

aramco



base oils

aramco base oils

product catalog 2023



aramco base oils: your complete source
of products to propel your business further



“We are ready to collaborate closely with our customers in meeting their base oils product needs in a dynamic, formidable marketplace today, and into the future. As the world’s largest producer of high-quality base oils, Aramco’s portfolio of advanced manufacturing complexes are positioned around the globe to enable the delivery of a full slate of high-quality Aramco branded base oils reliably, anywhere, at any time.”

YASSER M.MUFTI, Executive Vice President
Products & Customers



contents

Page 3 introducing
aramco base Oils

Page 7 aramcoDURA®

Page 11 aramcoPRIMA®

Page 17 aramcoULTRA®

Page 21 meeting API and
ACEA requirements

Page 24 contacts



Luberef is known as a reliable supplier of high-quality base oils to customers operating across the Middle East, East Africa, India, Pakistan, Singapore and Europe. The strategically advantageous location of Luberef's refineries in Jeddah and Yanbu in the Kingdom of Saudi Arabia, is combined with a consistent and reliable high quality supply of base oil, and an optimized grade mix to provide supply chain efficiencies to Luberef customers. Luberef's two production facilities produce approx. 1.4 million MT of Group I & II base oils and speciality products annually.



Motiva base oils are recognized for their quality and are key components in a broad spectrum of lubricants – including automotive, industrial, and functional fluid applications. Motiva's Port Arthur refinery is the site of the largest base oil plant in North America, operating three lube hydroprocessing units that use Motiva-patented unit designs, to upgrade heavy gas oils into high-quality premium base oils. With a world-class sales and supply logistics team, Motiva will consistently fulfill your Group II and Group III needs in the Americas and around the world. Motiva's total capacity is 40,300 barrels per day (2.0 million tons per year).



S-OIL is one of the world's top base oil producers, leading in South Korea since S-OIL's foundation in 1976 as the first local lube base oil refinery located in Ulsan. S-OIL's global presence has been successfully expanded into not only Asia but also Europe and North America, by utilizing its full range of product portfolio from Group I to Group III, with a daily production capacity of 44,700 barrels per day (2.2 million tons per year).

Introducing aramco base oils

For over 90 years, Saudi Aramco has been a reliable, trusted supplier of oil and gas to our customers across the world.

Through a series of joint ventures, we have been a major supplier of premium quality base oils around the world for over 40 years. Under the trusted company names of Luberef, Motiva, and S-OIL, we have collaborated with our customers to navigate market change, while delivering to them base oil solutions that meet their needs.



Three brand families for the products you trust

Aramco Base Oils is proud to present its high-performance, premium-quality base oils portfolio. Our broad portfolio of base oils will help you choose the right solution for whatever challenge you and your customers face so together you can innovate. Aramco Base Oils is a brand family, for the products you know, from the global name you trust.



aramco**DURA**[®]

aramcoDURA API Group I base oils are used in a wide range of applications, including: passenger car and heavy duty engine oils, gear oils, and transmission fluids, as well as in industrial applications such as hydraulic oils, turbine oils, compressor oils, and marine oils.

aramco**PRIMA**[®]

aramcoPRIMA API Group II base oils give you the power to formulate the majority of automotive and industrial lubricating oils for heavy duty diesel engine oils, as well as driveline, industrial hydraulic, and turbine oils.

aramco**ULTRA**[®]

aramcoULTRA API Group III base oils are used in applications that require high performance and efficiency, such as high-performance engine oils, automatic/manual transmission fluids, and long-life industrial fluids.



aramco**DURA**® 60

aramco**DURA**® 150

aramco**DURA**® 500

aramco**DURA**® 600

aramco**DURA**® 150BS

aramco**DURA**® BS150

aramcoDURA[®]

aramcoDURA API Group I base oils are used in a wide range of applications, including: passenger car and heavy duty engine oils, gear oils, and transmission fluids, as well as in industrial applications such as hydraulic oils, turbine oils, compressor oils, and marine oils.

- Consistency in the quality of base oils
- High quality brightstock for marine, driveline, and heavy viscosity applications

	Method	60	150
API Base Oil Category		Group V	Group I
Appearance	Visual	Clear & Bright	Clear & Bright
Kinematic Viscosity @ 40°C, cSt	ASTM D-445	6.5 - 9.0	28 - 31
Kinematic Viscosity @ 100°C, cSt	ASTM D-445	---	Report
Viscosity Index	ASTM D-2270	≥ 60	≥ 101
Flash Point, COC, °C	ASTM D-92	≥ 145	≥ 210
Pour Point, °C	ASTM D-5950	≤ -10	≤ -12
CCS viscosity @ -20 °C, cP	ASTM D-5293	---	---
Noack volatility, wt%	ASTM D-5800 (B)	---	---
Color ASTM	ASTM D-1500	≤ L0.5	≤ L1.5
Manufacturing Site		Ulsan	Jeddah

500	600	150BS	BS150
Group I	Group I	Group I	Group I
Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright
91 - 101	113.0 - 119.0	---	Report
Report	---	30.7 - 32.8	30 - 33
≥ 97	≥ 93	≥ 95	≥ 95
≥ 227	≥ 245	≥ 288	≥ 290
≤-6	≤-10	≤-10	≤-6
---	---	---	---
---	---	---	---
≤ L2.5	≤ L2.5	≤ L5.0	≤ L4
Jeddah	Ulsan	Ulsan	Yanbu

aramcoPRIMA® 100
aramcoPRIMA® 110
aramcoPRIMA® 150
aramcoPRIMA® 220
aramcoPRIMA® 230
aramcoPRIMA® 500
aramcoPRIMA® 600

aramcoPRIMA® 100S
aramcoPRIMA® 150S
aramcoPRIMA® 500S
aramcoPRIMA® 60
aramcoPRIMA® 70



aramcoPRIMA®

aramcoPRIMA API Group II base oils give you the power to formulate the majority of automotive and industrial lubricating oils for heavy duty diesel engine oils, as well as driveline, industrial hydraulic, and turbine oils.

- Provide optimized automotive engine oil formulations, ranging from 5W 20 to 20W 50
- Wide performance and viscosity grade coverage for North and South American/ Asian/ Middle East/European automotive engine oils.

Only aramcoPRIMA 60 are not classified as API Group II.

	Method	60	60
API Base Oil Category		Group V	Group V
Appearance	Visual	Clear & Bright	Clear & Bright
Kinematic Viscosity @ 40°C, cSt	ASTM D-445	9.0 - 11.0	7.5 - 9.5
Kinematic Viscosity @ 100°C, cSt	ASTM D-445	---	---
Viscosity Index	ASTM D-2270	---	≥ 60
Flash Point, COC, °C	ASTM D-92	≥170	≥ 150
Pour Point, °C	ASTM D-5950	<-33	≤-40
CCS viscosity @ -30 °C, cP	ASTM D-5293	---	---
CCS viscosity @ -25 °C, cP	ASTM D-5293	---	---
CCS viscosity @ -20 °C, cP	ASTM D-5293	---	---
Noack volatility, wt%	ASTM D-5800 (B)	---	---
ASTM Color	ASTM D-1500	---	≤ L0.5
Manufacturing Site		Port Arthur	Ulsan

70	100S	150S	500S
Group V	Group II	Group II	Group II
Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright
Report	19 - 22	28.1 - 31.0	94.4 - 98.0
2.8 - 3.3	---	---	---
≥ 76	≥ 95	≥ 95	≥ 95
≥ 175	≥ 202	≥ 204	≥ 232
≤-30	≤-10	≤-10	≤-10
---	---	---	---
Report	---	---	---
Report	---	---	---
---	---	---	---
≤ L0.5	≤ L1.0	≤ L1.5	≤ L2.0
Yanbu	Ulsan	Ulsan	Ulsan

	Method	100	110
API Base Oil Category		Group II	Group II
Appearance	Visual	Clear & Bright	Clear & Bright
Kinematic Viscosity @ 40°C, cSt	ASTM D-445	18.0 - 22.0	21 - 25
Kinematic Viscosity @ 100°C, cSt	ASTM D-445	≥ 3.8	Report
Viscosity Index	ASTM D-2270	≥ 95	≥ 100
Flash Point, COC, °C	ASTM D-92	≥199	≥ 204
Pour Point, °C	ASTM D-5950	≤-12	≤-15
CCS viscosity @ -30 °C, cP	ASTM D-5293	---	---
CCS viscosity @ -25 °C, cP	ASTM D-5293	≤ 1,550	Report
CCS viscosity @ -20 °C, cP	ASTM D-5293	---	Report
Noack volatility, wt%	ASTM D-5800 (B)	≤ 28.0	≤ 17
Color ASTM	ASTM D-1500	≤ L1.0	≤ L0.5

aramcoPRIMA slate

150	220	230	500	600
Group II	Group II	Group II	Group II	Group II
Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright
28.1 - 31.0	40.0 - 46.0	42.5 - 46.0	---	107 - 120
---	≥ 6.1	Report	10.5 - 11.5	≥ 11.7
≥ 95	≥ 95	≥ 100	≥ 100	≥ 95
≥ 204	≥ 216	≥ 220	≥ 232	≥ 250
≤ -13	≤ -12	≤ -15	≤ -13	≤ -12
---	---	---	---	---
---	---	Report	---	---
---	≤ 3,900	Report	---	---
---	≤ 13.0	≤ 8	---	---
≤ L0.5	≤ L1.0	≤ L0.5	≤ L0.5	≤ L1.0



aramcoULTRA® 4
aramcoULTRA® 6
aramcoULTRA® 8
aramcoULTRA® 2
aramcoULTRA® 3

aramcoULTRA[®]

- aramcoULTRA 4
- aramcoULTRA 6
- aramcoULTRA 8

aramcoULTRA API Group III base oils are used in applications that require high performance and efficiency, such as high performance engine oils, automatic/manual transmission fluids, and long-life industrial fluids.

- aramcoULTRA 2
- aramcoULTRA 3

These grades of aramcoULTRA are not classified as API Group III.

aramco **ULTRA**[®]

	Method	2	3
API Base Oil Category		Group II	Group II
Appearance	Visual	Clear & Bright	Clear & Bright
Kinematic Viscosity @ 100°C, cSt	ASTM D-445	1.9 - 2.4	3.0 - 3.5
Viscosity Index	ASTM D-2270	≥ 100	≥ 100
Flash Point, COC, °C	ASTM D-92	≥ 150	≥ 180
Pour Point, °C	ASTM D-5950	≤ -25	≤ -20
CCS viscosity @ -30 °C, cP	ASTM D-5293	---	---
Noack volatility, wt%	ASTM D-5800 (B)	---	---
Color ASTM	ASTM D-1500	L0.5	L0.5

aramcoULTRA®

aramcoULTRA slate

	Method	4	6	8
API Base Oil Category		Group III	Group III	Group III
Appearance	Visual	Clear & Bright	Clear & Bright	Clear & Bright
Kinematic Viscosity @ 100°C, cSt	ASTM D-445	4.0 - 4.5	5.8 - 6.2	7.0 - 7.5
Viscosity Index	ASTM D-2270	≥ 120	≥ 120	≥ 120
Flash Point, COC, °C	ASTM D-92	≥ 210	≥ 220	≥ 240
Pour Point, °C	ASTM D-5950	≤ -15	≤ -15	≤ -10
CCS viscosity @ -30 °C, cP	ASTM D-5293	≤ 1,600	Report	---
Noack volatility, wt%	ASTM D-5800 (B)	≤ 15.5	≤ 8.5	---
Color ASTM	ASTM D-1500	L0.5	L0.5	L0.5

Meeting API and ACEA requirement

Interchangeable and linked group II base oils

In accordance with API and ACEA protocols, Saudi Aramco has successfully completed test programs that demonstrated the interchangeability and lineage between Group II base oils from our global manufacturing sites. The extensive testing programs covers API SN/GF-5, API CJ-4 together with ACEA A3/B4, E7 and E9 automotive engine in addition to demonstration in industrial and gear oils applications.

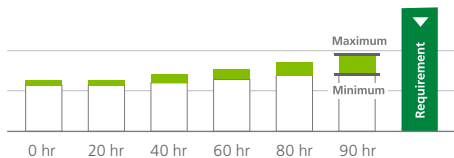
aramcoPRIMA API Licensability and OEM approval

The aramcoPRIMA base stock slate has completed the test program to support the API CK-4, ACEA A3/B4, E7, E9, and key North American and European Original Equipment manufacturers in commonly used SAE grades like 10W-30, 10W-40 and 15W-40 for heavy duty diesel engines. These formulations are now available for lubricant marketers to use to obtain API License and OEM approvals.

Automotive Engine Tests

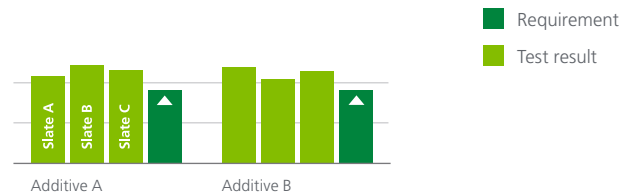
Sequence IIH Engine Test (API SN/GF-5)

Viscosity increase (cSt@40°C)
0 hr



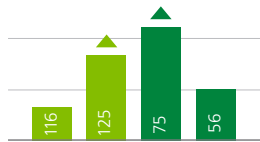
Sequence IIH Engine Test (API CJ-4)

Weighted Piston Deposit (merit rating)



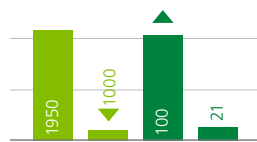
* Scales of each data adjusted for visualization

aramcoPRIMA HDD Test Program



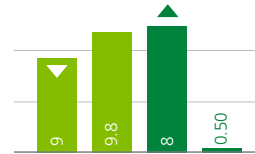
Oxidation Height A/cm

Volvo T-13
aramcoPRIMA in 15W-40



Sludge Rating, merit

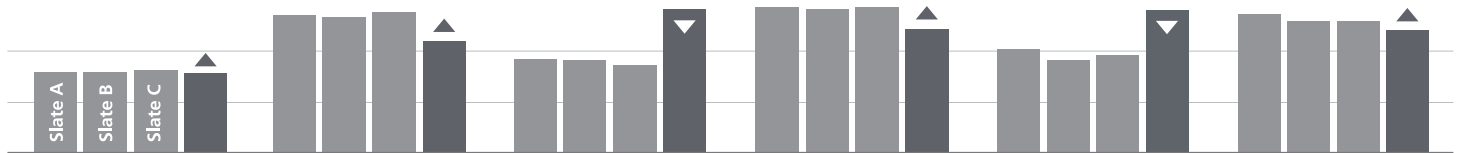
Cummins ISM
aramcoPRIMA in 10W-30



Engine Sludge, merit

OM501 LA (CEC L-101-09)
aramcoPRIMA in 10W-30

European Engine Test (ACEA A3/B4)



Piston Cleanliness

EOT TBN

Average Cam Wear

Rocker Pad Rating

Cam Wear Inlet

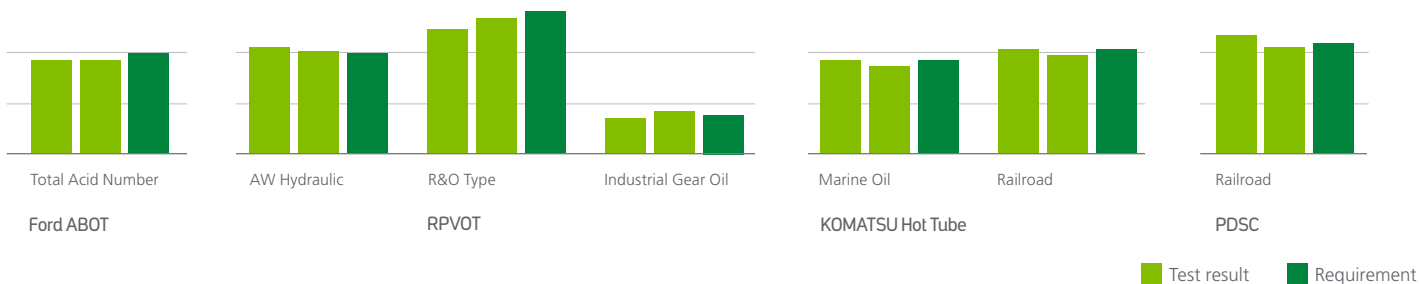
Engine Sludge

Volkswagen TDi (CEC L-78-T-99)
4 cyl., 1.9L, turbocharged, direct injection

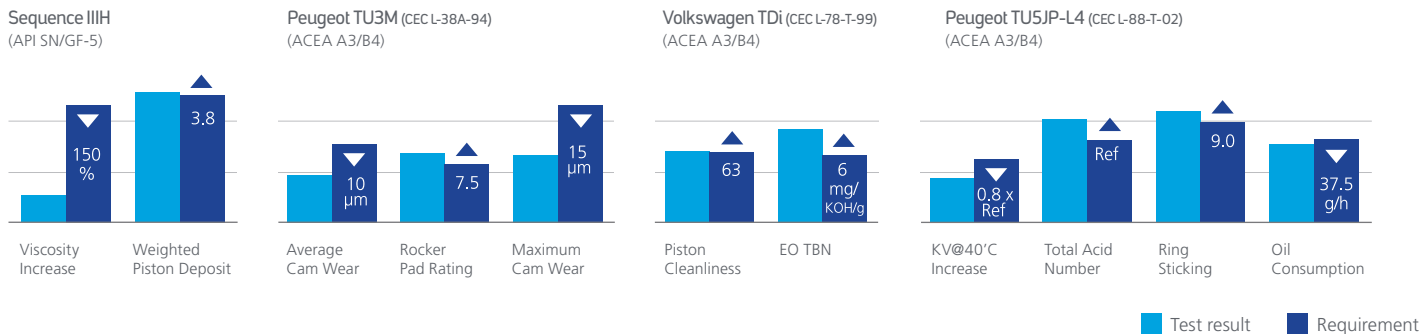
Peugeot TU3M (CEC L-38-A-94)
OHC, 4 cyl., gasoline, 1,360cc

Mercedes Benz OM646 LA (CEC L-099-08)
4 cyl., 2.2L, VTG turbocharged, direct injection

Driveline & Industrial Oxidation Tests



The Group II base oils show satisfactory performance in various API and ACEA engine tests across a number of metrics including oxidation, anti-wear, piston cleanliness, and sludge formation resistance using suitable additive technologies.



contact us

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A photograph of three male workers in an industrial setting. They are wearing white hard hats and safety glasses. The worker on the left is wearing a blue long-sleeved shirt and black pants. The two workers on the right are wearing light-colored, short-sleeved button-down shirts and dark pants. They are walking towards the camera on a concrete floor. In the background, there are yellow metal structures, possibly ladders or scaffolding, and a large, complex industrial machine with a central vertical shaft and various pipes and components. The lighting is bright, suggesting an indoor or well-lit outdoor environment.

your customers will know that you can offer them consistency, reliability, and high quality, no matter what they need or where they are in the world

Disclaimer

Each company affiliated with The Saudi Arabian Oil Company ("Saudi Aramco"), and in particular, each subsidiary company including their associated research centers, is a separate entity that manages and controls its own affairs. The use of terms such as "company," "Saudi Aramco," "organization," "it(s)," "our(s)," "their(s)," "we" and "us" and of abbreviated job titles is only for convenience and is not intended as an accurate description of individual status and corporate relationship, or to indicate that Saudi Aramco is conducting commercial activities outside the Kingdom of Saudi Arabia.

Selling more base oils to the market than any
other company on earth

aramco base oils

aramco