)		
Change in hardness	IRHD	-1
Change in TS	%	-6
Change in E @ B	%	-4
Change in volume	%	+3
Fluid immersion testing: Oil No 3 (IRM 903), 70 hours @ 150°C (302°F)		
Change in hardness	IRHD	-12
Change in TS	%	-6
Change in E @ B	%	+7
Change in volume	%	+18
Fluid immersion testing: Sweet gas [64%C₁; 12%C₂; 13%C₃; 10%N₂; 1%CO₂], 48 hours @ 80°C (176°F) and 200bar (2901psi)		
Change in hardness	IRHD	-12
Change in TS	%	+22
Change in E @ B	%	-11
Change in volume	%	+16
Fluid immersion testing: NACE-A, 5% in water, 28 days @ 80°C (176°F)		
Change in hardness	IRHD	-4
Change in TS	%	-11
Change in E @ B	%	0
Change in volume	%	+18

All tests carried out in accordance with the relevant BS/BS ISO methods (see table on page 23).