



## TECHNICAL SPECIFICATIONS

### 1. PRODUCT IDENTIFICATION

#### 1.1 ID/CODIGO:

UFG-404 Petroleum Derivaties.

UFG-404-A Diesel.

UFG-404-B Fueloil.

UFG-404-C Crude oil.

UFG-404-D Gasoline.

UFG-404-E Kerosen.

UFG-404-F Natrual Gas.

UFG-404-H Naphtha.



#### 1.2 PRODUCT DESCRIPTION:

Petroleum is a liquid distillate product obtained from mineral raw materials such as crude oil and coal. It is composed of cyclic and saturated chain hydrocarbons and cyclic hydrocarbons with aromatic double bonds. In addition to these paraffinic, naphthenic and aromatic components, the oil contains alkenes, also called olefins, and small fluctuating amounts of sulfur, nitrogen and organic compounds.

In common jargon, petroleum products are considered fossil fuels, such as gasoline, diesel, jet fuel, bunker fuel, and heating and lubricating oil, as these have been the most common uses for petroleum since industrialization. Additionally, mineral oils contain highly refined medicinal white oils. They are so thoroughly refined that they virtually contain only alkenes and cycloalkanes, that is, saturated hydrocarbons, and are used for medical and cosmetic applications.

##### 1.2.1 Diesel:

Diesel or gas oil, is a liquid hydrocarbon with a density greater than  $850 \text{ kg} / \text{m}^3$  ( $0.850 \text{ g} / \text{cm}^3$  at  $15^\circ \text{C}$ ), composed mainly of paraffins and used mainly as heating fuel and diesel. engines. Its lower calorific value is  $35.86 \text{ MJ} / \text{l}$  ( $43.1 \text{ MJ} / \text{kg}$ ) which depends on its composition.



### 1.2.2 Fueloil:

Fuel oil, also called fuel oil and also known as fuel oil, is a fraction of oil that is obtained as a residue in fractional distillation. From here you get between 30 and 50% of this substance. It is the heaviest fuel that can be distilled at atmospheric pressure. It is made up of molecules with more than 20 carbon atoms, and its color is black. Fuel oil is used as fuel for electric power plants, boilers and furnaces.

Fuel oil is classified into six classes, numbered from 1 to 6, according to its boiling point, its composition and its use. The boiling point, which varies from 175 to 600 ° C; the length of the carbon chain, from 9 to 70 atoms; and the viscosity increases with the number of carbons in the molecule, so the heavier ones must be heated to flow. The price generally decreases as the number increases.

Fuel oils No. 1, fuel oil No. 2 and fuel oil No. 3 are called by different names: distilled fuel oil, diesel fuel oil, light fuel oil, diesel or simply distillates. For example, No. 2 fuel oil, No. 2 distillate, and No. 2 diesel fuel oil are almost the same (diesel is different because it has a cetane number which describes the ignition quality of the fuel).

Diesel refers to the distillation process. The crude is heated, gasified, and then condensed.

**Number 1** is similar to kerosene and is the fraction that boils right after gasoline.

**Number 2** is the fuel used by diesel engines (machinery and light vehicles to heavy trucks).

**Number 3** is a distillate fuel that is rarely used.

**Number 4** is usually a mixture of distilled fuel oil and residues, such as No. 2 and 6; however, sometimes it is just a strong distillate. No. 4 can be classified as diesel, distillate or residual fuel oil.

**Number 5 and Number 6** are known as residual fuel oils (RFOs) or heavy fuel oils. In general, more Number 6 is produced than Number 5. The terms heavy



fuel oil and residual fuel oil are used as the names for Number 6. Number 5 and 6 are the remnants of crude oil after gasoline and distillate fuel oils are extracted through the distillation. Number 5 fuel oil is a blend of 75-80% Number 6 and 25-20% Number 2. Number 6 may also contain a small amount of No. 2 to meet certain specifications.

### **1.2.3 Crude Petroleum or crude oil:**

Crude oil is a fossil fuel composed mainly of hydrocarbons, which can also contain small amounts of sulfur, nitrogen, and oxygen. It is formed under conditions of high pressure and heat due to the transformation of organic matter and occurs, for example, in sandstones and fractured calcareous soils covered by impermeable layers. It can also be found in shales and sands, and in some cases it can rise directly to the surface.

Crude oil undergoes a cleaning process during which coarse impurities are removed and gas is separated. Later, it is desalted and dehydrated. After this process, the material is ready for refining.

The composition of the different crude oils and, therefore, their quality depend on their origin. The lighter and sweeter a crude oil is, the higher its quality. Sulfur content is an especially important indicator. For example, crudes from OPEC countries, such as Iraq, Iran, Kuwait, Saudi Arabia, and Venezuela, tend to be of poorer quality and, therefore, at a lower price than higher-quality crudes, known as el Brent from the North Sea and WTI (West Texas Intermediate) from the US Crude oil from the Ural Mountains of Russia is another cheaper variety. According to what is currently known, the largest oil deposits are in Saudi Arabia, followed by Venezuela and Iran. Canada and the United States are ranked 11 and 12, respectively.

### **1.2.4 Gasoline:**

Gasoline is a product obtained from petroleum by distillation, which is used mainly as fuel for all types of mobiles with internal combustion engines, stoves, lamps and for cleaning with solvents, among other applications. In Argentina, Paraguay and Uruguay and



nearby areas such as Tarija Bolivia, gasoline is known as naphtha (from the compound naphtha), and in Chile, as benzine (from the compound benzene).

Its density is 680 g / l, 1 20% less than diesel (diesel), which is 850 g / l. A liter of gasoline provides an energy of 34.78 megajoules (MJ) when burned, approximately 10% less than diesel, which contributes 38.65 MJ per liter. However, in terms of mass, gasoline provides 3.5% more energy.

In general, it is obtained from oil by direct distillation 2 and is the lightest liquid fraction of oil (excluding gases). Gasoline is also obtained from the conversion of heavy oil fractions (vacuum gas oil) into process units called FCC (Fluid Catalytic Cracking) or hydrocracking.

Gasoline is a mixture of hundreds of individual hydrocarbons from C4 (butanes and butenes) to C11, such as methylnaphthalene.

### 1.2.5 Kerosene.

Kerosene (from the Greek: κηρός (keros) which means "wax") is a flammable liquid, transparent (or with a slight yellowish color, depending on the fraction that is extracted), a mixture of hydrocarbons, which is obtained from the distillation of natural petroleum. It was originally used in stoves and lamps, and is now used as jet fuel and in the manufacture of insecticides. Intermediate density between gasoline and diesel, JP (short for jet petrol) is used as fuel in jet and gas turbine engines or is added to automotive diesel in refineries. It is also used as a solvent and for domestic heating, as a dielectric in electrical discharge machining processes and, formerly, for lighting. It is insoluble in water.

### 1.2.6 Natural Gas.

Natural gas is a hydrocarbon, a mixture of light gases of natural origin. It contains primarily methane and typically includes varying amounts of other alkanes and sometimes a small percentage of carbon dioxide, nitrogen, hydrogen sulfide, or helium. It forms when multiple layers of decomposing plant and animal matter are exposed to intense heat and pressure below the Earth's surface for millions of years. The energy that plants initially obtain from the sun is stored in the form of chemical bonds in the gas. It constitutes an important source of



fossil energy released by its combustion. It is extracted, either from independent fields (non-associated gas), or together with oil or coal fields (gas associated with other hydrocarbons and gases).

### 1.2.7 Naphtha.

Naphtha is a liquid compound of intermediate hydrocarbons derived from the refining of crude oil. It is usually desulfurized and also catalytically reformed, which restructures its molecules, in addition to breaking some bonds, into smaller molecules to produce a high-octane component of gasoline.

There are hundreds of sources of crude oil around the world and each source has its own unique composition or assay. There are also hundreds of oil refineries around the world and each of them is designed to process either a specific crude oil or specific types of crude oils. Naphtha is a general term that each refinery produces with its own unique initial and final boiling points and other physical and compositional characteristics. Naphthas can also be produced from other materials such as coal tar, shale deposits, tar sands, and the destructive distillation of wood.

### 1.3 PRESENTATION:

In bulk (By container, half vessel or full vessel or Barrel).

At the customer's convenience.

## 2 PRODUCT FEATURES

### 2.1 APPLICATION

Through the application of refining processes, a wide range of commercial products can be made available to the consumer.

**Energy:** specific fuels for transportation, agriculture, industry, electric current generation and for domestic use.

**Special products:** lubricants, paraffins, asphalt, greases for vehicles and products for industrial use.

**Raw materials** for the basic petrochemical industry: plastics, acrylics, gloves, paints, various packaging, detergents, textile fibers, insecticides, etc.



## 3 PRODUCT CONSERVATION

### 3.1 CONSERVATION MODE:

**Temperature and decomposition products:** Thermal decomposition can cause produce toxic and irritating fumes.

**Hazardous reactions:** When heated with strong oxidants such as: ammonium nitrate or Ammonium tetrachloride, bromates, chlorates, iodates, nitric acid, etc.

**Storage conditions:** Ventilated places. No smoking in the storage area.

**Incompatible materials:** Strong oxidizers such as: ammonium nitrate or ammonium tetrachloride, bromates, chlorates, iodates, nitric acid, etc.

**HIGHLY COMBUSTIBLE PRODUCTS, GENERATE HIGH MAGNITUDE EXPLOSIONS AND FIRE.**

### LABELED:

However, since the product is presented and shipped in bulk, labeling is unnecessary; According to the presentation required by the client, a labeling is offered, with the following data:

Product Name. Place Of Origin. Company number. Lot Number. Product destination. Product conservation. Date of production (Y/M/D). Expiration date. Conservation specifications. Barcode. Weight. Other data need.

Labeling can be done in any language or combination of languages and specifications in according to the client's request.

## 4 DISTRIBUTION

### 4.1 Conditions of carriage

Transport in vehicles with bodywork or a tent that protects the product from the rain. The vehicle must be clean and free of moisture. Avoid placing combustible or flammable objects on the container.

### 4.2 MARKET SEGMENT:

Export Quality for the whole world.



**4.3 CONTACT INFORMATION:**

Attention to UNITED FINANCIALS GROUP, Llc.

Web Site: [www.unitedfinancialsgroup.com](http://www.unitedfinancialsgroup.com)

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