



Eni Clematis TD, classified as TDAE (Treated Distillate Aromatic Extract), is a safe oil with a low content of polycyclic aromatic hydrocarbons (PAHs), produced by a solvent extraction of traditional distillate aromatic extract (DAE) oil.

Eni Clematis TD 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		
Density at 15°C	kg/m ³	940	970		ASTM D 1298
Viscosity at 40°C	mm ² /s	370	500		ASTM D 445
Viscosity at 100°C	mm ² /s	17.0	22.0		ASTM D 445
Flash point COC	°C	240			ASTM D 92
Flash point PM	°C	230			ASTM D 93
Pour point	°C		30		ASTM D 97; ASTM D 6892; ASTM D 7346
Aniline point	°C	60	75	68	ASTM D 611
VGC (calculated with viscosity at 100 °C)	-	0.86	0.93		ASTM D 2501
Glass transition temperature DSC	°C		-48	-52	ASTM E 1356; ISO 28343
Ca/Cn/Cp (calculated with VCG ASTM D2501 at 100°C)	% m/m			23/20/57	ASTM D 2140
Ca/Cn/Cp (calculated with VCG ASTM D2501 at 100°C no sulfur correction):	% m/m			25/34/41	ASTM D 2140
- Ca	% m/m	22	32		ASTM D 2140
- Cn	% m/m	25	40		ASTM D 2140
- Cp	% m/m	39	50		ASTM D 2140
Refractive index at 20°C	-	1.52	1.54		ASTM D 1218





Properties	Unit	Min	Max	Typical	Method
Class of hydrocarbons by Clay gel chromatography:	% m/m				ASTM D 2007
- Saturates	% m/m			26	
- Polars	% m/m			4	
- Aromatics	% m/m			70	
Sulphur	% m/m		3		ASTM D 1552; ASTM D 4294; ASTM D 2622
Water content	% v		0.5		ASTM D 95; ASTM D 6304
Ash content	% m/m		0.5	0.01	ASTM D 482
Distillation at 760 mmHg:	°C				EN 15199
- 5% volume	°C			420	
- 10% volume	°C			440	
- 20% volume	°C			460	
- 50% volume	°C			490	
DMSO extract	% m/m		2.9		IP 346
Polycyclic aromatic hydrocarbons (PAHs):	mg/kg				EN 16143
- Benzo(a)pyrene (BaP)	-		<1		EN 16143
Total sum of the following PAHs:	mg/kg		<10		EN 16143
- Benzo(a)pyrene (BaP)	-				EN 16143
- Benzo(e)pyrene (BeP)	-				EN 16143
- Benzo(a)anthracene (BaA)	-				EN 16143
- Chrysene (CHR)	-				EN 16143
- Benzo(b)fluoranthene (BbFA)	-				EN 16143
- Benzo(j)fluoranthene (BjFA)	-				EN 16143
- Benzo(k)fluoranthene (BkFA)	-				EN 16143





Properties	Unit	Min	Max	Typical	Method
- Dibenzo(a,h)antracene (DBAhA)	-				EN 16143

Legal limits – Reg. 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 TD**, given his elastic and durability properties, is used as process and extender oil in the production of OE SBR and BR and as free oil in the manufacturing of tyres and other rubber goods.

