INEOS Oligomers

Base Fluids for Lubricant Applications

Durasyn® Polyalphaolefins

NEW INEOS POLYALPHAOLEFINS INCREASE OPTIONS

INEOS has developed the Durasyn 120 and Durasyn 140 series fully synthesized polyalphaolefin base fluids as compliments to our Durasyn 160 series "first generation" polyalphaolefins.

Durasyn 120 and 140 series PAOs are designed to provide lubricant formulators and blenders with improved volatility, and thermal and oxidative stability performance.

Durasyn 120 series PAOs and Durasyn 140 series PAOs are engineered to have excellent physical and performance properties that include:

- ***Very low volatility***
- ***Superior thermo-oxidative stability***
- ***Low carbon, varnish and sludge forming tendencies***
- ***Excellent hydrolytic stability***
- ***High load carrying capacity***

Durasyn 160 series PAOs are still broadly available. However, if the PAO feedstock market continues to tighten, market forces will undoubtedly influence the pricing and availability of these fluids.

We invite you to consider Durasyn 120, 140, and 160 series PAOs for your applications and have evaluation and commercial quantities available immediately.

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Durasyn

TYPICAL PHYSICAL PROPERTIES OF DURASYN 120 AND 140 SERIES POLYALPHAOLEFINS

Properties	Durasyn 125	Durasyn 126	Durasyn 127	Durasyn 128	Durasyn 145	Durasyn 147	Durasyn 148
Kinematic Viscosity 100°C (ASTM D-445)	5.12	5.97	6.98	7.82	5.2	7.06	7.79
Kinematic Viscosity 40°C (ASTM D-445)	24.7	30.6	38.1	44.5	25.3	38.8	44.1
Kinematic Viscosity -18°C (ASTM D-445)	553.4	768.7	1,063	1,355	614	1,248	1,329
Kinematic Viscosity -40°C (ASTM D-445)	5,960	ND*	ND*	ND*	4,967	11,649	15,259
Viscosity Index (ASTM D2270)	143	144	144	145	143	145	146
Flash Point PMC (ASTM D93)	228	232	236	245	230	240	267
Flash Point COC (ASTM D92)	250	254	260	270	254	262	274
Cold Cranking Simulator Viscosity -25°C	770	1,150	1,870	2,020	880	1,920	2,154
Cold Cranking Simulator Viscosity -30°C	1,390	1,980	2,970	3,380	1,480	3,250	3,581
Cold Cranking Simulator Viscosity -35°C	2,220	3,340	5,170	5,590	2,525	5,590	6,258
Brookfield Viscosity (ASTM D2983) -26°C	1,135	1,504	1,970	2,540	1,010	2,125	ND
Brookfield Viscosity (ASTM D2983) -40°C	5,530	89,000	230,000	ND	4,705	ND	ND
High Temp High Shear 150°C (10^6 sec^{-1})	1.66	1.95	2.21	2.4	1.68	2.2	2.26
Pour Point (ASTM D-97)	-45	-40	-40	-39	-45	-43	-42
Noack Volatility (CEC L 40 -A-93)	5.5	4.5	3.0	2.3	4.9	3.2	2.9
Bromine Number (IP 129)	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Total Acid Number (ASTM D 974)	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Demulsibility 54°C(ASTM D 1401)	40/40/0	40/40/0	40/40/0	40/40/0	40/40/0	40/40/0	40/40/0
Density 15°C (ASTM D4052)	0.824	0.828	0.831	0.832	0.820	0.830	0.833

ND* = Not determined; too near pour point to measure consistently

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