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Superior vibration-damping and wear resistance of EPDM & EOR provided by S.O.E.™ L609 & L611*(trial grades)

As the cross-linking rates of S.O.E.™ L609 & L611 (trial grades) are almost equal to that of EPDM or EOR, they could perform as a modifier for vibration-damping and wear resistance for the cross-linked rubbers.

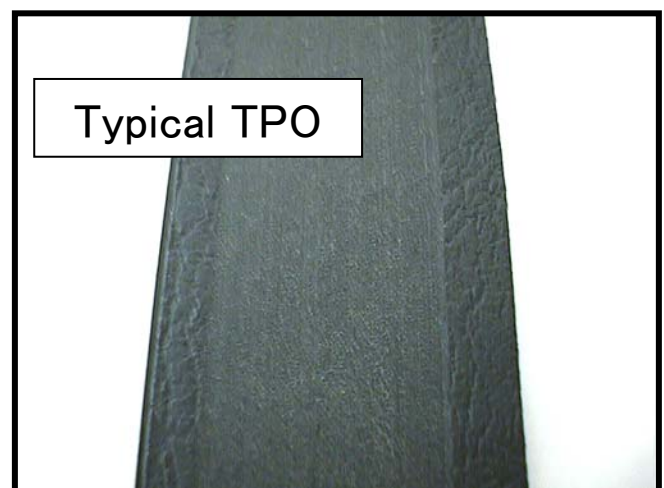
Table 1: Basic properties of S.O.E.™ L609 & L611

Property	Test method	Test conditions	Unit	L609	L611
Specific gravity	JIS K7112	-	-	1.00	1.02
MFR	JIS K7210	190 deg. C, 2.16kgf	g/10min	2.5	5.4
Hardness	JIS K6253	Durometer Type A	Sec.	-	71
			After 10 sec.	61	54
300% tensile stress	JIS K6251	#3 Dumbbell Tensile speed 500mm/min	MPa	4.0	4.0
Tensile strength			MPa	26.0	23.0
Elongation			%	640	600
Dunlop resilience	BS 903	23 deg. C	%	5	5

Figure 1: Wear resistance of neat S.O.E.™ (polymer)



Picture of the surface after wearing test cycles of 10,000



Picture of the surface after wearing test cycles of 4,000

*Trial grade S.O.E.™ L611 has been commercialized and the grade name has been changed to S.O.E.™ S1611 as of October 2010.

- S.O.E.™ L609 & L611 provide superior vibration absorption.
- S.O.E.™ L609 & L611 show excellent vibration-damping property, compared to BIIR and EPDM, due to $\tan \delta$ peak at room temperature.

Figure 2: $\tan \delta$ curve of S.O.E.™ L609 & L611

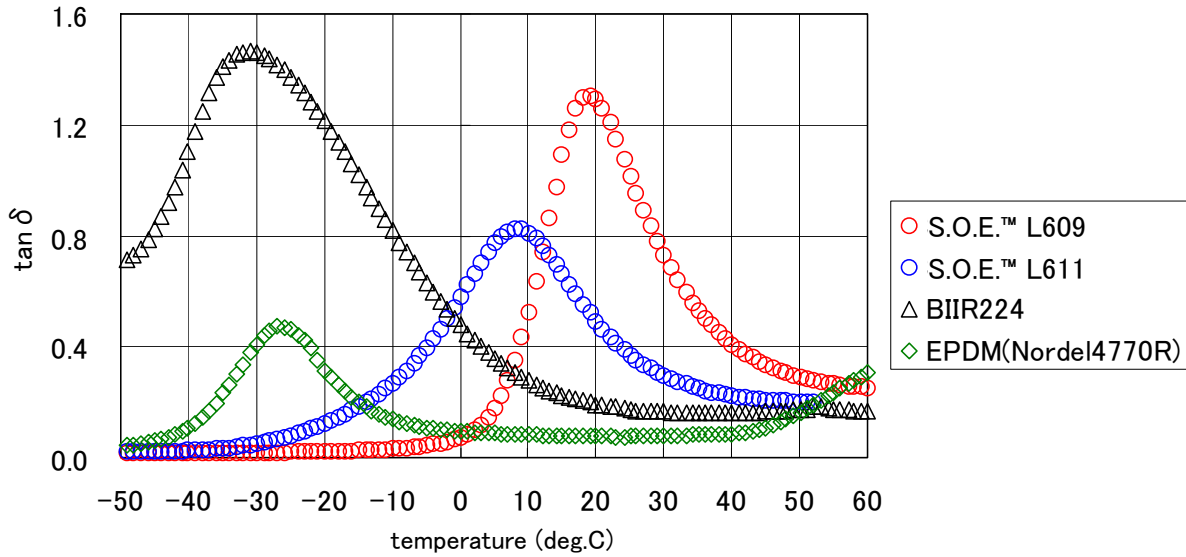
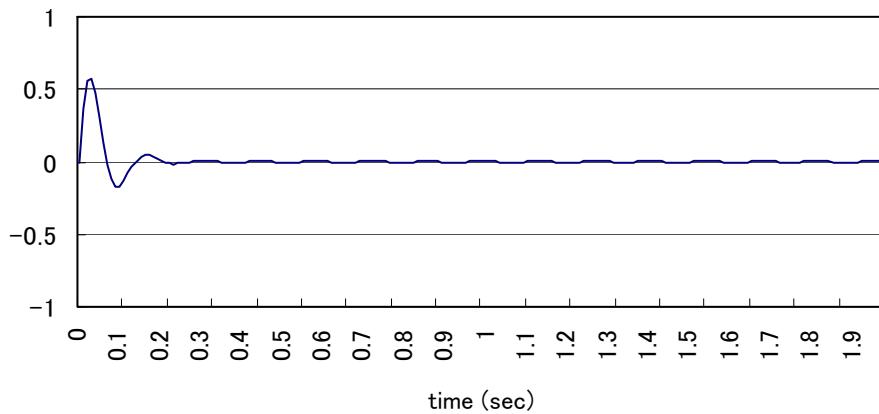
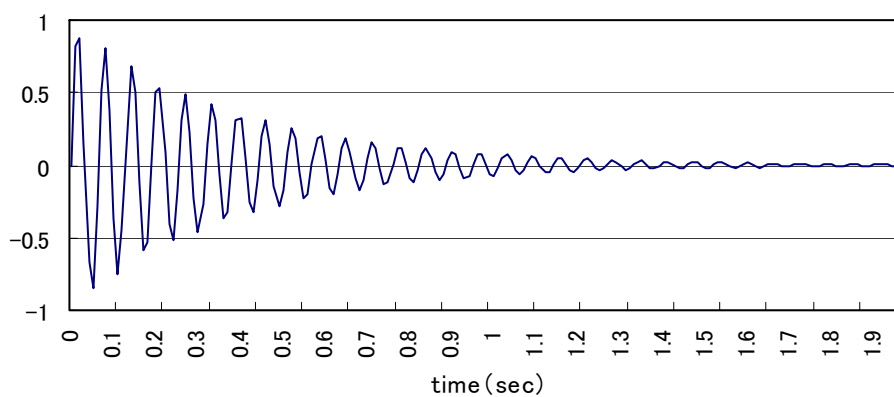


Figure 3: Vibration-damping property of S.O.E.™ L609

Vibration-damping behavior of L609

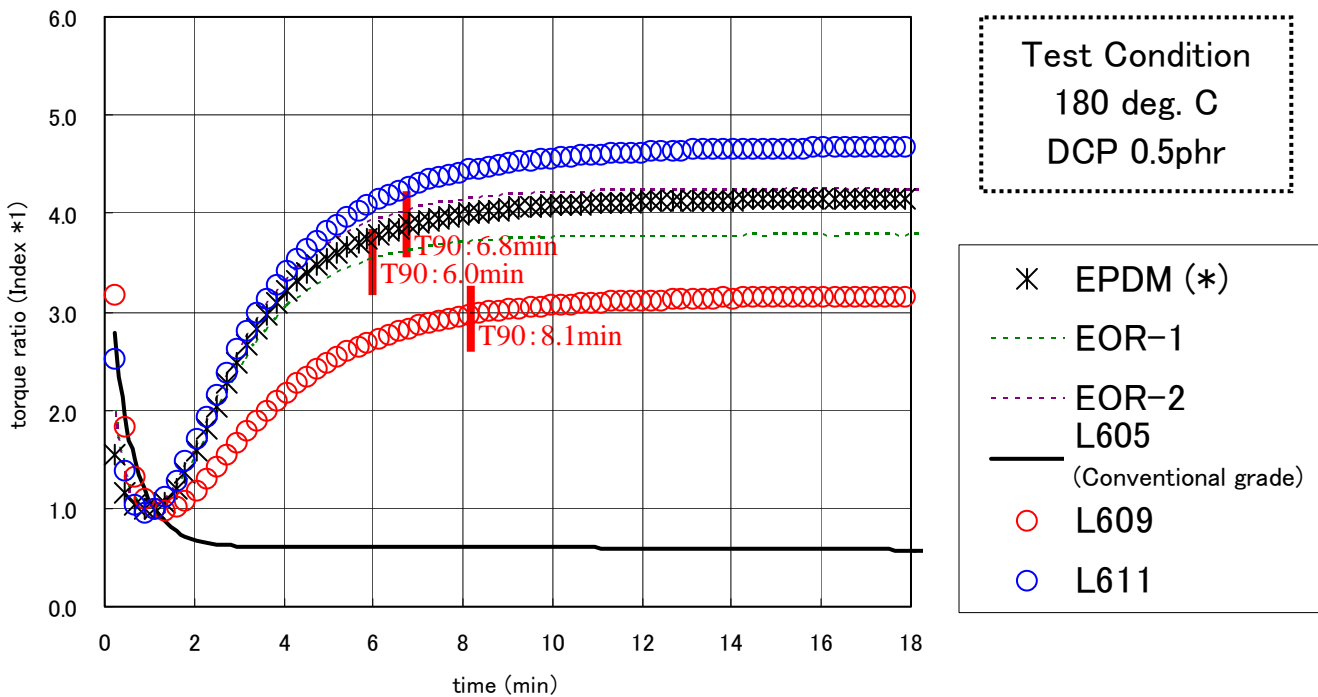


Vibration-damping behavior of typical SEBS



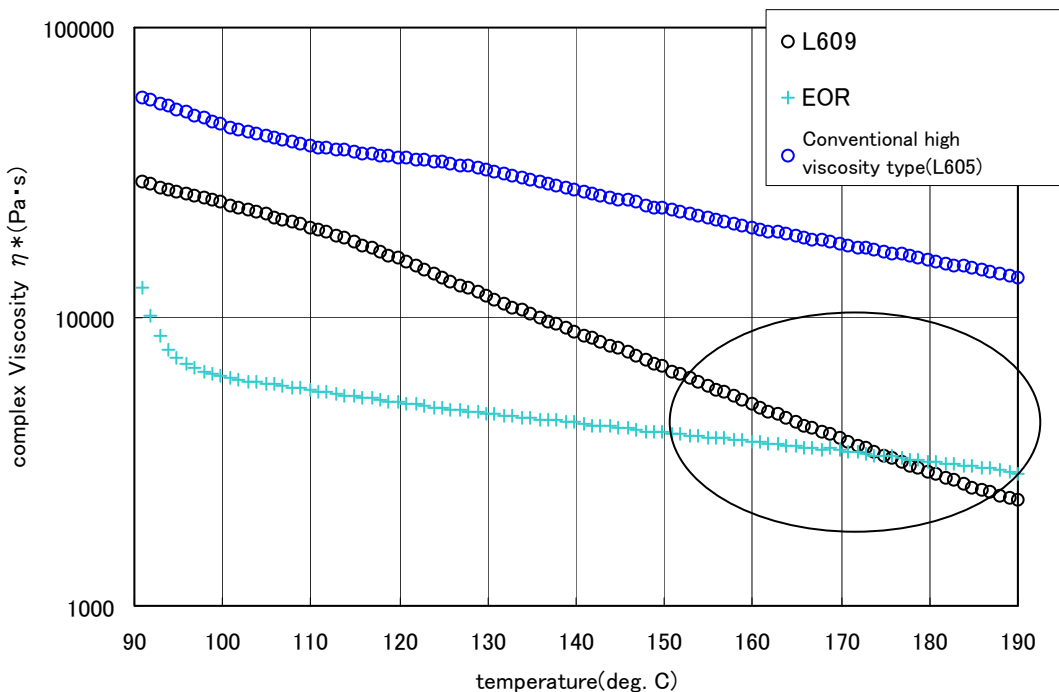
S.O.E.™ L609 & L611 show similar viscosity change to EPDM or EOR when cross-linking agent is added. Their cross-linking rates are almost equal to that of EPDM or EOR.

Figure 4: Cross-linking rate of S.O.E.™ L609 & L611



S.O.E.™ L609 & L611 are designed to have lower viscosity to make compounding at the processing temperature of EOR.

Figure 5: Complex viscosity curve of S.O.E.™ L609



All data and values based on specific test methods, and given for basic reference only and not as any warranty or specification. Applications shown for illustration only, and represent no warranty of suitability or non-infringement of intellectual property rights. Note: L609 and L611 are trial grades under development. Thus, their specification may be changed without notice, and L609 and L611 may not be commercialized. The product of Asahi Kasei Chemicals shown herein must not be used for any medical device or drug, except with its express written consent.

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S.O.E.™ is a trademark of Asahi Kasei Chemicals Corporation.

