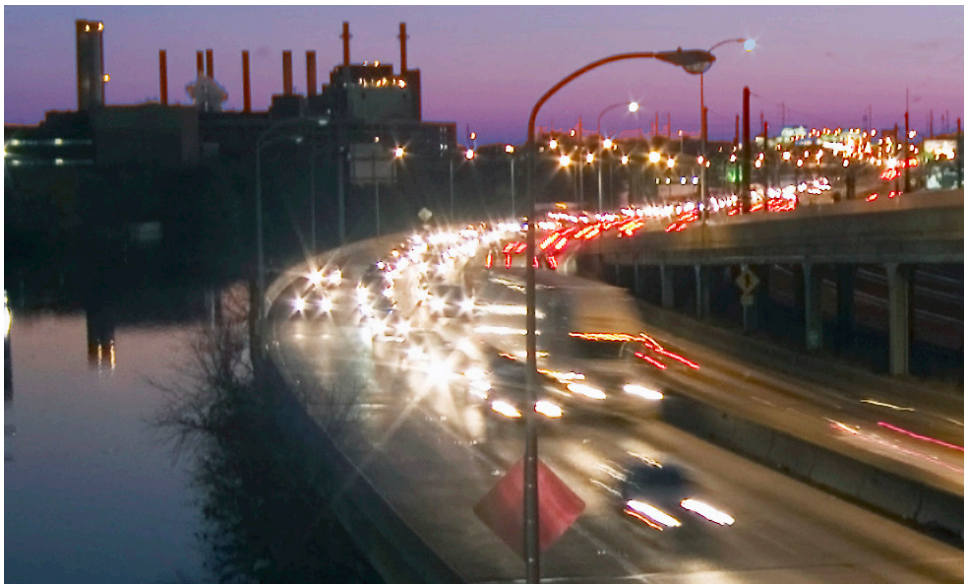
ENGINE OILS

HiTEC® 5825A

OCP Viscosity Index Improver



Shear Stable Solid OCP For Engine Oil Applications

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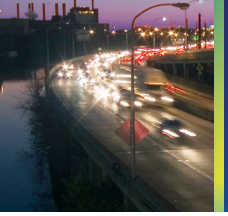

HiTEC® 5825A OCP Viscosity Index Improver

Shear Stable Solid OCP For Engine Oil Applications

Key Performance Benefits

HiTEC® 5825A additive is a solid amorphorus olefin copolymer designed for use as a Viscosity Index Improver for engine oils. HiTEC® 5825A additive imparts excellent shear stability and low temperature properties to passenger car motor oils and heavy duty engine oils.

HiTEC® 5825A additive benefits include:

- Excellent low temperature properties
- Solid 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® 5825A may be dissolved in a wide range of base oils at 12.0% wt. to produce a liquid HiTEC® 5825A Viscosity Index Improver. The following chart includes typical treat-rates for HiTEC® 5825A additive:

SAE J 300 Viscosity Grade	Liquid HiTEC® 5825A 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® 5825A:

Appearance:	Clear to grey greenish solid
Density at 15°C, g/ml:	0.875
Melt Flow Index, g/10:	10.4 max.
Propylene Content, % wt:	50 max.

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

Colour, ASTM D1500:	1.1
Density at 15°C, g/ml:	0.87
Flash Point, °C (PMCC):	236
Kinematic Viscosity at 100°C, mm^2/s:	1,092
Kinematic Viscosity at 40°C, mm^2/s:	13,710
SSI [1] (Bosch) ASTM D6278, % TP Loss:	23.6
Thickening Power [1] at 100°C, cSt:	6.44

Handling Information

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

Formulation Demonstrations

SAE 20W-50 Demonstration Oil

Composition	Function	% wt.
Liquid HiTEC® 5825A	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	19.35
CCS at -15°C	9,500 max	9374
MRV TP-1 at -20°C, cP	60,000 max	33,641
Yield Stress, gms	–	0
HSV at 150°C & 10^6 s-1, cP	3.7 min.	5.13

SAE 15W-40 Demonstration Oil

Composition	Function	% wt.
Liquid HiTEC® 5825A	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	14.32
CCS at -20°C	7,000 max	6490
MRV TP-1 at -20°C, cP	60,000 max	25,076
Yield Stress, gms	–	0
HSV at 150°C & 10^6 s-1, cP	3.7 min.	3.99

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

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