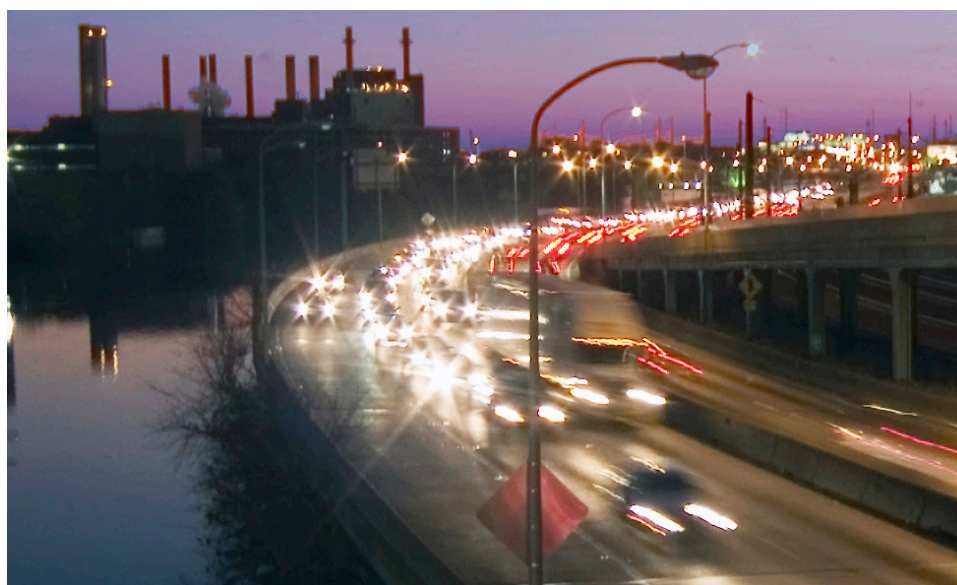


ENGINE OILS

HiTEC[®] 5825B

OCP Viscosity Modifier



Shear Stable Polymer OCP For Engine Oil Applications

HiTEC[®] 5825B OCP Viscosity Modifier

Shear Stable Polymer OCP For Engine Oil Applications

Key Performance Benefits

HiTEC[®] 5825B is an amorphous olefin copolymer designed for use as a Viscosity Modifier for engine oils. HiTEC[®] 5825B additive imparts excellent shear stability and low temperature properties to passenger car motor oils and heavy duty engine oils.

HiTEC[®] 5825B additive benefits include:

- Excellent low temperature properties
- Polymer form, easy to dissolve in base oils
- Applicable in a wide range of base oils
- Covers key Approvals (ACEA, Daimler, Volvo...) when used with the appropriate package

Recommended Dosage

HiTEC[®] 5825B may be dissolved in a wide range of base oils at 12 to 13% wt. to produce a liquid HiTEC[®] 5825B Viscosity Modifier. The following chart includes typical treat-rates for HiTEC[®] 5825B additive:

SAE J 300 Viscosity Grade	Liquid HiTEC [®] 5825B Treat, % wt.
10W-40	10.5 - 11.5
15W-40	8.5 - 9.5
20W-40	8.0 - 9.0

Typical Characteristics

Properties of HiTEC[®] 5825B:

Appearance:	Pale white to amber polymer
Density at 15°C, g/ml:	0.875
Melt Flow Index, g/10:	10.5 max.
Propylene Content, % wt:	53.1 max.

Properties of 12.0% wt. HiTEC[®] 5825B dissolved in ExxonMobil 150N AP/E:

Colour, ASTM D1500:	0.1L
Density at 15°C, g/ml:	0.87
Flash Point, °C (PMCC):	200
Kinematic Viscosity at 100°C, mm ² /s:	1,100
Kinematic Viscosity at 40°C, mm ² /s:	15,000
SSI ¹ (Bosch) ASTM D6278, % TP Loss:	23
Thickening Power ¹ at 100°C, cSt:	6.56

Handling Information

Max Dissolving Temp: 150 °C with nitrogen blanketing
Shelf Life: 36 months

¹ Measured at 11.5 wt% liquid VI Improver in RO-2001 reference oil (KV100C = 4.95 cSt)

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Formulation Demonstrations

SAE 20W-50 Demonstration Oil

Composition	Function	% wt.
Liquid HiTEC [®] 5825B	VI Improver	8.1
HiTEC [®] 9325G	DI Package	6.8
ExxonMobil 150N	Base Oil	14.8
ExxonMobil 600N	Base Oil	70.2
HiTEC [®] 672	PPD	0.1
Properties		J300 Specification
Kinematic Viscosity at 100°C	16.3-21.9	19.43
CCS at -15°C	9,500 max	9257
MRV TP-1 at -20°C, cP	60,000 max	33,713
Yield Stress, gms	–	0
HSV at 150°C & 10 ⁶ s ⁻¹ , cP	3.7 min.	5.18

SAE 15W-40 Demonstration Oil

Composition	Function	% wt.
Liquid HiTEC [®] 5825B	VI Improver	9.1
HiTEC [®] 9325G	DI Package	6.8
ExxonMobil 150N	Base Oil	59.0
ExxonMobil 600N	Base Oil	25.0
HiTEC [®] 672	PPD	0.1
Properties		J300 Specification
Kinematic Viscosity at 100°C	12.5-16.3	14.41
CCS at -20°C	7,000 max	6342
MRV TP-1 at -20°C, cP	60,000 max	25,808
Yield Stress, gms	–	0
HSV at 150°C & 10 ⁶ s ⁻¹ , cP	3.7 min.	4.05