

Engine oil SJ class compatibility with AFLAS®



Test method Soaked into the fluid at 175°C for 70h, 168h, 500h & 1000h.
Test fluid Engine oil SJ class
Test piece AFLAS® 150P (standard formulation)

Formulation		
AFLAS® 150P		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® 150P	FKM (polyol cure)	FKM (peroxide cure)
Tensile strength [MPa]	21	13	24
Tensile Elongation [%]	257	197	354
Hardness [shore-A]	70	79	67

Engine oil SJ class compatibility 175 °C for 70 hours	AFLAS® 150P	FKM (polyol cure)	FKM (peroxide cure)
Change of Tensile Strength [%]	-29.2	-3.6	-79.8
Change of Tensile Elongation [%]	15.6	-21.8	148.6
Change in Hardness [points]	-1	1	0
Volume change [%]	NA	NA	NA

Engine oil SJ class compatibility 175 °C for 168 hours	AFLAS® 150P	FKM (polyol cure)	FKM (peroxide cure)
Change of Tensile Strength [%]	-17.7	-54	-78.5
Change of Tensile Elongation [%]	-9	-65.5	-59
Change in Hardness [points]	-5	0	0
Volume change [%]	9.3	1.2	1.6

Engine oil SJ class compatibility 175 °C for 500 hours	AFLAS® 150P	FKM (polyol cure)	FKM (peroxide cure)
Change of Tensile Strength [%]	-15.3	-59.1	-84.7
Change of Tensile Elongation [%]	-7	-65.5	-66.7
Change in Hardness [points]	-6	1	0
Volume change [%]	8.8	1.4	1.4

Engine oil SJ class compatibility 175 °C for 1000 hours	AFLAS® 150P	FKM (polyol cure)	FKM (peroxide cure)
Change of Tensile Strength [%]	-12.4	-65	-78.5
Change of Tensile Elongation [%]	-0.8	-65	-59
Change in Hardness [points]	-5	3	3
Volume change [%]	7.3	0.4	1.2

* Triallylisocyanurate

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