



**BITOL**

# Petroleum

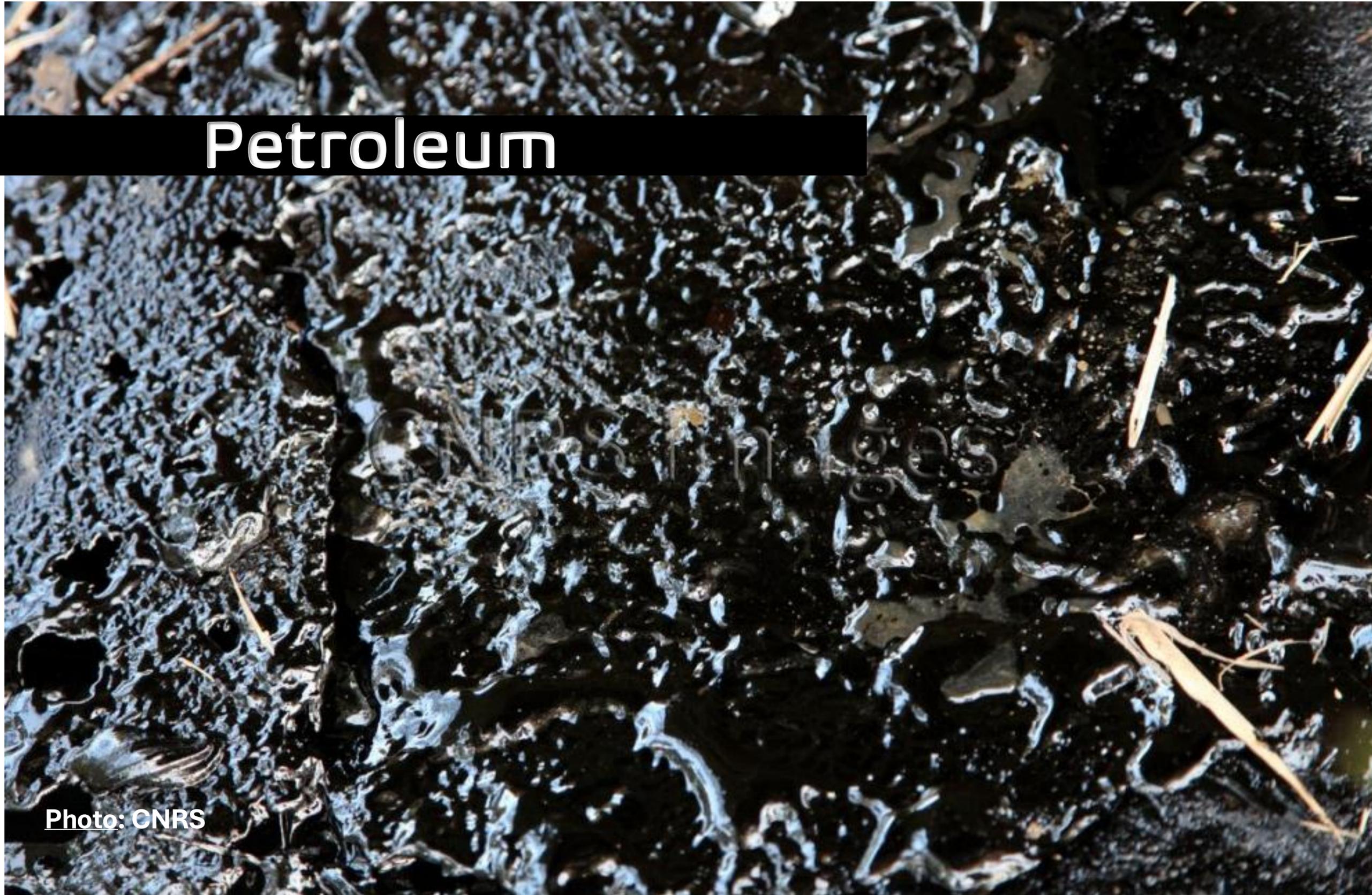
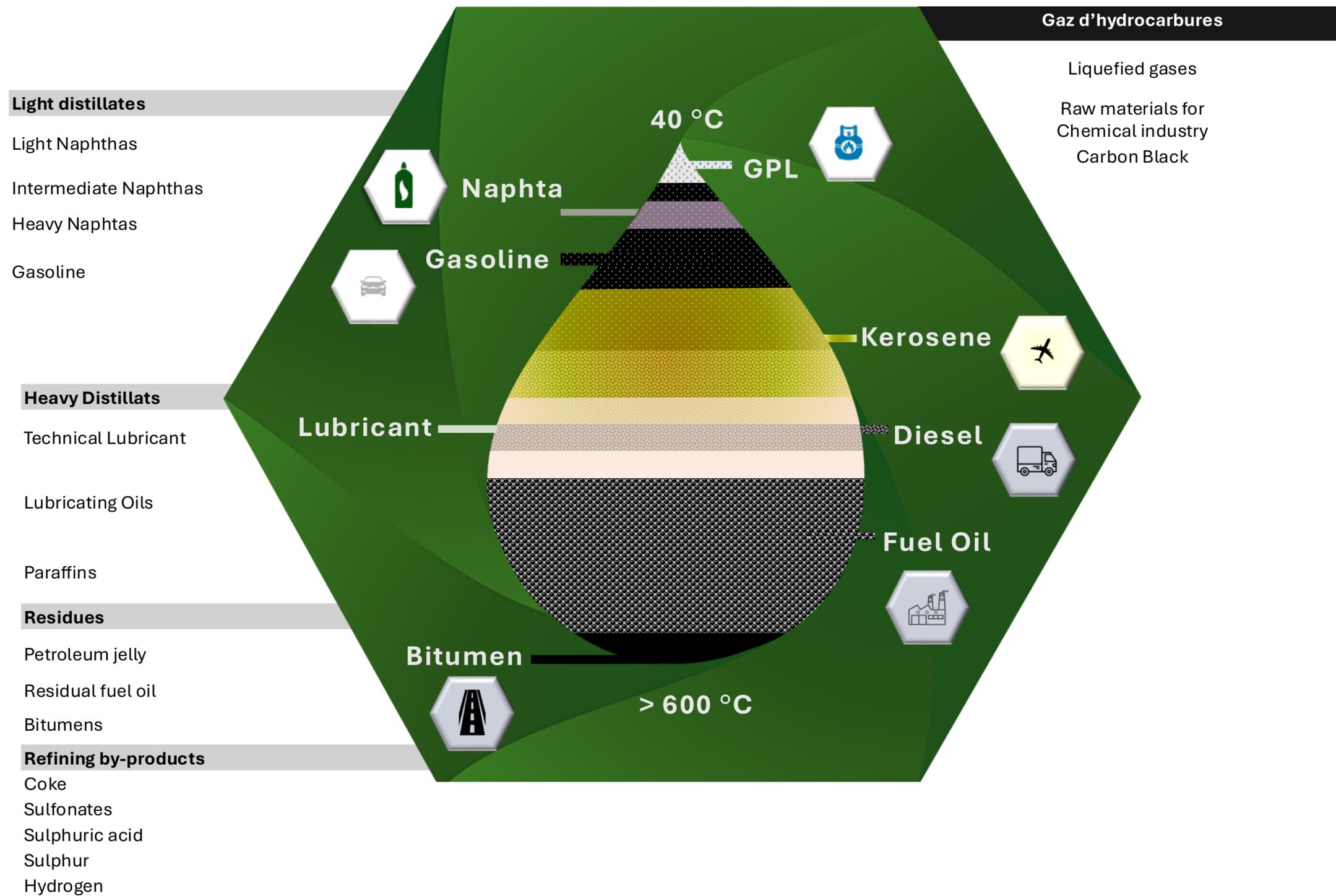


Photo: CNRS

# Petroleum – Key Products

BITOL supplies the main distillates from the processing of crude oil: from gas to bitumen.





## Petroleum – GPL



### GPL

Origin : Hors sanction

+ Optimisation Origin-Destination/Price/Insurance/ Schedule

Disponibility  test  1 delivery  Monthly   
Annual

Technical Support  INCOTERM & Payment Terms : On request

BITOL offers packaged LPG suitable for storage climates.

Type of LPG	Composition	Boiling point at 20°C	Boiling point at 30°C	Boiling point at 40°C	Storage pressure at 20°C	Storage pressure at 30°C	Storage pressure at 40°C
Propane	Mainly propane (C3H8)	-42°C	-36°C	-30°C	8-10 bars	10-12 bars	12-15 bars
Butane	Mainly butane (C4H10)	-0,5°C	+3,5°C	+7,5°C	2-3 bars	3-4 bars	4-5 bars
Propane/butane blend	Variable propane and butane blend	-20°C (env.)	-14°C (env.)	-8°C (env.)	5-8 bars	7-10 bars	9-12 bars
Refinery LPG	Complex mixture of hydrocarbons C3 to C5	Varies according to composition	Varies according to composition	Varies according to composition	Variable pressure depending on composition	Variable pressure depending on composition	Variable pressure depending on composition

The required storage pressure increases with temperature due to the expansion of the gases. This information is crucial for the proper sizing of tanks and piping in liquefied petroleum gas (LPG) storage and distribution systems.

On request, BITOL undertakes a diagnosis of collective and domestic installations.

BITOL also offers anaerobic digestion solutions adapted to individual consumption, in continuous and discontinuous supply units. Without replacing LPG, anaerobic digestion units provide a significant additional energy that can be installed in a small garden, a garage, a factory, a street, a public park, to limit energy purchase expenses, or even constitute a new source of income.





## Petroleum – Naphta

### Naphta

Origin : Hors sanction

+ Optimisation Origin-Destination/Prix/Assurances/Délai

Disponibility  test  1 delivery  Monthly   
Annual

Technical Support  PACKAGE UNDER YOUR BRAND

Property	Value
<b>Chemical composition</b>	Complex mixture of aliphatic and aromatic hydrocarbons
<b>Origine</b>	Light fraction from crude oil refining
<b>Apparence</b>	Clear, colourless to yellowish liquid
<b>Odeur</b>	Characteristic smell of hydrocarbons
<b>Density</b>	0,65 - 0,85 g/cm <sup>3</sup>
<b>Boiling Point</b>	30 - 200°C: This wide boiling range allows the separation of naphtha into different fractions with varying properties and applications.
<b>Flash Point</b>	-40 à 0°C
<b>Main use</b>	<p>The complete range of naphtha solvents may be divided, for convenience, into four general categories:</p> <ol style="list-style-type: none"> <li>1. Special boiling point spirits having overall distillation range within the limits of 30–165°C (86–329°F);</li> <li>2. Pure aromatic compounds such as benzene, toluene, xylenes, or mixtures (BTX) thereof;</li> <li>3. White spirit, also known as mineral spirit and naphtha, usually boiling within 150–210°C (302–410°F);</li> <li>4. High-boiling petroleum fractions boiling within the limits of 160– 325°C (320–617°F).</li> </ol> <p>Because the end use dictates the required composition of naphtha, most grades are available in both high- and low-solvency categories and the various test methods can have major significance in some applications and lesser significance in others. Hence the application and significance of tests must be considered in the light of the proposed end use. Odor is particularly important because, unlike most other petroleum liquids, many of the manufactured products containing naphtha are used in confined spaces, in factory workshops, and in the home.</p>
<b>Risks</b>	- Extrêmement inflammable - Toxique par inhalation et ingestion - Danger pour l'environnement aquatique
<b>Precautions for use above 25°C</b>	<ul style="list-style-type: none"> <li>- Augmentation du risque d'évaporation et d'inflammation</li> <li>- Renforcement de la ventilation et de la surveillance</li> <li>- Stockage dans des zones fraîches et à l'abri de la chaleur</li> <li>- Port de gants et lunettes de protection obligatoire</li> </ul>

BITOL offers a wide range of naphtha-derived products.

Products are classified into four main categories: (i) Special boiling point spirits: Distillation between 30 and 165 °C, (ii) Pure aromatic compounds: Including benzene, toluene and xylenes (BTX), (iii) White spirit: Also known as mineral spirit, with a boiling range of 150 to 210 °C, (iv) High boiling point petroleum fractions: Boiling between 160 and 325 °C. Each grade of naphtha is tailored to specific uses, with high and low solvency options, depending on the needs of the application.





## Petroleum – Gasoline

GPL

Origin : Hors sanction

+ Optimisation Origin-Destination/Prix/Assurances/Délai

Disponibility  test  1 delivery  Monthly   
Annual

Technical Support  INCOTERM & Payment Terms : On request

BITOL offers essences that essentially meet European standards, to limit the environmental impact of species. That said, sulphur remains essential in these fuels:

Natural lubricant for engine parts and injection.

Fuel stabilizer helps reduce deposit formation.

Leak detection: gives a characteristic smell to the fuel.

Compliance with European standards is a guarantee against the disadvantages of sulphurised fuels:

Pollution: The combustion of sulphur produces sulphur oxides (SO<sub>x</sub>).

Corrosion: can contribute to the corrosion of engine parts and injection system and also high sulfur content can decrease combustion efficiency and engine performance.

Fuel Type	Sulfure Rate	Environnemental Impact
Unleaded Gasoline 95 E5	max 10 ppm	9/10
Unleaded Gasoline 98 E5	max 10 ppm	9/10
Super Unleaded Gasoline 95 E10	max 10 ppm	8/10
Super Unleaded Gasoline 98 E10	max 10 ppm	8/10
Premium Unleaded Gasoline 95 E5	max 10 ppm	9/10
Premium Unleaded Gasoline 98 E5	max 10 ppm	9/10
Unleaded Gasoline 95 E0 (no ethanol)	max 10 ppm	9/10
Unleaded Gasoline 98 E0 (no ethanol)	max 10 ppm	9/10
Ethanol Flex Fuel E85	max 10 ppm	7/10
Racing Gasoline (100 octane)	max 10 ppm	9/10

Regulations have gradually reduced the level of sulphur allowed in fuels from thousands of ppm to only 10 ppm maximum, while preserving the necessary lubricating properties.





# Petroleum – Kerosene

GPL

Origin : Hors sanction

+ Optimisation Origin-Destination/Prix/Assurances/Délai

Disponibility  test  1 delivery  Monthly   
Annual

Technical Support  INCOTERM & Payment Terms : On request

Property	Value
Boiling Point	150 - 300°C
Flash Point	38 - 72°C
Main use	<ul style="list-style-type: none"> <li>- Aviation fuel (JET A1 aviation kerosene)</li> <li>- Fuel for boilers and diesel engines</li> <li>- Industrial solvent</li> </ul>
Risks	<ul style="list-style-type: none"> <li>- Flammable</li> <li>- Toxic by inhalation and ingestion</li> <li>- Hazard to the aquatic environment</li> </ul>
Storage precautions below 25°C	<ul style="list-style-type: none"> <li>- Storage in closed, ventilated tanks</li> <li>- Distance from heat and ignition sources</li> <li>- Grounding of equipment to prevent sparks</li> </ul>
Storage precautions above 25°C	<ul style="list-style-type: none"> <li>- Increased risk of evaporation and ignition</li> <li>- Storage in cool, shaded and well-ventilated places</li> <li>- Increased monitoring of tank levels and tightness</li> <li>- No smoking or use of open flames in the vicinity</li> </ul>

**Above 25°C, storage precautions must be reinforced to limit the risk of evaporation and ignition. These precautions are essential to ensure the safety of kerosene storage and distribution facilities in hot climates.**





## Petroleum – Lubricants

GPL

Origin : Hors sanction

+ Optimisation Origin-Destination/Prix/Assurances/Délai

Disponibility  test  1 delivery  Monthly   
Annual

Technical Support  INCOTERM & Payment Terms : On request

Type of lubricant	Composition	Key qualities	Advice for use and storage above 25°C
<b>Mineral Oils</b>	<ul style="list-style-type: none"> <li>- Crude oil refining fraction</li> <li>- Primarily composed of aliphatic and naphthenic hydrocarbons</li> </ul>	<ul style="list-style-type: none"> <li>- Good lubrication</li> <li>- Medium oxidation resistance</li> <li>- Relatively low cost</li> </ul>	<ul style="list-style-type: none"> <li>- Increased risk of evaporation and thermal degradation</li> <li>- Monitor tank levels and tightness</li> <li>- Store in cool, shaded and well-ventilated places</li> </ul>
<b>Synthetic Base Oils</b>	<ul style="list-style-type: none"> <li>- Synthetic hydrocarbons, usually polyalphaolefins (PAOs)</li> </ul>	<ul style="list-style-type: none"> <li>- Excellent resistance to oxidation and thermal degradation</li> <li>- Very good fluidity over a wide temperature range</li> <li>- High lubrication performance</li> <li>- Longer lifespan</li> </ul>	<ul style="list-style-type: none"> <li>- Reduced risk of heat degradation</li> <li>- Monitor lubricant condition more regularly</li> <li>- Store in cool, shaded and well-ventilated places</li> </ul>
<b>Lubricating greases</b>	<ul style="list-style-type: none"> <li>- Mixture of base oil (mineral or synthetic) and a thickening agent (metallic soap, polymer, etc.)</li> <li>- Allows lubrication of parts under heavy load</li> </ul>	<ul style="list-style-type: none"> <li>- Excellent resistance to pressure and impact</li> <li>- Protects against wear and corrosion</li> <li>- Improved sealing due to paste-like consistency</li> </ul>	<ul style="list-style-type: none"> <li>- Risk of softening and loss of tightness</li> <li>- Monitor the condition of the fat and its behavior</li> <li>- Store in cool, shaded and well-ventilated places</li> </ul>

Mineral oils are more sensitive to heat and require increased level and tightness monitoring.

Synthetic oils are more resistant to thermal degradation.

Lubricating greases can soften and lose sealing at high temperatures, requiring special monitoring.

The choice of lubricant type and storage precautions depend on the technical, environmental and economic constraints of the application





# Petroleum – Gasoil

GPL

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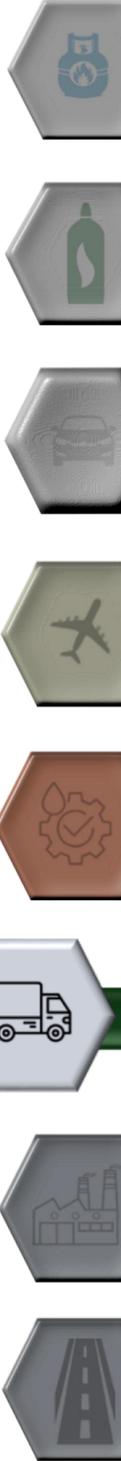
Disponibility  test  1 delivery  Monthly   
Annual

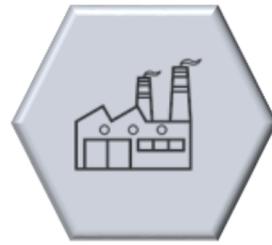
Technical Support  INCOTERM & Payment Terms : On request

Gasoil Type	Composition	Characteristics	Safety instructions above 25°C
<b>Standard Gasoil</b>	Blending of hydrocarbons from crude oil refining	<ul style="list-style-type: none"> <li>- Cetane value &gt; 51</li> <li>- Kinematic viscosity between 2 and 4.5 mm<sup>2</sup>/s</li> <li>- Flash point &gt; 55°C</li> </ul>	<ul style="list-style-type: none"> <li>- Increased risk of evaporation and ignition</li> <li>- Store in cool, shaded and well-ventilated places</li> <li>- Avoid sources of ignition and hot surfaces</li> <li>- Wear appropriate personal protective equipment</li> </ul>
<b>Low-Sulfur Diesel (LFDS)</b>	Same composition as standard diesel, with reduced sulphur content (< 10 ppm)	<ul style="list-style-type: none"> <li>- Cetane value &gt; 51</li> <li>- Kinematic viscosity between 2 and 4.5 mm<sup>2</sup>/s</li> <li>- Flash point &gt; 55°C</li> </ul>	<ul style="list-style-type: none"> <li>- Same instructions as for standard diesel</li> <li>- Avoid contact with skin and eyes</li> </ul>
<b>Synthetic paraffinic diesel (GTL)</b>	Paraffinic hydrocarbons produced by the conversion of natural gas	<ul style="list-style-type: none"> <li>- Cetane Value &gt; 70</li> <li>- Kinematic viscosity between 2 and 4.5 mm<sup>2</sup>/s</li> <li>- Flash point &gt; 55°C</li> </ul>	<ul style="list-style-type: none"> <li>- Lower risk of evaporation and ignition</li> <li>- Store in cool, shaded and well-ventilated places</li> <li>- Avoid sources of ignition and hot surfaces</li> <li>- Wear appropriate personal protective equipment</li> </ul>
<b>Biodiesel (EMHV)</b>	Methyl esters of vegetable oils or animal fats	<ul style="list-style-type: none"> <li>- Cetane value &gt; 51</li> <li>- Kinematic viscosity between 3.5 and 5 mm<sup>2</sup>/s</li> <li>- Flash point &gt; 120°C</li> </ul>	<ul style="list-style-type: none"> <li>- Increased risk of degradation at high temperatures</li> <li>- Store in cool, shaded and well-ventilated places</li> <li>- Monitor fuel condition and replace if necessary</li> <li>- Avoid contact with skin and eyes</li> <li>- Risk of degradation by bacteria under unsuitable storage conditions</li> </ul>

Store fuels in cool, shaded and well-ventilated places to limit the risk of evaporation and ignition.

Strictly avoid sources of ignition (open flames, hot surfaces, etc.) near storage and handling areas. Regularly monitor the condition of fuels, especially for biodiesel, and replace them if necessary in the event of degradation.





## Petroleum – Fuel Oil

GPL

Origin : Hors sanction

+ Optimisation Origin-Destination/Prix/Assurances/Délai

Disponibility  test  1 delivery  Monthly   
Annual

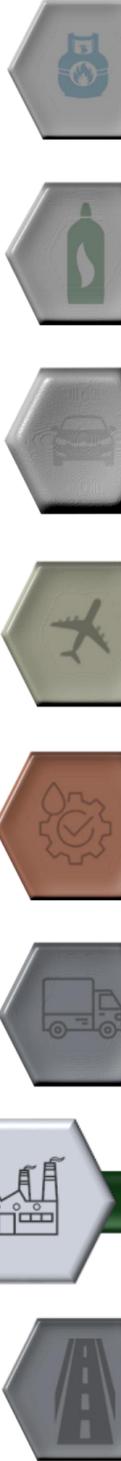
Technical Support  INCOTERM & Payment Terms : On request

Characteristic	Heavy fuel oil
Composition	- Complex mixture of heavy hydrocarbons from crude oil refining
Viscosity	- Very high, typically between 180 and 380 mm <sup>2</sup> /s at 50°C
Density	- High, typically between 0.95 and 1.01
Flash Point	- High, usually above 60°C
Sulphur content	- Variable, up to 3.5% by mass
Usage	- Primarily used as fuel in marine engines and industrial boilers

Safety tips for climates above 25°C:

- Store heavy fuel oil in closed, shaded and well-ventilated tanks to limit the risk of evaporation and ignition.
- Strictly avoid any source of ignition (open flames, hot surfaces, etc.) near storage and handling areas.
- Wear appropriate personal protective equipment (gloves, goggles, protective clothing, etc.) when handling heavy fuel oil.
- Regularly monitor the condition of the fuel and check for contamination or degradation.
- Scrupulously follow the instructions for use and safety
- Have an emergency plan and equipment to fight spills and fires.
- Properly train and equip personnel responsible for handling and using heavy fuel oil.

**BITOL offers admixtures, as well as network systems to optimize the storage and distribution of all distillates, thanks to its expertise in the behavior of hydrocarbons in hot and dry and hot and humid countries**





# Petroleum – Bitumen

GPL

Origin : Hors sanction

+ Optimisation Origin-Destination/Prix/Assurances/Délai

Disponibility  test  1 delivery  Monthly   
Annual

Technical Support  INCOTERM & Payment Terms : On request

Characteristic	Bitumen
Composition	- Complex mixture of heavy hydrocarbons and heterocyclic compounds from crude oil refining
Aspect	- Solid or semi-solid at room temperature, which can be liquefied by heating
Viscosity	- Very high, varying by grade and temperature
Softening Temperature	- Typically between 35°C and 60°C
Flash Point	- High, usually above 200°C
Usage	- Road surfaces, roofs, waterproofing, etc.

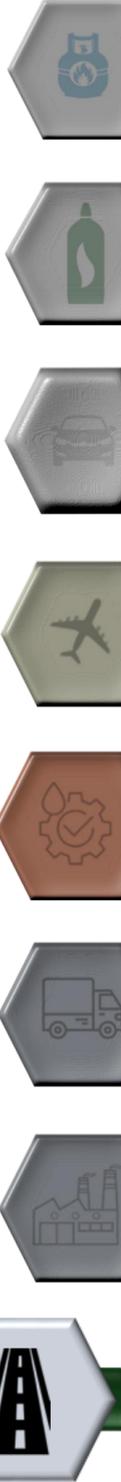
**Climates above 25°C:** Store bitumen in closed, shaded and well-ventilated tanks to limit the risk of overheating and degradation + Avoid contact with hot surfaces and sources of ignition.

**Very dry climates:** Monitor the evolution of the viscosity and consistency of the bitumen, which can change with prolonged exposure to dry heat + Consider the use of softer bitumen grades, better adapted to drought conditions + Apply surface treatments to limit premature aging phenomena.

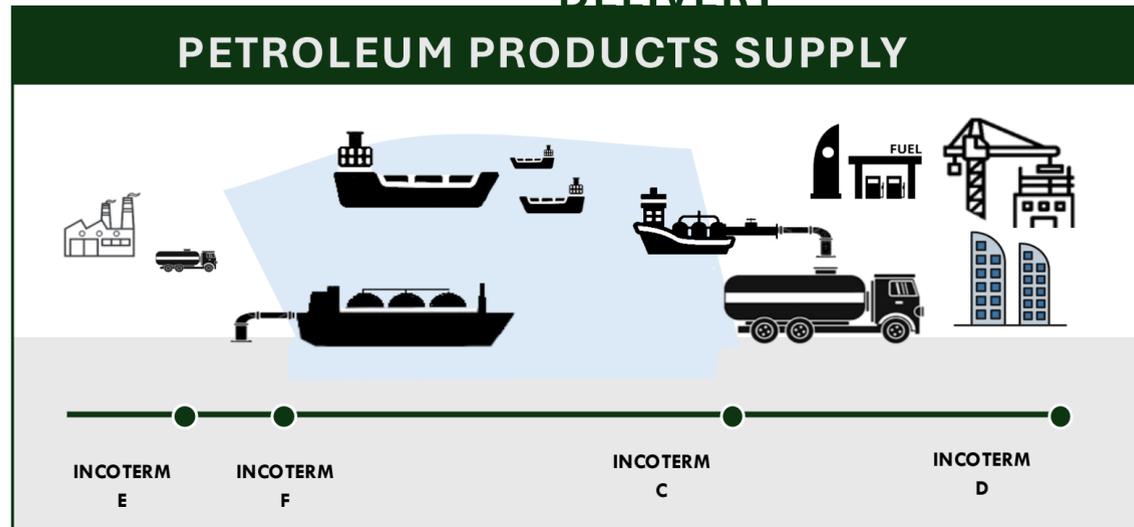
**High humidity climates:** Protect bitumen stocks from ambient moisture to avoid adhesion and compatibility problems with other materials + Regularly check the condition of packaging and storage tanks for water ingress + Adapt application and implementation methods to account for high humidity.



**BITOL offers fixed and mobile technical solutions for on-site management, to preserve your building materials purchased from us or not**



## DELIVERY



## LOCAL STORAGE



**BITOL Gas Tank Storage at Client Site**

Consulting for Fuel and gas Storage

## CLIMATE-RESILIENT PRODUCTS



**Lubricants under Client Specificities**

Development of Lubricants adapted to Sub-saharian Climates

Technical Training + O&M



Delivery and Storage

## BITUMEN



Bitumen Furnace on worksite

Bitumen

Continuous

Replenishment



Technical Advice for Potential Admixtures