

HFC46 Fluid compatibility with AFLAS®



Test method Soaked into the fluid at 120C for 336h. Then cooled down to r.t. to pick specimen out.
Test fluid HFC46 fluid (a category of Fire Resistant Hydraulic fluid), which is aqueous polymer solution of Glycol with 35-50wt% water.
Test piece AFLAS® 100S (standard formulation)

Formulation

AFLAS® 100S	100
MT-Carbon(N990)	25
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	ref. 2-FKM(polyol)	ref. 3-FKM(peroxide)
Tensile strength [MPa]	22	13	17
100% Modulus [MPa]	5.0	8.2	2.8
Tensile Elongation [%]	282	166	368
Hardness [shore-A]	70	77	66
Specific gravity	1.58	1.83	1.86

HFC46 Fluid compatibility 120 °C for 336 hours	AFLAS® 100S	ref. 2-FKM(polyol)	ref. 3-FKM(peroxide)
Tensile strength [MPa]	19	2	2
Tensile Elongation [%]	306	54	128
Hardness [shore-A]	66	62	44
Change of Tensile strength [%]	-14	-85	-88
Change of Tensile Elongation [%]	9	-67	-65
Change in Hardness [points]	-4	-15	-22
Volume change [%]	7	31	109

* Triallylisocyanurate

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