

CNG Oil compatibility with AFLAS®



Test method Soaked into the fluid at 175°C for 168h & 720h.
Test fluid CNG Oil (The engine oil for vehicle fueled by Compressed Natural Gas)
Test piece AFLAS® 100S (standard formulation)

Formulation	AFLAS® 100S	100
	MT-Carbon(N990)	30
	TAIC*	5
	Perkadox® 14**	1
	Sodium Stearate	1

(phr)

Cure Conditions Press molded at 170C for 20min
 Post cured at 200C for 4h

Properties (before test)	AFLAS® 100S	FKM (polyol cure)	FKM (peroxide cure)
Tensile strength [MPa]	22	14	19
Tensile Elongation [%]	222	173	290
Hardness [shore-A]	72	86	68

CNG Oil compatibility 175 °C for 168 hours	AFLAS® 100S	FKM (polyol cure)	FKM (peroxide cure)
Change of Tensile Strength [%]	-13	-48	-54
Change of Tensile Elongation [%]	-1	-58	-30
Change in Hardness [points]	-8	0	-3
Volume change [%]	5.7	0.6	0.1

CNG Oil compatibility 175 °C for 720 hours	AFLAS® 100S	FKM (polyol cure)	FKM (peroxide cure)
Change of Tensile Strength [%]	-15	-35	-34
Change of Tensile Elongation [%]	-1	-39	-16
Change in Hardness [points]	-7	0	-2
Volume change [%]	8.7	0.9	0.1

* Triallylisocyanurate

** 1,3-bis(t-butylperoxy)-diisopropylbenzene. Perkadox® is a registered trademark of Akzo Nobel Chemicals B.V.