

base oils

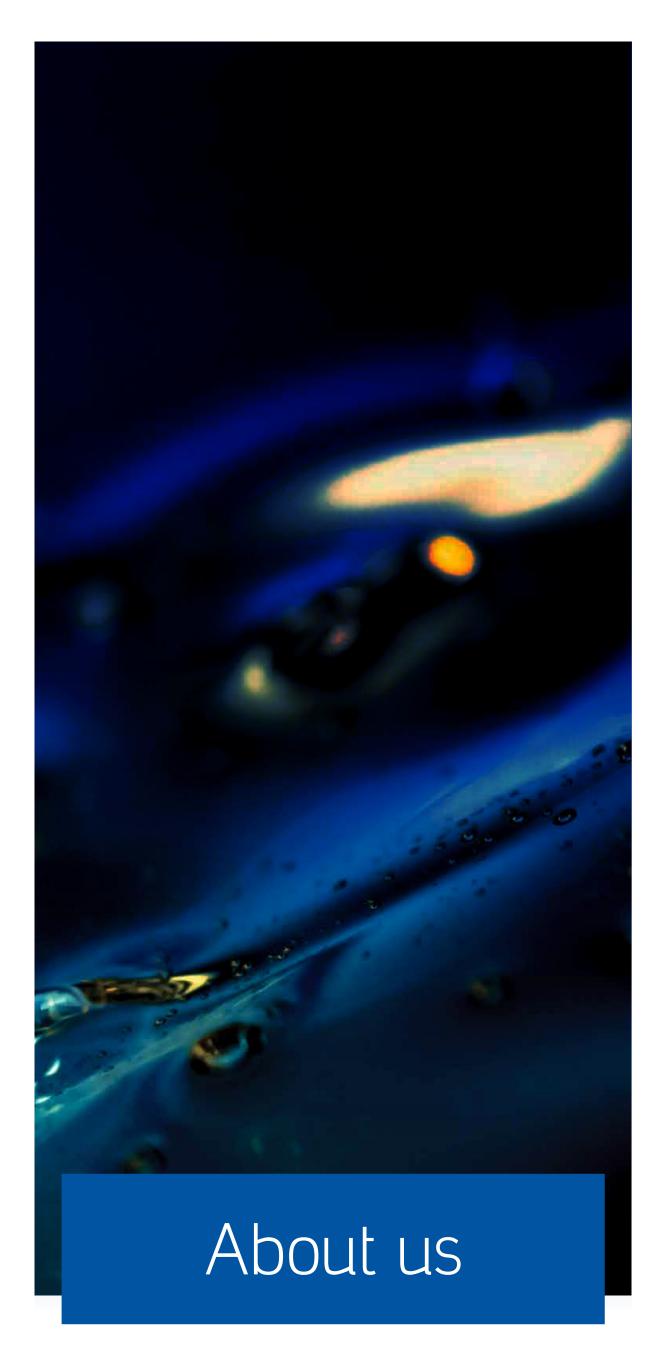
selling more base oils

to the market than any other

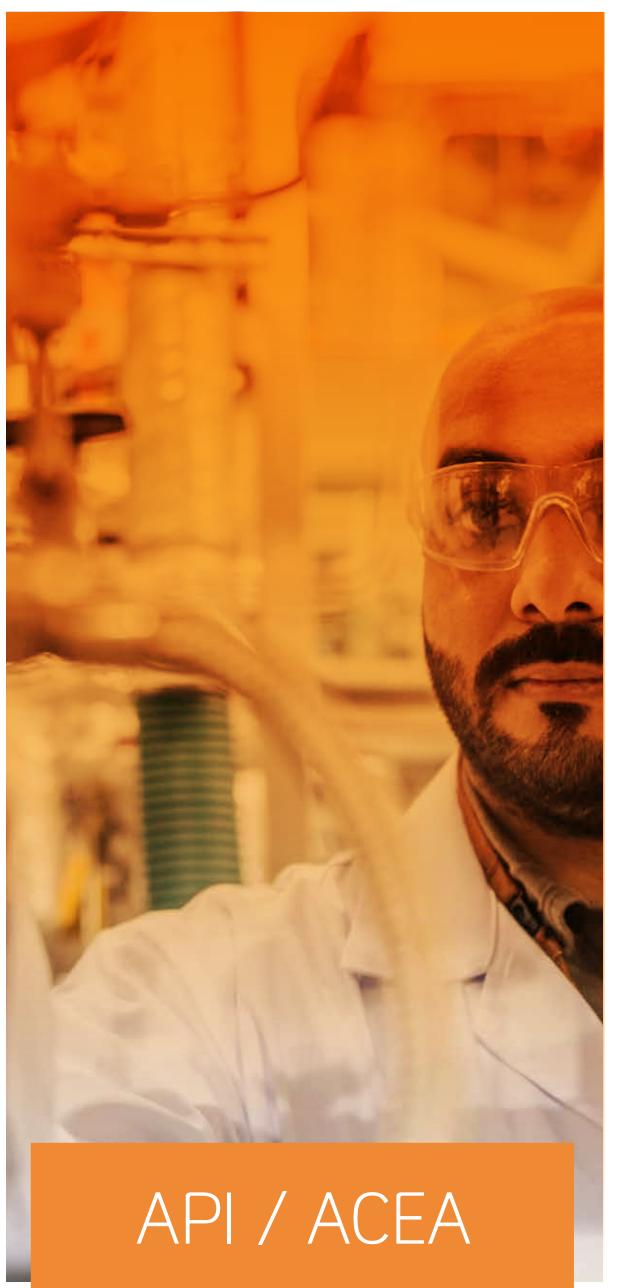
company on earth

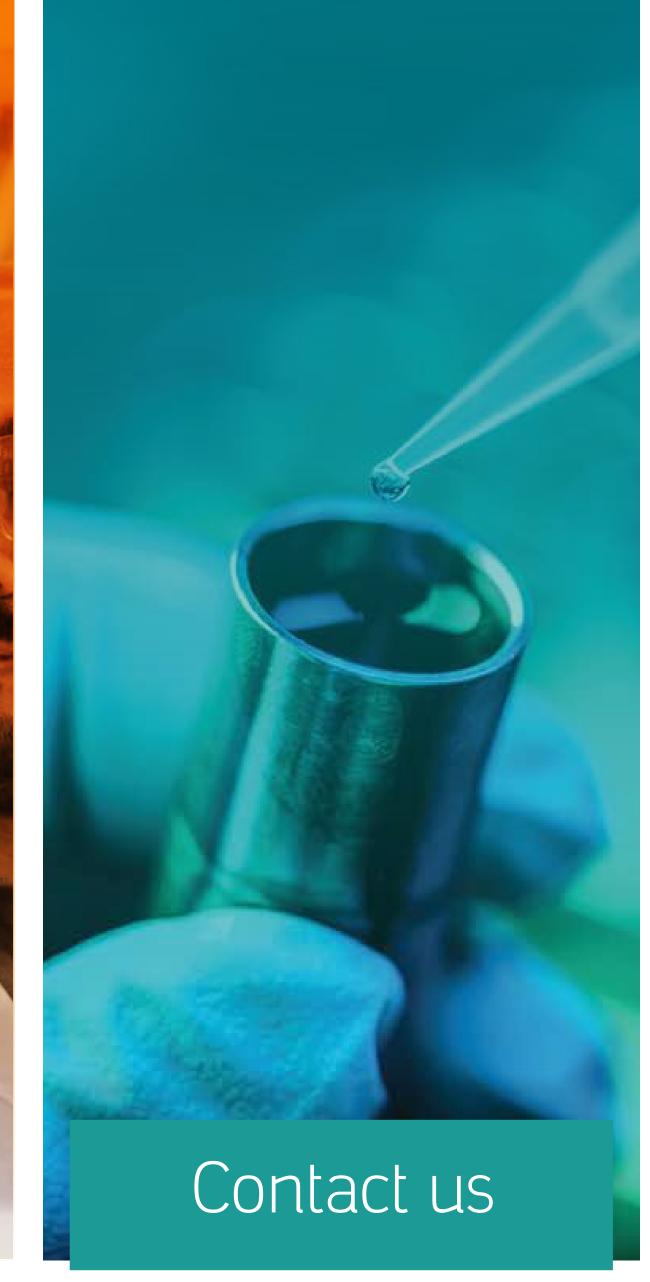
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aramco base oils









# Aramco Base Oils

For over 80 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.



About us

Products

API / ACEA

Vice President











Luberef supplies base oils customers operating across the Middle East, East Africa, India and Pakistan. 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 efficie
Luberef customers. Luberef's total
capacity is 24,300 barrels per day (1.2
million tons per year).

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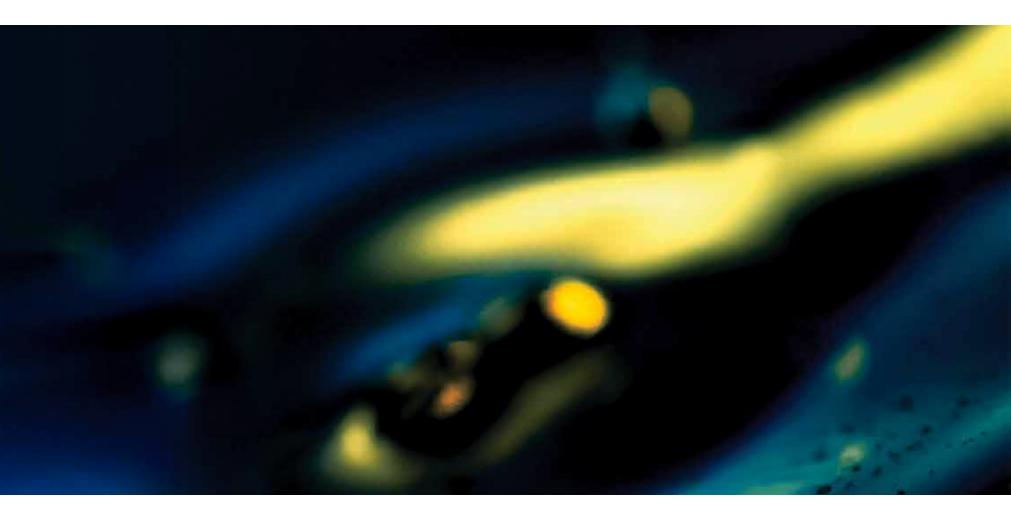
Base Oils are recognized for their quality and are key components in a broad spectrum of lubricants – including automotive, industrial, and functional fluid applications. Motiva's Port Arthur Refinery is the site of the largest base oil plant in North America, operating three lube hydroprocessing units 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).

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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).

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 new brand family, for the products you know, from the global name you trust



### aramcodura®

aramco**prima**®

aramcoultra

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.

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### aramcodura®

aramco**prima**®

aramco**ultra**®

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API Base Oil Category		60 Group V	150 Group I	500 Group I	
Properties	Method	Typical	Typical	Typical	
nt solution for Appearance	Visual	C & B	C & B	C & B	
Kinematic Viscosity @ 40°C, cSt	D 445	7.92	28 - 31	91 - 101	
Kinematic Viscosity @ 100°C, cSt	D 445	2.19	Report	Report	
Oducts you Viscosity Index	D 2270	71	101	97	
Sulfur Content, ppm	D 5453	<10	1.0 <sup>‡</sup>	1.3 <sup>‡</sup>	
Pour Point, °C	D 5950	-20	-12*	-6*	
Density @ 15.6 °C, kg/L	D 4052	0.8751	Report	Report	
Color, ASTM	D 1500	L 0.5	1.5	2.5	
Flash Point, COC, °C	D 92	149	210	227	
Flash Point, PMCC, °C	D 93		200+	210+	
Furfural Content, ppm	M - 1414		5	5	
Copper Strip Corrosion, 100°C, 3 hrs	D 130	1b	1a	1a	
Conradson Carbon Residue, wt%	D 4530	<0.01	0.1	0.1	
Neutralization No., mgKOH/g	D 974	<0.01	0.05	0.05	
Ash, wt%	D 482		0.01	0.01	
Manufacturing Site		Ulsan	Yanbu	Yanbu	

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aram co**dura**®

aramco**prima**®

aramcoultra

These grades of aramcoPRIMA are not classified as API Group II. They are commonly used for non engine oil applications.

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 & South American/Asian/ Middle East/European automotive engine oils.

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aram co **DURA**®

aramco**prima**®

aramcoultra

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.

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

# Meeting API and ACEA requirements

### 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 linkage between Group II base oils from our global manufacturing sites. The extensive testing programs covered API SN/GF-5, API CJ-4 and ACEA A3/B4 automotive engine oils together with demonstration in industrial and gear oils applications. Engine tests to meet ACEA E7 and E9 are currently underway with completion expected Q1 2019.

Automotive Engine Tests

CLICK TO KNOW MORE

Driveline & Industrial Oxidation Tests

CLICK TO KNOW MORE

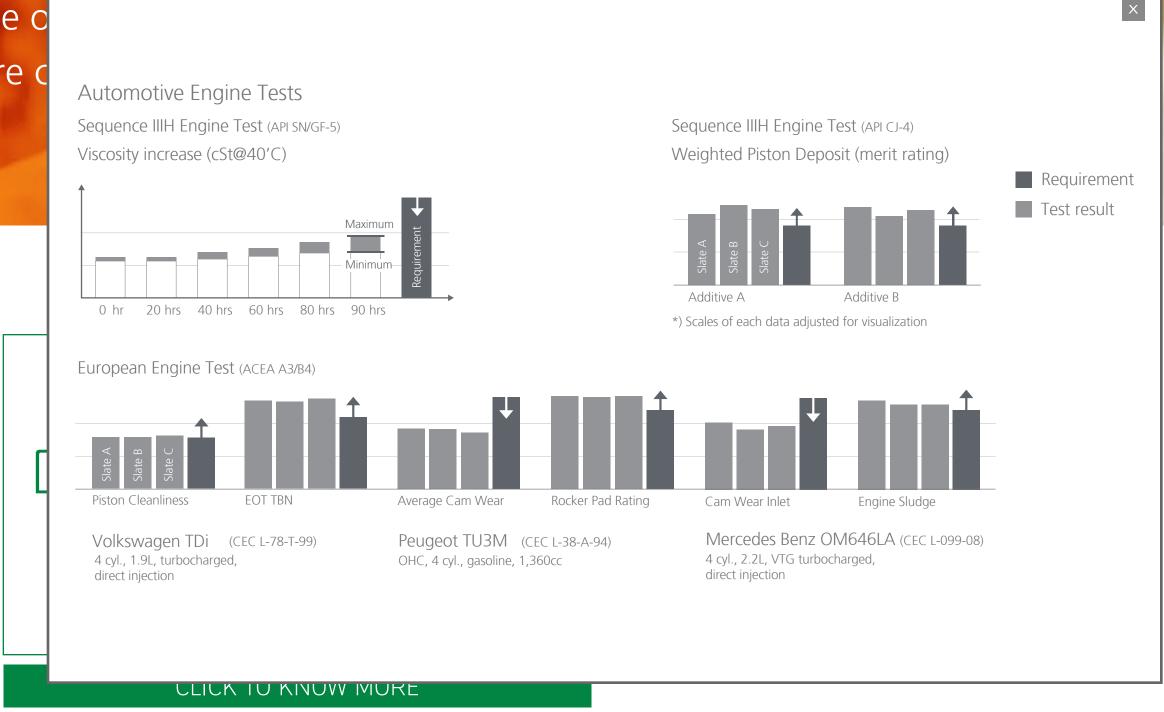
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Automotive Engine
Tests



# Meeting API and ACEA requirements

# In a the Driveline & Industrial Oxidation Tests process and Linked group II base oils In a the Driveline & Industrial Oxidation Tests process and the process

Total Acid Number AW Hydraulic R&O Type Industrial Gear Oil Marine Oil Railroad Railroad Railroad Romann AW Hydraulic RPVOT KOMATSU Hot Tube PDSC

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.

Sequence IIIH (API SN/GF-5) Peugeot TU3M (ACEA A3/B4) Volkswagen TDi (ACEA A3/B4) Peugeot TU5JP-L4 (ACEA A3/B4) Requirement Test result

Test result

Requirement Test result

Driveline & Industrial Oxidation Tests

CLICK TO KNOW MORE

CLICK TO KNOW MORE

"We leverage our 14% base oil market share, tremendous base oil industry experience spanning several decades, globally recognized base oil brands, and technical excellence to meet the needs of our customers.

Our consistent product quality and reliability of supply from three of the most advanced and complex manufacturing sites across the globe ensure that we will always be a dependable choice of base oils."

### Said Al-Hadrami

Vice President Saudi Aramco International Operations

# Contact us

### Commercial Contacts

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