Requirements according to PN-EN 14023:2011/Ap1:2014 for the polymer modified road bitumens (PMB) for application in Poland in road construction

Property		Test method	Unit	the lower limit of penetration at 25ºC / the upper limit of penetration at 25ºC – the lower limit of softening point									
				10/40-65		25/55-60		45/80-55		45/80-65		65/105-60	
				requirement	class	requirement	class	requirement	class	requirement	class	requirement	class
Penetration at 25ºC		EN 1426	0,1 mm	10÷40	2	25÷55	3	45÷80	4	45÷80	4	65÷105	6
Softening point R&B		EN 1427	ºC	≥ 65	5	≥ 60	6	≥ 55	7	≥ 65	5	≥ 60	6
Cohesion	Force ductility (50 mm/min traction)	EN 13589 EN 13703	J/cm^2	≥ 2 at 10ºC	6	≥ 2 at 10ºC	6	≥ 3 at 5ºC	2	≥ 2 at 10ºC	6	≥ 3 at 5ºC	2
Resistance to hardening	Change of mass	EN 1427	%	≤ 0,5	3	≤ 0,5	3	≤ 0,5	3	≤ 0,5	3	≤ 0,5	3
	Retained Penetration		%	≥ 60	7	≥ 60	7	≥ 60	7	≥ 60	7	≥ 60	7
	Increase in Softening point R&B		ºC	≤ 8	2	≤ 8	2	≤ 8	2	≤ 8	2	≤ 10	3
Flash point		EN ISO 12592	ºC	≥ 235	3	≥ 235	3	≥ 235	3	≥ 235	3	≥ 235	3

cont. of the table in the next page

Property		Test method	Unit	the lower limit of penetration at 25ºC / the upper limit of penetration at 25ºC – the lower limit of softening point									
				10/40-65		25/55-60		45/80-55		45/80-65		65/105-60	
				requirement	class	requirement	class	requirement	class	requirement	class	requirement	class
Frass Breaking Point		EN 12593	ºC	≤ -5	3	≤ -10	5	≤ -15	7	≤ -15	7	≤ -15	7
Elastic recovery	at 25ºC	EN 13398	%	≥ 60	4	≥ 60	4	≥ 70	3	≥ 80	2	≥ 70	3
	at 10ºC	EN 13398	NR [a]	NR [a]	0	NR [a]	0	NR [a]	0	NR [a]	0	NR [a]	0
Plasticity range		Podpunkt 5.1.9	ºC	NR [a]	0	NR [a]	0	NR [a]	0	NR [a]	0	NR [a]	0
Drop in softening point R&B after EN 12607-1		EN 12607-1 EN 1427	ºC	TBR[b]	1	TBR[b]	1	TBR[b]	1	TBR[b]	1	TBR[b]	1
Elastic recovery at 25ºC after EN 12607-1		EN 12607-1 EN 13398	%	≥ 50	4	≥ 50	4	≥ 50	4	≥ 60	3	≥ 60	3
Elastic recovery at 10ºC after EN 12607-1		EN 12607-1 EN 13398	%	NR [a]	0	NR [a]	0	NR [a]	0	NR [a]	0	NR [a]	0
Storage stability Difference in softening point R&B		EN 13399 EN 1427	ºC	≤ 5	2	≤ 5	2	≤ 5	2	≤ 5	2	≤ 5	2
Storage stability Difference in penetration		EN 13399 EN 1426	0,1 mm	NR [a]	0	NR [a]	0	NR [a]	0	NR [a]	0	NR [a]	0

[a] NR – No Requirement
[b] TBR – To Be Reported