

Technical Bulletin

Therban AT

Raw polymer data



Conclusions:

- ⇒ **Therban AT is alike to standard HNBR grades in microstructure but features a lower molecular weight and a narrower molecular weight distribution.**
- ⇒ **From molecular modelling similar performance as with standard grades but significantly improved processing characteristics can be expected.**
- ⇒ **Main usage should be with problems where excellent part properties must be combined with excellent processing properties. Use Therban AT to improve processing properties of given HNBR compounds without changing your part properties.**
- ⇒ **Think about replacing some of your plasticizer with Therban AT where you want to improve part properties without sacrificing processing properties.**

Raw polymer data

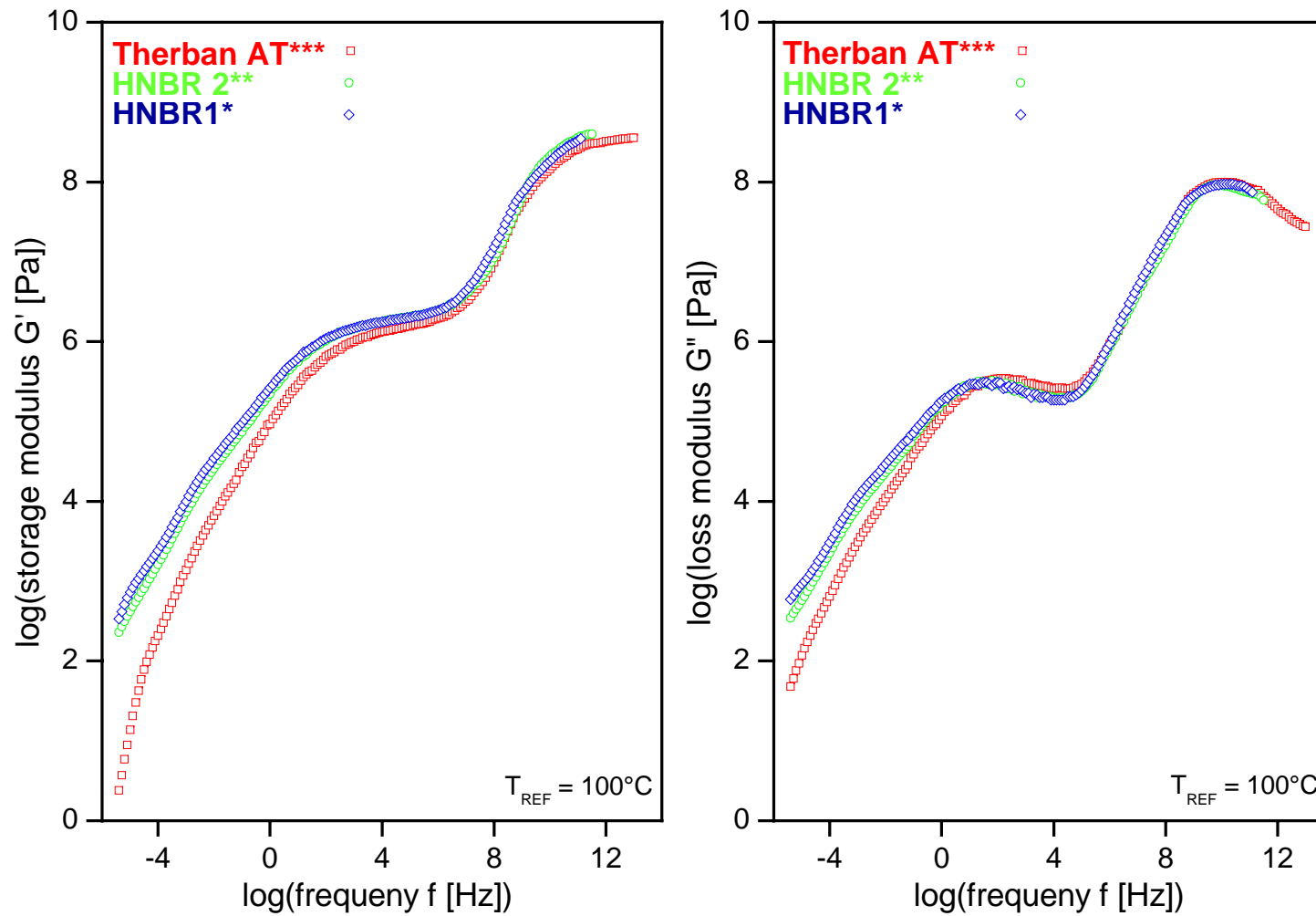
characterisation	HNBR 1*	HNBR 2**	Therban AT ***
RDB [%]	0,85	0,41	0,9
ACN 8%	34,0	33,8	33,9
ML1+4,100°C [ME]	71	57	36
ash [%]	0,05	0,05	0,05
fatty acid [%]	0,16	0,28	0,2
Mn [Dalton]	90737	79648	64287
Mw [Dalton]	259921	227700	159528
Mp [Dalton]	128636	120288	101368
Mz [Dalton]	678111	571360	362705
Pd [Dalton]	2,9	2,9	2,5
Tg (DSC,20°/min) [°C]	-24,8	-25,3	-24,5

* Standard 34 ACN / ML 70

** Standard 34 ACN / ML 60

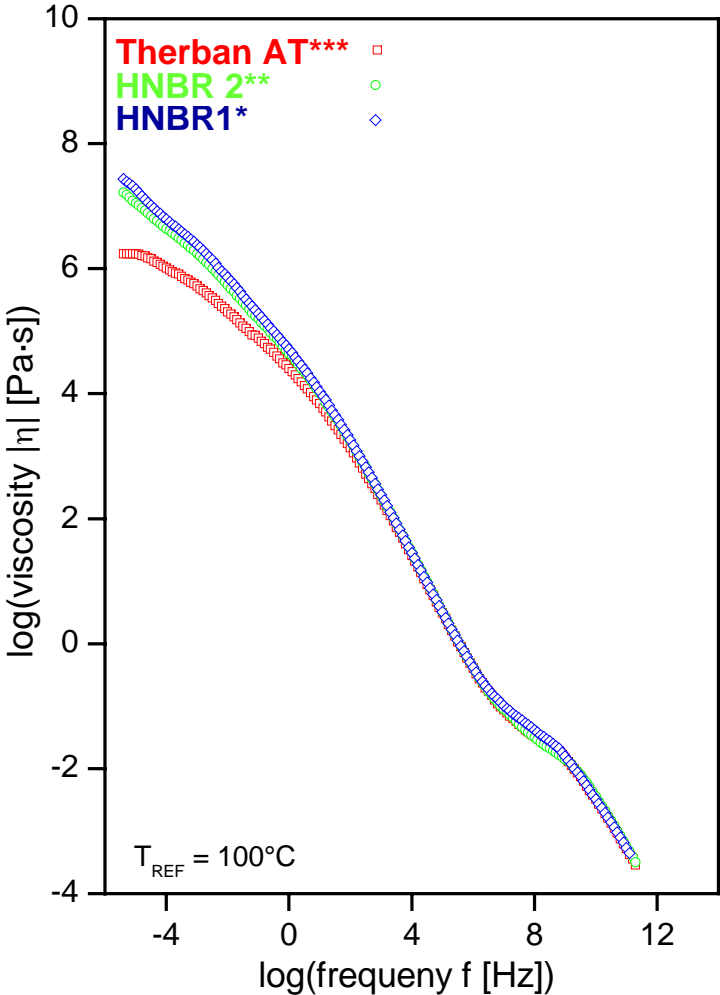
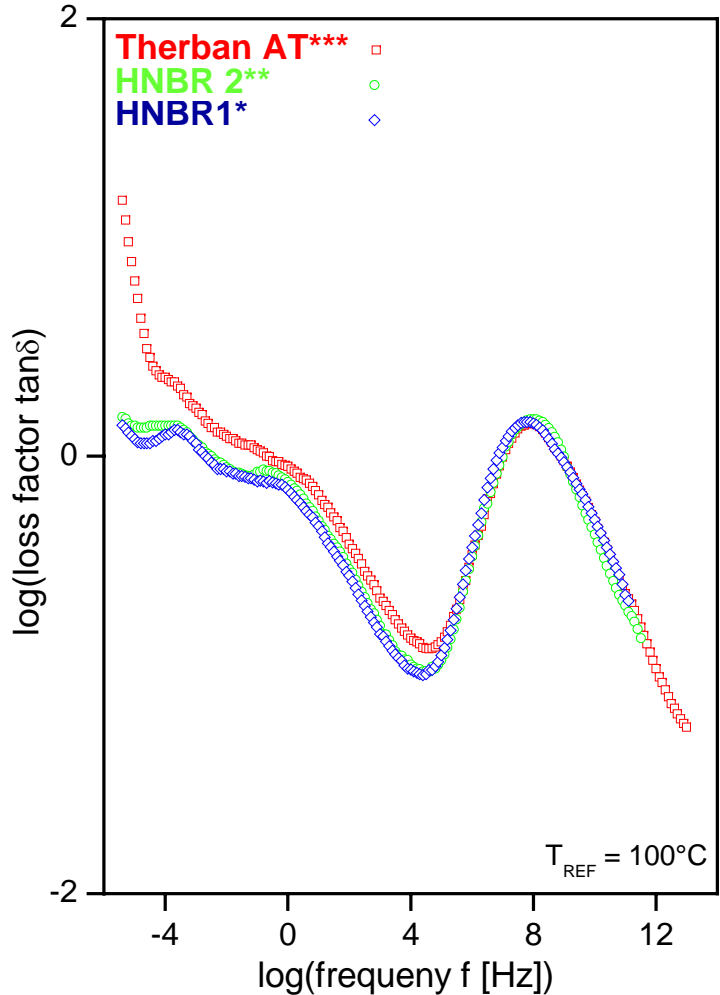
*** Therban AT VPKA 8966 (34 ACN / ML 39)

Master curve G'



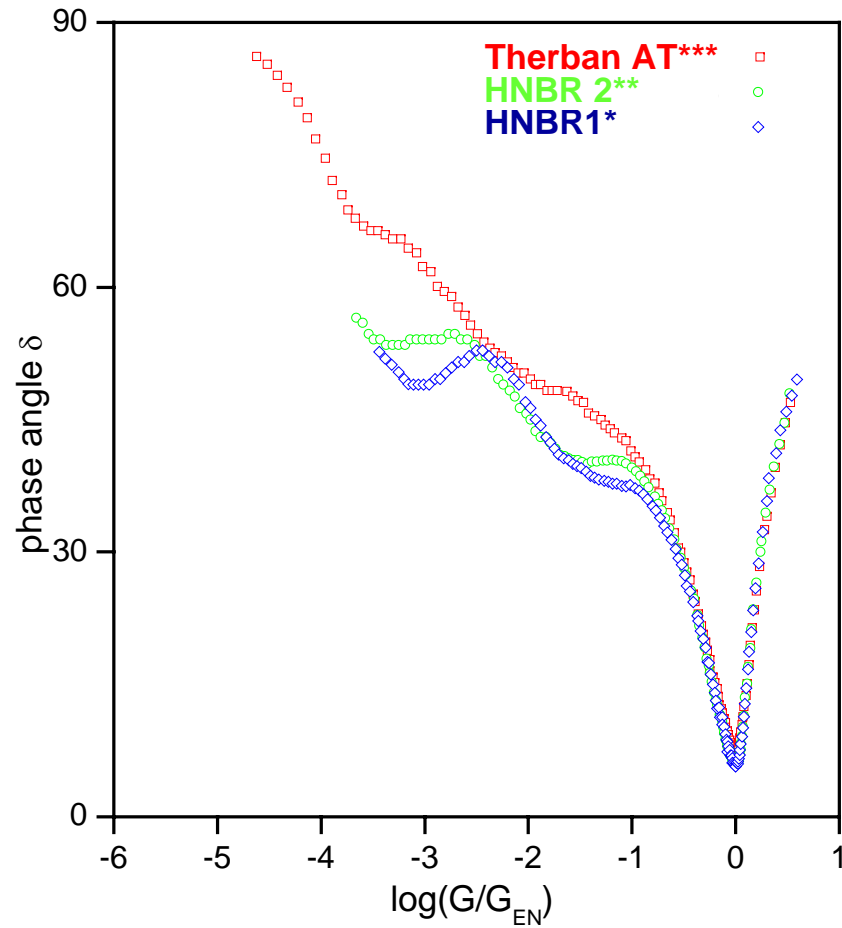
* Standard 34 ACN / ML 70 ** Standard 34 ACN / ML 60 *** Therban AT VPKA 8966 (34 ACN / ML 39)

Master curve tand



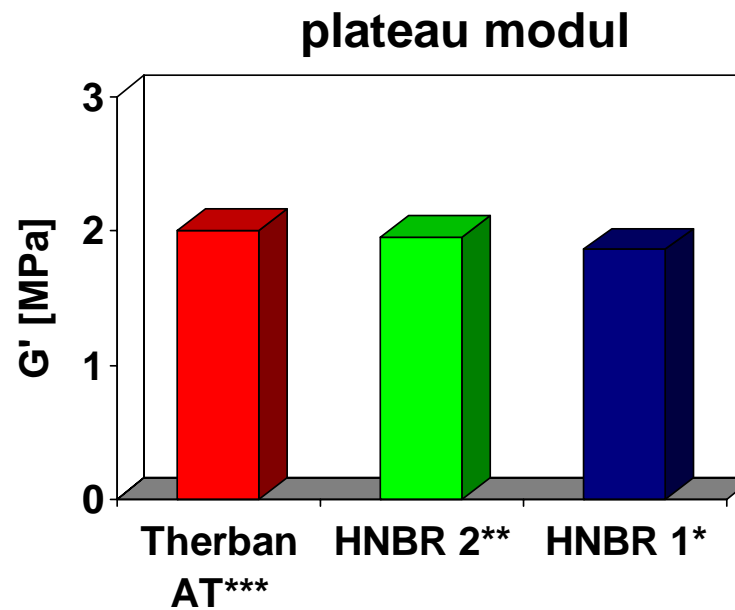
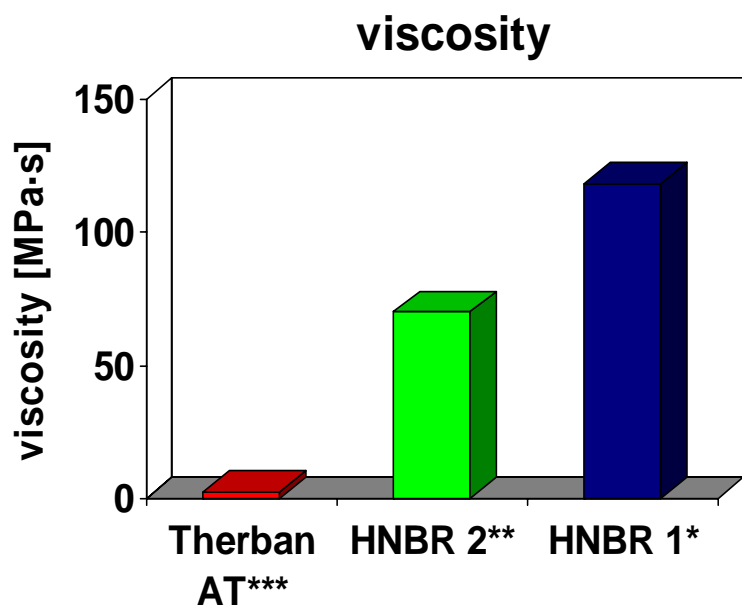
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vanGurp plot



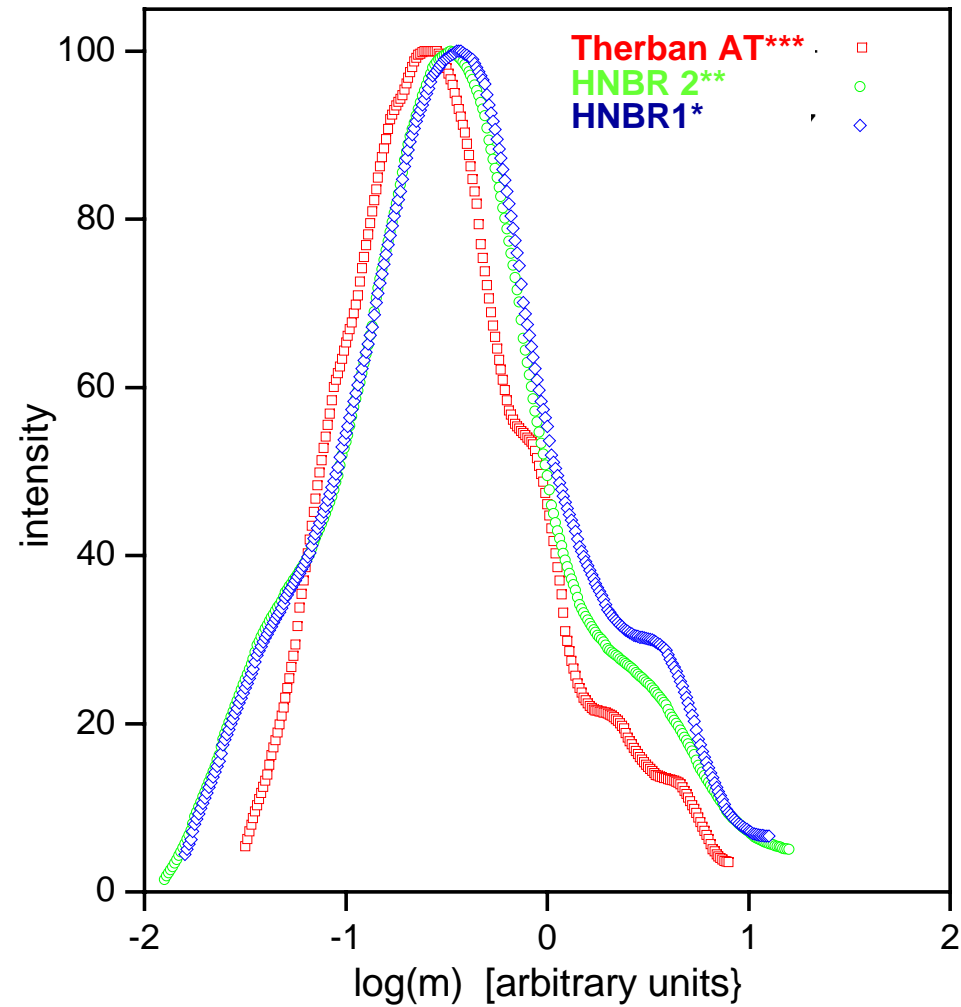
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Rheological key numbers



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Molecular weight distribution derived from rheological experiment



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