

# Gear Oil (Shell SPIRAX EP80) compatibility with AFLAS®



**Test method** Soaked into the fluid at 175°C for 168h & 1000h.  
**Test fluid** Gear Oil (Shell SPIRAX EP80)  
**Test piece** AFLAS® 100S (standard formulation)

Formulation		
AFLAS® 100S		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® 100S	FKM
Tensile strength [MPa]	23.7	13.7
Tensile Elongation [%]	240	200
Hardness [shore-A]	72	79

Shell SPIRAX EP80 compatibility 175 °C for 168 hours	AFLAS® 100S	FKM
Change of Tensile Strength [%]	-30	-59
Change of Tensile Elongation [%]	-16	-67
Change in Hardness [points]	-11	-1
Volume change [%]	9	NA

Shell SPIRAX EP80 compatibility 175 °C for 1000 hours	AFLAS® 100S	FKM
Change of Tensile Strength [%]	-21	NA
Change of Tensile Elongation [%]	-14	NA
Change in Hardness [points]	-6	NA
Volume change [%]	6	NA

\* Triallylisocyanurate

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