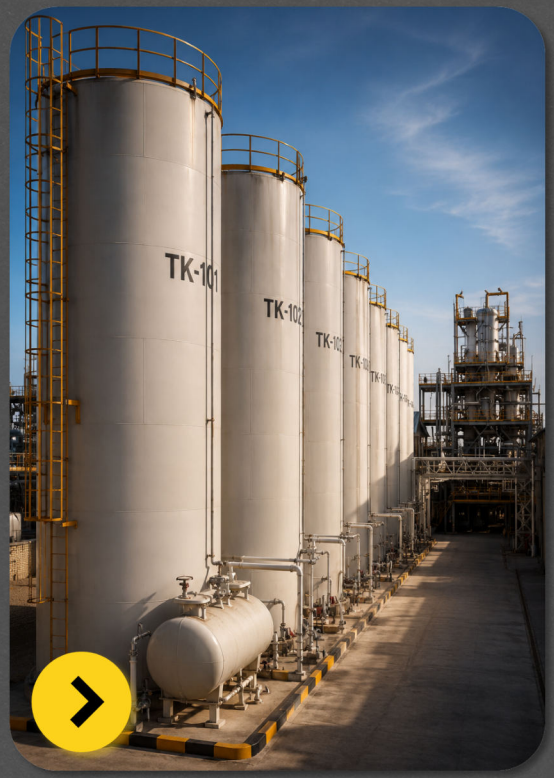
LIMA PETRO REFINERY

Where Refining Technology



LIMA PETRO REFINERY

COMPANY PROFILE

Builds Customer Trust

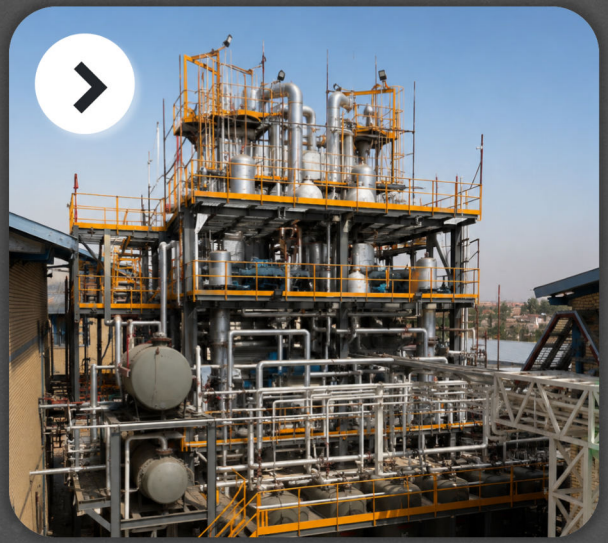
LIMA PETRO REFINERY

INTRO

Introduction To Our Company

Advanced Vacuum Distillation

EST. 2024



Lima Petro Refinery is a newly constructed, state-of-the-art facility dedicated to the production of high-quality recycled base oils and hydrocarbon products, commenced operations in 2024. Building on extensive prior experience in supplying petrochemical and petroleum products across Asia, Africa, and Europe, we combine global expertise with local precision. Our core production process utilizes advanced vacuum distillation technology, ensuring superior product quality and a diverse, reliable output.

At Lima Petro Refinery, quality, professionalism, and trust are not just values - they are the foundation of every products we produce.

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STRATEGIC LOCATIONS

Strategic Presence

Strategic International Network

Lima Petro Refinery benefits from a strategic international network developed through experienced foreign partners and affiliated commercial channels across key regional markets. While our production operations are based in Iran, our business development and export coordination are supported through established trading offices and partner networks in the UAE, India, and Turkey.

This structure enables us to connect our refining and production capabilities with international buyers, regional distributors, and industrial customers across the Middle East, South Asia, Africa, and neighboring markets. Through this network, we support product inquiries, commercial negotiations, documentation, logistics coordination, and market development activities with greater flexibility and regional access. Our international cooperation model allows Lima Petro Refinery to maintain a strong production focus while benefiting from cross-border commercial expertise, market intelligence, and export-oriented partnerships.

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PRODUCTION PROCESSES

Advanced

Production Processes

We combine two key production methods to manufacture diverse products for domestic and international markets.

1. Vacuum Distillation and Lube oil Polishing Process

Utilizing advanced vacuum distillation columns and refining systems, we produce high-purity products:

- Refined Base Oil: For lubrication and industrial oil production.
- Value-Added By products: Including spindle oil, Vacuum distillation Residue/Bitumen , and Fuel cut.

2. **Advanced Blending Process**

In this method, high-quality hydrocarbon cuts are blended with precise ratios under stringent quality control to produce:

- Light Hydrocarbons: For solvent, paint, and resin industries.
- Heavy Hydrocarbons: For industrial fuels and energy applications.

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RECYCLED BASE OILS

Recycled Base Oils

Lima Petro Refinery produces high-quality recycled base oils through advanced vacuum distillation, treatment, and polishing processes. Used oil is processed under controlled vacuum conditions and separated into different product fractions based on operating temperature and boiling range. Our recycled base oil portfolio includes Spindle Oil, SN150, SN300, and SN500. These products are designed to provide stable quality, improved color, reduced odor, and reliable performance for lubricant-related and industrial applications

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SN150

Recycled Base Oil – SN150

PROPERTIES	UNIT	TEST METHOD	RANGE
Viscosity @100 (°C)	CST	ASTM D445	4.1-5.6
Viscosity Index	-	ASTM D2270	100
Flash Point	°C	ASTM D92	Min 180
Pour Point	°C	ASTM D97	-3
Color	-	ASTM D1500	1.5-2
Density @15 °C	Kg/m^3	ASTM D1298	855-870

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SN300

Recycled Base Oil – SN300

PROPERTIES	UNIT	TEST METHOD	RANGE
Viscosity @100 (°C)	CST	ASTM D445	5.6 – 8.5
Viscosity Index	-	ASTM D2270	80-120
Flash Point	°C	ASTM D92	Min 200
Pour Point	°C	ASTM D97	-3
Color	-	ASTM D1500	1.5-2
Density @15 °C	Kg/m^3	ASTM D1298	860-875

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SN500

Recycled Base Oil – SN500

PROPERTIES	UNIT	TEST METHOD	RANGE
Viscosity @100 (°C)	CST	ASTM D445	9 – 11
Viscosity Index	-	ASTM D2270	80-120
Flash Point	°C	ASTM D92	Min 220
Pour Point	°C	ASTM D97	-3
Color	-	ASTM D1500	1-2
Density @15 °C	Kg/m^3	ASTM D1298	865-880

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TEXTILE SPINDLE OIL

Textile Spindle Oil

TEST	UNIT	TEST METHOD	RANGE
Density @ 15.6°C	kg/m³	ASTM D1298	850/870
Kinematic Viscosity @ 40°C	CST	ASTM D445	REPORT
Kinematic Viscosity @ 100°C	CST	ASTM D445	3.0-4.1
Viscosity Index	-	ASTM D2270	80-120
Open Flash Point	°C	ASTM D92	Min 150
Pour Point	°C	ASTM D97	Max 0
Color Number	-	ASTM D1500	Max 2
Copper Corrosion (3h @ 100°C)	-	ASTM D130	Max 1b
Acid Number	Mg KOH/g	ISIRI 3299	Max 0.05

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BITUMEN

Bitumen

Lima Petro Refinery offers Bitumen / Vacuum Distillation Residue as a heavy refinery product obtained from advanced distillation operations. This product is suitable for industries requiring dense hydrocarbon residue for asphalt-related applications, industrial fuel blending, roofing materials, insulation production, and refinery feedstock use.

Vacuum distillation residue is commonly used as a base material for bitumen and road asphalt production, residual fuel oil, and further refinery processing. It can also support industrial applications where stable heavy hydrocarbon residue is required

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Light Hydrocarbons (White Spirit)

Utilizing advanced technology, we produce two superior grades of light hydrocarbons

Premium Light Hydrocarbon (White Spirit)

- **Sulfur:** Maximum 450 ppm (low)
- **Mercaptan:** 32 ppm
- **Color:** Less than 0.5 (clear)
- **Applications:** Solvent for paints and resins, instant thinner, printing and degreasing industries.
- **Competitive Advantage:** Suitable for sensitive markets like Turkey, UAE, and Europe, India, South – East Asia.

Economical Light Hydrocarbon (White Spirit)

- **Sulfur:** Maximum 1500 ppm
- **Mercaptan:** 233 ppm
- **Applications:** General industrial solvent, economical thinner, adhesive and resin industries.
- **Competitive Advantage:** Competitive pricing, suitable for large volumes, markets in Africa and Central Asia.

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Light Hydrocarbons (White Spirit)

Technical Data Sheet

PROPERTIES	TEST METHOD	LPR/03/D	LPR/05/B	LPR/03/E
Density @15°C (Kg/m³)	ASTM D4052	790 ±2	795 ±2	791 ±2
Pour Point (°C)	ASTM D97	N/R	N/R	N/R
Flash Point (Open Cup) (°C)	ASTM D92	N/R	N/R	N/R
Flash Point (Closed Cup) (°C)	ASTM D93	56 ±2	48 ±2	53 ±2
color	ASTM D1500	< 0.5	< 0.5	< 0.5
Mercaptan	ASTM D130	32	11	233
Sulfur (ppm)	ASTM D4294	Max 450	Max 80	Max 1500
Copper Corrosion	ASTM D3227	1a	1a	1a
I.B.P (°C)	ASTM D-86-20b	163 ±3	160 ±3	158 ±3
10% Distillation (°C)	ASTM D-86-20b	168 ±3	165 ±3	165 ±3
30% Distillation (°C)	ASTM D-86-20b	172 ±3	170 ±3	171 ±3
50% Distillation (°C)	ASTM D-86-20b	176 ±3	175±3	177 ±3
70% Distillation (°C)	ASTM D-86-20b	184 ±3	182 ±3	186 ±3
90% Distillation (°C)	ASTM D-86-20b	208 ±3	199 ±3	202 ±3
95% Distillation (°C)	ASTM D-86-20b	215 ±3	211 ±3	210 ±3
F.B.P (°C)	ASTM D-86-20b	242 ±3	218 ±3	236 ±3
Recovery (%Vol)	ASTM D-86-20b	99.6 %	99 %	99.8 %
Residue (%Vol)	ASTM D-86-20b	0.4 %	0.5 %	0.2 %

Heavy Hydrocarbons

Lima Petro Refinery produces heavy hydrocarbon products through controlled blending processes for industrial fuel, blending, and thermal applications. These products are developed to meet regional market requirements where reliable supply, stable specifications, and competitive commercial terms are essential.

Our heavy hydrocarbon portfolio is mainly focused on the markets of Afghanistan, Pakistan, India, and the UAE, with product characteristics adjusted according to customer requirements, industrial usage, and destination market needs.

Applications

Heavy hydrocarbons are suitable for:

- Industrial fuel applications
- Fuel blending
- Thermal applications
- Industrial burners
- Boilers and furnaces
- Heating systems
- Energy-intensive industries
- Regional fuel supply markets

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Heavy Hydrocarbons

Technical Data Sheet

PROPERTIES	LPR/05/I	LPR/04/E
Density @15°C (kg/m³)	820 ±1	841 ±2
Pour point (°C)	-39	—
Flash point (°C)	75 ±2	49 ±2
Color (ASTM D1500)	2.5	2 ±0.5
Copper Corrosion	1a	—
Mercaptan (ppm)	—	—
Sulfur (ppm)	Max 800	Max 1500
Cetane Index (ASTM D976)	50.2	—
Initial Boiling Point (IBP °C)	176 ±3	162 ±3
10% Distillation Point (°C)	203 ±3	170 ±3
30% Distillation Point (°C)	218 ±3	175 ±3
50% Distillation Point (°C)	238 ±3	179 ±3
70% Distillation Point (°C)	246 ±3	186 ±3
90% Distillation Point (°C)	267±3	203 ±3
95% Distillation Point (°C)	308 ±3	224 ±3
Final Boiling Point (FBP °C)	353 ±3	337 ±3
Recovery (%Vol)	97	99
Residue (%Vol)	2	1

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Heavy Hydrocarbons

Technical Data Sheet

PROPERTIES	LPR/02/B	LPR/03/B	LPR/04/A
Density @15°C (kg/m³)	814 ±2	814 ±2	825 ±2
Pour point (°C)	—	—	-36
Flash point (°C)	64 ±2	61 ±2	57 ±2
Color (ASTM D1500)	1.5	1.5	2
Copper Corrosion	1a	1a	1a
Mercaptan (ppm)	—	252	—
Sulfur (ppm)	Max 3500	Max 3500	Max 3500
Cetane Index (ASTM D976)	—	43	
Initial Boiling Point (IBP °C)	172 ±3	169 ±3	157 ±3
10% Distillation Point (°C)	187 ±3	185 ±3	174 ±3
30% Distillation Point (°C)	199 ±3	197 ±3	187 ±3
50% Distillation Point (°C)	209 ±3	210 ±3	208 ±3
70% Distillation Point (°C)	216 ±3	224 ±3	231 ±3
90% Distillation Point (°C)	249 ±3	256 ±3	272 ±3
95% Distillation Point (°C)	274 ±3	282 ±3	294 ±3
Final Boiling Point (FBP °C)	328 ±3	332 ±3	326 ±3
Recovery (%Vol)	99.6	99.4	99.9
Residue (%Vol)	0.4	0.6	0.1

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Heavy Hydrocarbons

Technical Data Sheet

PROPERTIES	LPR/02/D	LPR/05/A	LPR/01/E	LPR/04/B
Density @15°C (kg/m³)	819 ±2	818 ±2	821 ±2	820 ±2
Pour point (°C)	—	—	-33	-30
Flash point (°C)	65 ±2	67 ±2	67 ±2	48 ±2
Color (ASTM D1500)	—	—	1.5	0.5
Copper Corrosion	—	—	1a	1a
Mercaptan (ppm)	177	—	—	—
Sulfur (ppm)	Max 5000	Max 5000	Max 5500	Max 5600
Cetane Index (ASTM D976)	49.6	53.5	52.7	53.06
Initial Boiling Point (IBP °C)	170 ±3	175 ±3	168 ±3	167 ±3
10% Distillation Point (°C)	191 ±3	208 ±3	188 ±3	191 ±3
30% Distillation Point (°C)	217 ±3	235 ±3	222 ±3	230 ±3
50% Distillation Point (°C)	236 ±3	247 ±3	248 ±3	248 ±3
70% Distillation Point (°C)	250 ±3	255 ±3	253 ±3	251 ±3
90% Distillation Point (°C)	273 ±3	274 ±3	262 ±3	255 ±3
95% Distillation Point (°C)	316 ±3	301 ±3	286 ±3	257 ±3
Final Boiling Point (FBP °C)	371 ±3	334 ±3	>390	271 ±3
Recovery (%Vol)	99	99	96	100
Residue (%Vol)	1	1	4	0

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QUALITY CONTROL

Advanced Laboratory

Modern testing instruments and analytical technologies for accurate product evaluation.

Continuous Monitoring

Quality control from raw material intake to in-process production and final product delivery.

Expert Technical Team

Experienced laboratory and production specialists in recycled base oils, vacuum distillation, blending, and hydrocarbons.

Consistent Product Quality

Stable specifications, reliable performance, and customer focused quality assurance.

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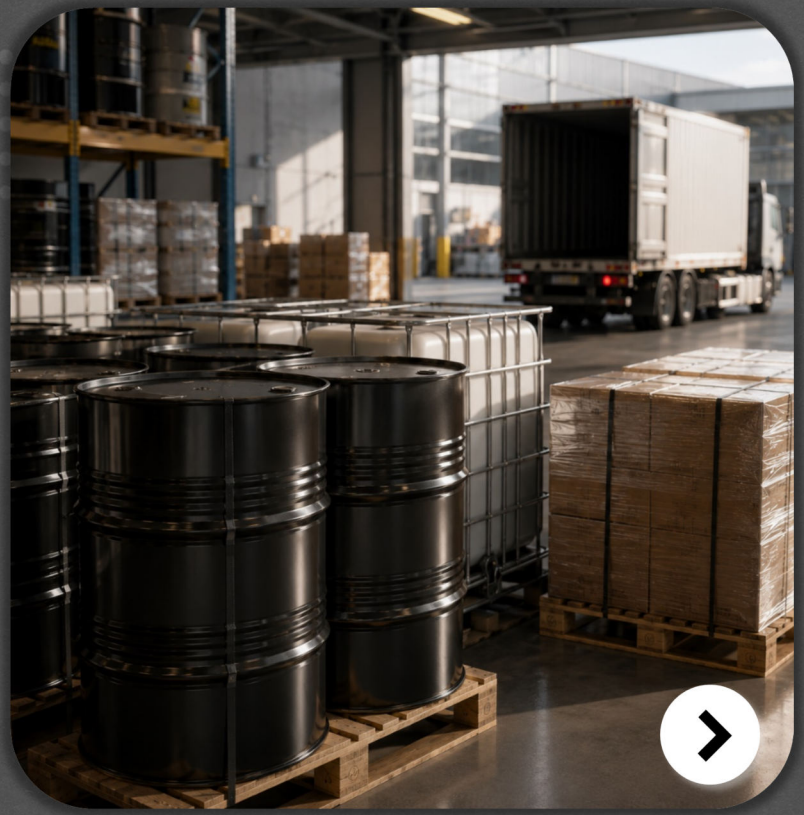

Packaging & Logistics

Packaging Options (used and new):

- Bulk: Via road tankers (24-25 MT), vessels, and port terminals.
- ISO Tank: Standard stainless-steel containers.
- Flexi Tank: Disposable polymer bags for cost-effective exports.
- IBC: 1000-liter tanks (approx. 850 kg).
- Drum: 208-liter steel drums (approx. 180 kg net).

Our Logistics Advantages:

- Customized shipping planning.
- Full compliance with safety regulations (IMDG, ADR).
- Complete documentation (MSDS, COA, COO).
- Global delivery capability to major ports.

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CONTACT INFO

Factory: Aradan , Iran

Office: Tehran, Iran

Contact us