

Engine oil SM class compatibility with AFLAS®



Test method Soaked into the fluid at 175°C for 168h & 720h.
Test fluid Engine oil SM class
Test piece AFLAS® 200P (standard formulation)

Formulation

AFLAS® 200P	100
MT-Carbon(N990)	25
TAIC*	5
Parkadox® 14**	1
MgO (highly active)	3
Sodium Stearate	1

(phr)

Cure Conditions

Press molded at 170C for 20min
 Post cured at 230C for 24h

Properties (before test)	AFLAS® 200P	FKM (polyol cure)	FKM (peroxide cure)
Tensile strength [MPa]	16	14	19
Tensile Elongation [%]	260	173	290
Hardness [shore-A]	66	86	68

Engine oil SM class compatibility 175 °C for 168 hours	AFLAS® 200P	FKM (polyol cure)	FKM (peroxide cure)
Change of Tensile Strength [%]	4	-12	-2
Change of Tensile Elongation [%]	-18	-9	6
Change in Hardness [points]	-2	0	-3
Volume change [%]	2.1	0.7	0.7

Engine oil SM class compatibility 175 °C for 720 hours	AFLAS® 200P	FKM (polyol cure)	FKM (peroxide cure)
Change of Tensile Strength [%]	14	-27	-4
Change of Tensile Elongation [%]	-34	-35	7
Change in Hardness [points]	0	2	-2
Volume change [%]	3.6	-0.3	-0.7

* Triallylisocyanurate

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