Nitric acid 20% aq compatibility with AFLAS®

Test method Soaked into the fluid at 70℃ for 168h & 720h.

Test fluid Nitric acid 20% aq

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)
Tensile strength [MPa]	21	14
Tensile Elongation [%]	259	173
Hardness [shore-A]	72	86

Nitric acid 20% aq compatibility 70 ℃ for 168 hours	AFLAS® 100H	FKM (polyol cure)
Chang of Tensile Strength [%]	**-9**	-14
Change of Tensile Elongation [%]	**17**	12
Change in Hardness [points]	**-2**	-7
Volume change [%]	**2.9**	23.4

Nitric acid 20% aq compatibility 70 ℃ for 720 hours	AFLAS® 100H	FKM (polyol cure)
Chang of Tensile Strength [%]	**-27**	-57
Change of Tensile Elongation [%]	**29**	-13
Change in Hardness [points]	**-4**	-27
Volume change [%]	**9.9**	103.3

* Triallylisocyanurate

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