

Lubrication Technologies, Inc.

Lube Base Oils Reference Center Data

API Group I Lube Base Stocks



Bradford, PA

Base Stock	Nominal Viscosity at 100C, cSt (actual viscosity in parenthesis below the product name/number designation)											
	2	4	6	8	10	12	14	20	30	40	50	100
KENDEX, straight cuts		0150H (5.2)					0750 (14.0)		0846, 0847 (28.0), (32)	0840, (45.0),	0842 (53)	
KENDEX, custom blends	0100 (4.0)	0200, 0250, 0300 (6.35), (6.68)		0500 (11.6)								



Calumet Specialty Products, L.P.

Shreveport, LA

Base Stock	Nominal Viscosity at 100F, SUS									
	60	80	100	150	200	300	500	600	1,000	2500
Calpar	60	80						700		2500
	(54.9)	(78.4)						(709.2)(2641)	(154.8 SUS at 210F)	



Tulsa, OK

Base Stock	Nominal Viscosity at 100F, SUS									
	100	150	200	300	500	600	1,000	2500		
	SN 70	SN 100	SN 148, SN 150	SN 200	SN 250	SN 525	SN 600		SN 150BS	
	(65)	(106)	(130) (156)	(211)	(268)	(511)	(622)		(2572) (160 @ 210F)	

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Baton Rouge, LA; Baytown, TX; Beaumont, TX

<i>Base Stock</i>				<i>Nominal Viscosity at 40C, cSt</i>			
	20	32	46	68	100	150	460
AMERICAS CORE	100	150			600		2500
	(20)	(30)			(112)		(500)



Fawley, UK, Augusta, Italy, Gravenchon, France

<i>Base Stock</i>				<i>Nominal Viscosity at 40C, cSt</i>			
	20	32	46	68	100	150	460
AP/E CORE	100	150			600		2500
	(20)	(30)			(112)		(500)



Pulau Ayer Chawan, Singapore & Wakayama, Japan

Base Stock	20	32	46	Nominal Viscosity at 40C, cSt			
				68	100	150	460
AP/E CORE	100	150			600		2500
	(20)	(30)			(112)		(500)
AP/E SN	100				500		
	(20)				(96)		



Strathcona, Alberta, Canada - (Sarnia, Ontario, Canada plant to be closed end October 2010)

<i>Base Stock</i>	<i>20</i>	<i>32</i>	<i>46</i>	<i>Nominal Viscosity at 40C, cSt</i>			
				<i>68</i>	<i>100</i>	<i>150</i>	<i>460</i>
AMERICAS CORE		150					
		(30)					
SN					500	1400	



Paulsboro, NJ

Base Stock

straight cuts

Blended

**MOL, Szazhalombatta, Hungary**

Base Stock

Base Stock

Purchased by PBF Holding Company LLC

Nominal Viscosity at 100F, SUS

Nominal Viscosity at 100C, cSt

Nominal Viscosity at 40C, cSt

Nominal Viscosity at 100C, cSt

P150BS
(2527) (151 AT 210F)

(270)

VP150BS
(2620)

100

VP610
(11.9)



Lotus, Gdansk, Poland

Base Stock

20	32	46	68	100	150	500
	SAE 10/95		SAE 30/95			SAE 30/90
	(34)		(89)			(591)

Nominal Viscosity at 40C, cSt



CEPSA, San Roque, Spain

Base Stock

2	4	6	8	10	12	14	20	30	40	100
								B.S.		
								(31.5)		

Nominal Viscosity at 100C, cSt

Base Stock

20	32	46	68	100	150	500
				600		
				(118)		

Nominal Viscosity at 40C, cSt

Cauchoil

4	10
(30)	(118)

Base Stock

2	4	6	8	10	12	14	20	30	40	100
								30		
								(31.5)		

Nominal Viscosity at 100C, cSt

Cauchoil



Kuwait Petroleum, Europort (Rotterdam), The Netherlands

Base Stock

10	20	32	46	68	100	150	500
KPE 70 SN	KPE 100 SN	KPE 150 SN		KPE 300 SN	KPE 650 SN		KPE 150 BS
(11.96)	(20.0)	(29.96)		(58.8)	(128.6)		(31.3 cSt at 100C)

Nominal Viscosity at 40C, cSt



Cartagena, Spain

Base Stock

10 20 32
SP80 SN100 SN150
(15.4) (20.7) (32.4)

Nominal Viscosity at 40C, cSt

46 68 100 150 500
SN300 SN500D BS170
(60.2) (115.4) (621)



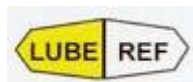
Puertollano, Spain

Base Stock

10 20 32
SP90 SN145
(11.4) (23.4)

Nominal Viscosity at 40C, cSt

46 68 100 150 500
SN220 SN500 BS160
(43.4) (98.5) (524)



Jeddah, Saudi Arabia

Base Stock

20 32 46
100SN 150SN*
(21) (29.5)
* Blend

Nominal Viscosity at 40C, cSt

68 100 150 500
500SN*
(96)

Base Stock

2 4 5 6 8 10 12 14 20 30 40 100
150BS
(32)



Yanbu, Saudi Arabia

Base Stock

20 32 46
150SN
(29.5)
* Blend

Nominal Viscosity at 40C, cSt

68 100 150 500
500SN*
(96)

Base Stock

2 4 5 6 8 10 12 14 20 30 40 100
150BS
(32)



Tupras, Izmir, Turkey

Base Stock

4	5	Nominal Viscosity at 100C, cSt		12	14	20	30	40	100
Spindle	Light	6	8	10			Bright Stock		
(3.6)	(5.3)			Medium			(34)		
				(11)					



Behran Oil, Tehran, Iran

Base Stock

2	4	Nominal Viscosity at 100C, cSt		10	12	14	20	30	40	100
	SN90	5	6	8						
	(4.0)	SN150		SN350	SN500					
		(5.1)		(8.8)	(10.8)					



Sepahan Oil, Esfahan, Iran

Base Stock

2	4	Nominal Viscosity at 100C, cSt		10	12	14	20	30	40	100
		5	6	8						
					SN 500					
					(11.8)					



NIOC, Abadan & Tehran, Iran

Base Stock

2	4	Nominal Viscosity at 100C, cSt		10	12	14	20	30	40	100
		5	6	8						
		SN150			SN500	SN600				
		(5.7)			(10.8)	(13.0)				



Pars Oil, Tehran, Iran

Base Stock

2	4	5	6	8	10	12	14	20	30	40	100
				SAE20 (9+)	SAE30 (10.3)		SAE40 (13.5)				



Alexandria Mineral Oils Co., Alexandria, Egypt

Base Stock

2	4	5	6	8	10	12	14	20	30	40	100
		SN-150 (5.0)			SN-500 (9.7)						

Base Stock

20	32	46	68	100	150	500
				SN-600 (115)		



Haifa Basic Oils Ltd, Haifa, Israel

Base Stock

2	4	5	6	8	10	12	14	20	30	40	100
	SN90 (3.75)	SN150 (5.2)		SN300 (8.75)	SN500 (10.75)				Bright Stock (32)		



IRPC PLC. (PTT), Rayong, Thailand

Base Stock

10	20	32	46	68	100	150	500
60N (10.5)		150N (29.68)			500N (96.91)		150BS (486.97)



Thai Lube, Sriracha, Thailand

Base Stock

Nominal Viscosity at 100C, cSt											
	4	5	6	8	10	12	14	20	30	40	100
60SN		150SN			500SN				150BS		
(10.2 40C)		(5.9)			(11.0)				(32.5)		



PETROBRAS

Petrobras, Duque de Caxias, Brazil

Base Stock

Nominal Viscosity at 40C, cSt							
10	20	32	46	68	100	150	500
PSP 09	PTL 25	PNL 30	PNM 55		PTP 85	PNP 95	
(9.5)	(25)	(30)	(56)		(83.5)	(98)	

Base Stock

Nominal Viscosity at 100C, cSt							
10	12	14	20	30	40	60	100
					PBS 33	PCL 45	PCL 60
					(32.7)	(43.1)	(61)



PETROBRAS

Petrobras, São Francisco do Conde, Bahia, Brazil

Base Stock

Nominal Viscosity at 40C, cSt							
10	20	32	46	68	100	150	500
		PNL 30 RL	PNM 55 RL	PNM 80			
		(30)	(56)	(79)			

Base Stock

Nominal Viscosity at 100C, cSt							
10	12	14	20	30	40	60	100
				PBS 30			
				(30)			



Pertamina, Cilacap, Indonesia

Base Stock	10	20	32	Nominal Viscosity at 40C, cSt				150	500
		SN130		46	68	100			BS150
				SN200		SN500			



Onsan, South Korea

Base Stock	2	4	6	Nominal Viscosity at 100C, cSt						
				8	10	12	14	28	40	100
Premium								P480 BS		150
								(31.3)		



Shell, Pulau Bukom, Singapore

Base Stock	10	20	32	Nominal Viscosity at 40C, cSt				150	500
		HVI60		46	68	100			
		(SN150)			HVI 120	HVI160B			HVI650
		(23)			(SN400)	(SN500)			(BS150)
						(96.9)			(530.2)



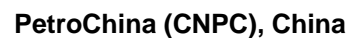
Shell, Buenos Aires, Argentina

Base Stock	10	20	32	Nominal Viscosity at 40C, cSt				150	500
		HVI55	HVI60B	46	68	100			
		(SN100)	(SN150)		HVI95	HVI160B	HVI170		HVI650
		(19.5)	(25.7)		(SN250)	(SN500)	(SN600)		(BS150)
					(56.1)	(96.9)	(124.1)		(530.2)



Base Stock

Nominal Viscosity at 100C, cSt										
2	4	6	8	10	12	14	28	40	100	150
N 60	N 100	N 150	N 300	N 500			Bright Stock		Cilindro	
(3)	(4)	(5)	(8)	(11)			(33)		(73)	



Base Stock

Nominal Viscosity at 100C, cSt											
2	3	4	5	6	8	10	12	14	28	40	100
			HVI 150	HVI 200		HVI 400					
			(5.28-5.4)	(6.1-6.3)		(9.2-9.6)					

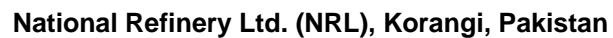


Base Stock

			Nominal Viscosity at 40C, cSt				
10	20	32	46	68	100	150	500
		150 N					
		(30)					

Base Stock

Nominal Viscosity at 100C, cSt									
2	4	6	8	10	12	14	28	40	100
				500 N		1200 N			
				(10.5)		(19)			



Base Stock

Nominal Viscosity at 40C, cSt							
10	20	32	46	68	100	150	500
65N-HVI	100N-HVI	150N-HVI					
(11)	(20)	(30)					

Base Stock

Nominal Viscosity at 100C, cSt										
2	4	6	8	10	11	12	14	28	40	100
				400N-HVI 500N-HVI			BS-HVI			
				(9.9) (11.0)			(34.5)			



NIPPON OIL

Your Choice of Energy

Base Stock

JX/Nippon, Mizushima, Japan

10	20	32	Nominal Viscosity at 40C, cSt			150	500
		150SN	46	68	100		150BS
		(28.27)			500SN		(467.2)
					(97.09)		

JX/Nippon, Negishi, Japan

Base Stock

10	20	32	Nominal Viscosity at 40C, cSt			150	500
		150SN	46	68	100		150BS
		(30.55)			500SN		(522.6)
					(93.94)		



OJSC Naftan, Novopolotsk, Belarus

Base Stock

10	20	32	Nominal Viscosity at 40C, cSt			150	500
		100 NS	46	68	100		
			200 NS		450 NS	650 NS	



IndianOil

Haldia, India

Base Stock

Alprol

10	20	32	Nominal Viscosity at 40C, cSt			150	500
		32	46	68	100		
	12	(SN 70)			100		150 BS
		(SN 150)			(SN 500)		



H&R Chempharm GmbH, Salzbergen, GERMANY

<i>Nominal Viscosity at 40C, cSt</i>									
10	20	32	46	68	100	150	250	500	650
P 3148	P 4197	P 4165			T B 8014	Extra	T 4124	P 4073	P 4153
(SN55)	(SN100)	(SN180)			(500N)		(SN900)	(BS)	(BS)
(8.6)	(21.5)	(38)			(97)		(250)	(480)	(650)

P= Pionier, T=Tudalen

H&R Ölwerke Schindler GmbH, Hamburg, GERMANY

Base Stock

<i>Nominal Viscosity at 40C, cSt</i>									
10	20	32	46	68	100	150	250	500	650
P 70		T 1968		T 12	T 23	T 3912			
(SN 70)		(SN150)		(SN 400)	(SN 500)	(900 N)			
(13.9)		(30.7)		(83.8)	(104.4)	(219.3)			

P= Pionier, T=Tudalen