



LUBRICATING GREASES

Lubricating greases are widely used in the automotive and industrial markets. They are semi-solid substances applied to mechanisms to minimize leaks and outside contamination, prevent corrosion, and lubricate components. Calumet manufactures and markets paraffinic, naphthenic and white mineral oils that meet the specific requirements for the grease market.

APPLICATIONS

- Construction Equipment
- Food Processing Equipment
- Mining Equipment
- Agricultural Equipment
- Railroad Rail
- High-Speed Bearings
- Low-Speed Bearings
- High-Temp Bearing
- Low-Temp Bearing
- Automotive Wheel Bearings
- High-Speed Flex Couplings
- High-Temp Roller Element Bearing
- Open & Enclosed Gear
- Cable/Wire Rope

BASE OILS

We offer an extensive product line of naphthenic and paraffinic base oils that cover a wide range of viscosity and solvency characteristics that can be used in the greases market. Base oils are the foundation of lubricating greases, and the majority of greases utilize them as the fluid component for industrial applications.

HYDROCAL™ NAPHTHENIC BASE OILS

PROPERTIES	METHOD	38	45	60	100	750	2400
Viscosity @ 100 °F (SUS)	D2161	37.5	44.9	62.9	109.3	765.1	2411.1
Viscosity @ 210 °F (SUS)	D2161	30.3	31.9	34.6	38.7	64.6	99.6
Viscosity @ 40 °C (cSt)	D445	3.3	5.5	10.3	20.6	143.2	440.4
Viscosity @ 100 °C (cSt)	D445	1.3	1.7	2.5	3.7	11.1	21.8
Viscosity Index	D2270	85	65	39	20	43	43
API Gravity @ 60 °F	D4052	29.8	28.0	27.1	25.7	23.7	22.2
Flash Point, COC (°F)	D92	219	265	317	329	438	481
Pour Point (°F)	D97	-81	-81	-78	-64	-15	10
Color, ASTM	D1500	L0.5	L0.5	L0.5	L0.5	1.0	L2.0
Aniline Point (°F)	D611	138.6	149.0	162.8	175.3	207.6	217.7
Aniline Point (°C)	D611	59.2	65.0	72.7	80.3	97.5	103.2
Neut. No (mg KOH/g)	D974	0.01	0.01	0.01	0.01	0.01	0.01
Sulfur (Wt.%)	D4294	0.0024	0.0054	0.0078	0.0210	0.0228	0.0715
Refractive Index @ 20 °C	D1218	1.4768	1.4837	1.4899	1.4910	1.4999	1.5041
Clay Gel (Wt.%)	D2007	-	-	-	-	-	-
Asphaltenes	-	0	0	0	0	0	0
Polar Compounds	-	0	0	0	0	0	2
Aromatics	-	25	31	32	24	26	32
Saturates	-	75	69	68	76	74	66
Carbon Type Analysis (%)	D2140	-	-	-	-	-	-
Ca	-	-	9	13	8	10	9
Cn	-	-	51	40	47	36	36
Cp	-	-	40	47	45	54	55
FDA 21 CFR 178.3620 (c)	-	-	PASS	PASS	PASS	PASS	PASS

NAPHTHENIC BASE OILS

PROPERTIES	METHOD	RAVEN™ 140	N-BRIGHT STOCK	CYLINDER STOCK 210
Viscosity @ 40 °C (cSt)	D445	612.31	1773.6	946.82
Viscosity @ 100 °C (cSt)	D445	29.39	58.43	43.55
Viscosity @ 100 °F (SUS)	D2161	3349.4	9883.5	5180.4
Viscosity @ 210 °F (SUS)	D2161	144.8	285.0	212.3
API Gravity @ 60 °F	D4052	20.5	20.7	23.5
Specific Gravity @ 60 °F	D1250	0.9309	0.9296	0.9128
Viscosity-Gravity Constant	D2501	0.854	0.834	0.819
Density (Pounds per Gallon)	D1250	7.752	7.756	7.601
Molecular Weight	D2502	590	690	695
Pour Point (°F)	D97	5	59	39
Color, ASTM	D1500	D8.0	D8.0	L8.0
Flash Point, COC (°F)	D92	460	607	612
Refractive Index @ 20°C	D1218	N/A	1.5109	1.4821
Aniline Point (°F)	D611	208.4	237.5	255.5

CALSOL™ PROCESS OILS

PROPERTIES	5550	550	575	850
Viscosity @ 40 °C (cSt)	97.10	96.25	141.95	95.90
Viscosity @ 100 °C (cSt)	9.0	9.0	10.9	8.0
Viscosity @ 100 °F (SUS)	514.4	508.7	759.0	512.5
Viscosity @ 210 °F (SUS)	56.8	56.8	63.8	53.2
API Gravity @ 60 °F	25.2	25.2	23.9	21.4
Specific Gravity @ 60 °F	0.9029	0.9029	0.9105	0.9254
Viscosity-Gravity Constant	0.840	0.841	0.845	0.871
Density (Pounds per Gallon)	7.529	7.518	7.582	7.716
Molecular Weight	420	425	435	370
Pour Point (°F)	-36	-26	-18	-22
Color, ASTM	L0.5	L0.5	L1.0	1.0
UV Absorptivity @ 260 nm	0.5	0.4	N/A	3.2
Volatility @ 225 °F (Wt.%)	0.3	0.5	N/A	3.3
Flash Point, COC (°F)	438	412	440	377
Refractive Index @ 20 °C	1.4918	1.4914	N/A	1.5024
Aniline Point (°F)	209.5	211.5	207.8	180.0
Carbon Type Analysis (%)	-	-	-	-
Ca	4	3	10	8
Cn	44	46	43	52
Cp	52	51	51	40
FDA 21 CFR 178.3620 (c)	PASS	PASS	PASS	PASS

CALPAR™ PARAFFINIC BASE OILS

PROPERTIES	METHOD	75	100	325	600	2500
Viscosity @ 100 °F (SUS)	D2161	74.3	111.4	330.3	640.5	2641.2
Viscosity @ 210 °F (SUS)	D2161	36.8	40.3	53.9	69.4	155.3
Viscosity @ 40 °C (cSt)	D445	13.2	21.3	63.7	122.1	484.5
Viscosity @ 100 °C (cSt)	D445	3.1	4.2	8.2	12.4	31.7
Viscosity Index	D2270	93	95	97	92	96
API Gravity @ 60 °F	D4052	34.6	32.7	30.4	28.4	27.0
Flash Point (°C)	D92	194	207	250	261	316
Flash Point (°F)	D92	382	406	481	502	600
Pour Point (°C)	D97	-18	-19	-12	-13	-7
Pour Point (°F)	D97	0	-2	10	9	20
Color, ASTM	D1500	L0.5	L0.5	L1.0	L2.0	L3.5
Aniline Point (°C)	D611	99.5	102.4	114.0	117.0	133.1
Aniline Point (°F)	D611	211.2	216.4	237.0	243.0	271.5
Saturates (Mass %)	D2007	94.9	92.1	92.3	86.7	87.0
Sulfur (Mass %)	D4294	0.0007	0.0021	0.0050	0.008	0.0087

WHITE OILS

White oils like DRAKEOL® and PAROL® can be used in the greases market for NSF H1 (incidental food contact) applications. They can also be used for complex soap and non-soap thickeners in rolling and bearing applications.

MINERAL OIL USP

PROPERTIES	METHOD	DRAKEOL 35	DRAKEOL 500
Viscosity @ 100 °F (SUS)	D2161	340/365	515/570
Viscosity @ 40 °C (cSt)	D7042	65.8/71.0	99/109.9
Specific Gravity @ 25/25 °C	D4052	0.8640/0.8810	0.860/0.878
Flash Point, COC (°F)	D92	465	508
Flash Point, COC (°C)	D92	240	264
Pour Point (°F)	D97	5	4
Pour Point (°C)	D97	-16	-16
FDA 21 CFR 172.878	FDA	PASS	PASS

LIGHT MINERAL OIL NF

PROPERTIES	METHOD	DRAKEOL 10B
Viscosity @ 100 °F (SUS)	D2161	95/105
Viscosity @ 40 °C (cSt)	D7042	17.7/20.2
Specific Gravity @ 25/25 °C	D4052	0.8670/0.8840
Flash Point, COC (°F)	D92	340
Flash Point, COC (°C)	D92	177
Pour Point (°F)	D97	-25
Pour Point (°C)	D97	-31
FDA 21 CFR 172.878	FDA	PASS

TECHNICAL MINERAL OIL

PROPERTIES	METHOD	PAROL 100	PAROL 80
Viscosity @ 100 °F (SUS)	D2161	107.6	84.3
Viscosity @ 40 °C (cSt)	D7042	20.32*	15.53*
Specific Gravity @ 25/25 °C	D4052	0.8441*	0.8432
Specific Gravity @ 60/60 °F	D4052	0.8501	0.8494*
Flash Point, COC (°F)	D92	400	380
Flash Point, COC (°C)	D92	204	193
Pour Point (°F)	D97	5	0
Pour Point (°C)	D97	-21	-21
FDA 21 CFR 178.3620(B)	FDA	PASS	PASS

*Typical values

TECHNICAL ASSISTANCE

For product or technical questions, contact your Sales Representative or Calumet Product Support at (800) 437-3188 or email technical@calumet.com.

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