



Hydraulic Brake & Clutch Fluid: 260 DOT 5.1 EHV

Technical Data Sheet

Ferodo Low Viscosity fluid 260/180 DOT 5.1 EHV, has been specifically engineered for use in the brake and clutch systems of Plug in Hybrid or full electric vehicles although it may be used in any conventional hydraulic system for which such glycol ether based fluids are specified. It has very wide applicability, allows Stability Program (ESP) systems to operate effectively over a wide temperature range while maintaining excellent lubricity which increases system life and reduces noise.

The product shall fully meet the requirements of the latest issue of the US FMVSS 116 DOT 5.1, DOT 4, DOT 3, SAE J 1703, SAE J 1704 and ISO 4925 (Classes 3, 4, 5.1, 6 & 7) Specifications. The product shall also meet the following requirements:

Test	Units	Method	Specification
Equilibrium Reflux Boiling Point	°C.	FMVSS 116	260 Min.
Wet Equilibrium Boiling Point	°C.	FMVSS 116	180 Min.
Kinematic Viscosity at -40 °C.	cSt	ASTM D 445	750 Max.

Ferodo Brake Fluids also conform to many other international and manufacturers' standards. Details are available on request.

It is recommended that brake fluid packages are stored under cover in a dry and largely dust free environment, out of direct sunlight at a temperature of 15 -30°C.

Large changes in humidity or temperature should be avoided where possible.

Test Required	Typical Results	Specification
Dry Equilibrium Reflux Boiling Point, °C	274	260 °C. Min.
Wet Equilibrium Reflux Boiling Point, °C	184	180 °C. Min.
Kinematic Viscosity	690	750 cSt Max.
	2.04	1.5 cSt Min.
pH	7.60	7 – 11.5
High Temperature Stability, °C	-1	+/- 3.0 °C. Max
Chemical Stability, °C	+1	+/- 3.0 °C. Max
Evaporation, %w/w	65	80% Max
Fluidity & Appearance	Pass, 2 seconds	No freezing, Bubble time 10 sec. Max
	Pass, 4 seconds	No freezing, Bubble time 35 sec. Max
Water tolerance	Clear, 2.5 seconds	10 seconds Max
	Clear, No sediment	Sediment not to exceed 0.05% v/v
Compatibility	Clear, No stratification	No stratification
	Clear, No sediment	Sediment not to exceed 0.05% v/v
Colour, visual	Pale Straw	Water white to amber
Water Content, %	< 0.15	Not required
Density @ 20 °C, g/ml	1.067	Not required
Conductivity µS/cm	0.49	Not required

Corrosion Resistance

Tinned Iron	Δ mg/cm ²	-0.03	0.2 Max
	Appearance	Good	No pitting or etching
Steel	Δ mg/cm ²	-0.01	0.2 Max
	Appearance	Good	No pitting or etching
Aluminium	Δ mg/cm ²	Nil	0.1 Max
	Appearance	Good	No pitting or etching
Cast Iron	Δ mg/cm ²	-0.03	0.2 Max
	Appearance	Good	No pitting or etching
Brass	Δ mg/cm ²	-0.08	0.4 Max
	Appearance	Good	No pitting or etching
Copper	Δ mg/cm ²	-0.05	0.4 Max
	Appearance	Good	No pitting or etching
Zinc	Δ mg/cm ²	+0.01	0.4 Max
	Appearance	Good	No pitting or etching
Fluid Appearance		Pass	No crystallisation or gelling
Sediment %		< 0.05	< 0.1%
pH		8.20	7 – 11.5
Rubber Diameter Change mm		+0.16	+1.40 Max
Hardness Change °IRHD		-4	-15 °IRHD Max
Appearance		Pass	No sloughing, blistering or disintegration

Effect on Rubber

SBR @ 70 °C	\emptyset change, mm	+0.59	0.15 to 1.40
	Δ hardness, IRHD	-3	0 to -10
	Δ volume, %	+6.49	1 to 16
	Appearance	Good	No blistering, sloughing or disintegration
SBR @ 120 °C	\emptyset change, mm	+0.80	0.15 to 1.40
	Δ hardness, IRHD	-7	0 to -15
	Δ volume, %	+7.95	1 to 16
	Appearance	Good	No blistering, sloughing or disintegration
EPDM @ 70 °C (as required by SAE J1703)	Δ hardness, IRHD	-2	0 to -10
	Δ volume, %	+1.39	0 to 10
	Appearance	Good	No blistering, sloughing or disintegration
EPDM @ 120 °C	Δ hardness, IRHD	-2	0 to -15
	Δ volume, %	+1.91	0 to 10
	Appearance	Good	No blistering, sloughing or disintegration
EPDM @ 70 °C (as required by ISO 4925)	\emptyset change, mm	+0.38	0.15 to 1.40
	Δ hardness, IRHD	-5	0 to -10
	Δ volume, %	+4.61	1 to 16
	Appearance	Good	No blistering, sloughing or disintegration