CNG Oil compatibility with AFLAS®

Test method Soaked into the fluid at 175℃ for 168h & 720h.

Test fluid CNG Oil (The engine oil for vehicle fueled by Compressed Natural Gas)

Test piece AFLAS® 100H (standard formulation)

Formulation

AFLAS® 100H	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® 100H**	**FKM (polyol cure)**	**FKM (peroxide cure)**
Tensile strength [MPa]	21	14	19
Tensile Elongation [%]	259	173	290
Hardness [shore-A]	72	86	68

CNG Oil compatibility 175 ℃ for 168 hours	**AFLAS® 100H**	**FKM (polyol cure)**	**FKM (peroxide cure)**
Chang of Tensile Strength [%]	**-13**	-48	-54
Change of Tensile Elongation [%]	**7**	-58	-30
Change in Hardness [points]	**-9**	0	-3
Volume change [%]	**7.0**	0.6	0.1

CNG Oil compatibility 175 ℃ for 720 hours	**AFLAS® 100H**	**FKM (polyol cure)**	**FKM (peroxide cure)**
Chang of Tensile Strength [%]	**-14**	-35	-34
Change of Tensile Elongation [%]	**3**	-39	-16
Change in Hardness [points]	**-7**	0	-2
Volume change [%]	**7.5**	0.9	0.1

* Triallylisocyanurate

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