

**Specification for Polymer Modified Asphalt Cement for Asphalt Concrete  
(Asphalt Concrete or Hot-mix Asphalt)**

Item No.	Properties	Unit	Minimum	Maximum	Test Method
1.	Penetration at 25 °C, 100 gm., 5 sec.	0.1 mm.	60	70	DH-T 403
2.	Softening Point, Ring and Ball	°C	70	-	ASTM D36
3.	Penetration Index	-	+3	-	NLT-181 *
4.	Ductility at 13 °C, 5 cm/min	cm.	55	-	DH-T 405
5.	Torsional Recovery at 25 °C	%	70	-	NLT-329 *
6.	Float Test at 60 °C	sec.	3000	-	ASTM D139
7.	Toughness/Tenacity Test, 25 °C				ESM NE-31 **
	Toughness	Kg.cm	200	-	
	Tenacity	Kg.cm	100	-	
8.	Brookfield Viscosity, Shear Rate 18.6 s <sup>-1</sup> , Spindle 21				ASTM D4402
	At 135 °C	cP	1100	-	
	At 165 °C	cP	300	-	
9.	Storage Stability at 165 °C, 120 hrs.				NLT-328 *
	Difference in Softening Point	°C	-	5	
10.	Density at 25 °C	gm/cc	1.00	1.05	ASTM D70
11.	Flash Point, Cleveland Open Cup	°C	220	-	ASTM D92
12.	Solubility in Trichloroethylene	% wt.	99.0	-	DH-T 409
<b>Test on Residue from Thin Film Oven Test</b>					
13.	Weight Loss	% wt.	-	0.5	ASTM D1754
14.	Retained Penetration at 25 °C	%	70	-	DH-T 403
15.	Variation in Softening Point	°C	4	6	ASTM D36
16.	Ductility at 13 °C, 5 cm/min	cm.	40	-	DH-T 405
17.	Torsional Recovery at 25 °C	%	60	-	NLT-329 *

Note \* Refer to the National Laboratory of Transportation Madrid, Spain

\*\* Refer to Elpidio Sanchez Marcos, Spain