Eni Clematis MS

Eni Clematis MS, classified as MES (Mild Extraction Solvate), is an aromatic safe not carcinogenic oil, produced by a heavy paraffinic fraction with an aromatic level well exceeding those of standard paraffinic oils.

Eni Clematis MS has a high performance coming from excellent chemical-physical characteristics in terms of high stability, low volatility, excellent plastic behavior, adequate viscosity and remarkable chemical compatibility both with rubber and rubber blend.

PROPERTIES

Properties	Unit	Values		Typical	Method
		Min	Max		
Appearance	-			Clear liquid	esame visivo
Density at 15°C	kg/m³	905	925		ASTM D 1298
Viscosity at 40°C	mm²/s	130	250		ASTM D 445
Viscosity at 100°C	mm²/s	13	17		ASTM D 445
Flash point COC	°C	240			ASTM D 92
Flash point PM	°C	230			ASTM D 93
Pour point	°C		-9		ASTM D 97; ASTM D 6892; ASTM D 7346; ISO 3016
Viscosity Gravity Constant (VGC)	-	0.825	0.865		ASTM D 2501
Glass transition temperature DSC	°C		- 57	- 61	ASTM E 1356; ISO 28343
Aniline point	°C			98	ASTM D 611
Ca/Cn/Cp (calculated with VCG ASTM D2501 at 100°C)	% m/m			8/25/67	ASTM D 2140
Ca/Cn/Cp (calculated with VCG ASTM D2501 at 100°C no sulfur correction):	% m/m			10/33/57	ASTM D 2140
- Ca	% m/m	4	19		ASTM D 2140
- Cn	% m/m	26	36		ASTM D 2140
- Cp	% m/m	50	63		ASTM D 2140
Refractive index at 20°C	-	1.495	1.505		ASTM D 1218

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Properties	Unit	Min	Max	Typical	Method
Class of hydrocarbons by Clay gel chromatography:	% m/m				ASTM D 2007
- Saturates	% m/m			55	
- Polars	% m/m			3	
- Aromatics	% m/m			42	
- Asphaltenes	% m/m			-	
Sulphur	% m/m		2		ASTM D 4294; ASTM D 2622
Water content	% m/m		0.1		ASTM D 95; ASTM D 6304
Ash content	% m/m		0.5	0.01	ASTM D 482
DMSO extract	% m/m		2.9		IP 346
Distillation at 760 mmHg:	°C				EN 15199-2
- 5% volume	°C			435	
- 10% volume	°C			455	
- 20% volume	°C			475	
- 50% volume	°C			510	
Polycyclic aromatic hydrocarbons (PAHs):	mg/kg				EN 16143
- Benzo(a)pyrene (BaP)	-		<1		
Total sum of the following PAHs:	-		<10		
- Benzo(a)pyrene (BaP)	-				
- Benzo(e)pyrene (BeP)	-				
- Benzo(a)anthracene (BaA)	-				
- Chrysene (CHR)	-				
- Benzo(b)fluoranthene (BbFA)	-				
- Benzo(j)fluoranthene (BjFA)	-				
- Benzo(k)fluoranthene (BkFA)	-				

Properties	Unit	Min	Max	Typical	Method
- Dibenzo(a,h)antracene (DBAhA)	-				

Legal limits – Reg. (CE)1907/2006 (REACH), Annex XVII, Point 50 regarding the extender oils used for the production of tyres or part of tyres. It does not apply to other uses.

ASTM D 6304: the results have been reported, in compliance with test method, in mg/kg

APPLICATIONS

- **Eni Clematis MS** is used as extender oil in the production of rubbers and in the manufacturing of tyres and other rubber goods. Thanks to its chemical and physical characteristics, the product provides ductility to highly brittle materials in which is present.