



## ***ARGUS EUROPEAN PRODUCTS***

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***LAST UPDATED: JANUARY 2012***

The most up-to-date Argus European Products methodology is available on [www.argusmedia.com](http://www.argusmedia.com)

## Introduction

Argus European Products is a daily market report that publishes prices and market commentary on the international bulk spot market for petroleum products in Europe.

It is one of the leading reports serving the oil industry and is widely used as a reference in the pricing of petroleum products.

Argus European Products contains price assessments for different types of spot contracts at specified locations. The market commentary is on the two main regional markets — the bulk spot market in northwest Europe and the bulk spot market in the Mediterranean.

Argus European Products provides prices that are used in third-party contracts, risk management contracts (such as swaps), internal price transfers, internal benchmarking, mark-to-market pricing and market analysis.

Argus publishes prices that report and reflect prevailing levels for open-market arm's length transactions (please see the Argus Global Compliance Policy for a detailed definition of arm's length).

The assessed prices are based on prices from the open spot market whenever possible. *Argus'* price series are based on the structure of the market established by market participants, so if the market trades at price differentials to a benchmark price, such as the London-based Intercontinental Exchange's (Ice) gasoil price, *Argus* will reflect prices in the open spot market on this basis.

*Argus* price assessments for European petroleum products reflect market information gathered on transactions and daily bid/ask spreads for each petroleum product under standardised specifications and under the general terms and conditions employed for standard contracts in common use.

Argus European Products contains assessments for the listed products and also the Argus high-sulphur fuel oil volume-weighted average (Argus HSFO VWA). The Argus HSFO VWA is a volume-weighted average of transactions in the Rotterdam fuel oil barge market recorded by *Argus* and published on the Argus Fuel Oil Bulletin Board between 11.00am and 11.30am and 3.45pm and 4.45pm London time. More details about the Argus HSFO VWA can be found in the Argus HSFO VWA document. Details about the Argus Fuel Oil Bulletin Board can be found in the document Argus Bulletin Board Procedures HSFO.

*Argus* reporters conduct a comprehensive daily survey of key industry participants to uncover all relevant market information and to confirm market transactions, bids and offers for inclusion in the assessments. *Argus* uses the telephone and various electronic mail and messaging services to acquire and cross-check its information. *Argus* does not restrict itself to one subsection of the market such as a single trading platform or single informational channel for its market information. The market surveys are balanced in their approach and are conducted by well trained specialists who are part of a dedicated team responsible for Argus European Products.

The reporters consider a broad range of information — fixed-price deals, formula-related deals, premiums and discounts to futures prices or other accepted benchmarks, reported but unconfirmed trades, netback values, bids, offers, forward markets, spreads and supply/demand fundamentals before making their market assessments. Transactions and buy/sell ranges outside of the *Argus* loading/delivery periods and for specifications not directly included in the methodology are considered when assessing prices if market participants believe they have affected market values for the products under the standardised terms reported in Argus European Products.

Deals, bids and offers must be considered repeatable to be reflected in daily assessments. All day information is taken into account but if the market shows high intra-day volatility, *Argus* will weight the assessments towards trading activity at the end of the working day up to the cutoff time in the specifications listed below.

The *Argus* assessments methodology relies on a common sense approach and informed analysis of all market data. The market surveys will involve up to 20 market participants in each market segment contacted by telephone or electronically. The information will be verified and analysed. The approach is methodical and standardised and the assessments will be tested against the views of other market participants.

Information from the survey is verified as best as possible and archived in databases. The methodologies are detailed and transparent. A professional approach by trained staff monitored by experienced managers is a characteristic of the *Argus* tradition.

*Argus* uses the liquid barge market at Rotterdam as a marker for many products and sets cargo prices in line with the market's perception of the premium or discount to barges. The fob-cif differentials are maintained on spot freight costs unless there is an overriding reason to deviate from this policy.

There will be some assessments that are published as a service to the industry that are not supported by an open traded market. These price assessments will be constructed by comparing price values from the liquid traded open markets adjusted for freight and any other appropriate costs. Most of the Mediterranean prices will be constructed using an open market price reference on this basis. *Argus* uses northwest Europe prices to establish prices in the Mediterranean in the absence of an open market price for the product. *Argus* will modify the prices according to regional market conditions. *Argus* believes this approach of using an open liquid market to provide baseline price visibility provides consistent assessments and a transparent structure for the clear identification of Mediterranean assessments.

All assessments and formulas refer to the price of the product on the day of the published report and are expressed in US dollars unless otherwise stated. The prices are for contracts under whatever general terms and conditions are accepted as standard and prevailing in that particular market. Price changes refer to the last published report.

## Main pricing table

### Northwest Europe cargoes

#### Mogas 95R 10ppm fob

Motor gasoline 95 Ron (octane) 10ppm sulphur.

Prices are in US dollars/tonne.

Prices are assessed as Mogas 95R 10ppm cif northwest Europe cargoes minus the UK Continental freight cost unless modified by *Argus* according to market conditions.

The UK Continental freight cost will be based on current spot freight rates (WS100 rates) as they apply to an average of specific routes.

These routes are Brofjorden to Rotterdam, Coryton to Le Havre and Le Havre to Hamburg for 22,000t vessels.

The pricing period is for loading 5-15 days forward.

Size is standardised to 10,000-15,000t.

The basis is fob northwest Europe.

The specifications are 95 Ron, unleaded, 10ppm sulphur, standard Eurograde.

The assessment time is 9.00am to 5.30pm London time.

#### Mogas 95R 10ppm cif

Motor gasoline 95 Ron (octane) 10ppm sulphur.

Prices are in US dollars/tonne.

Prices are usually assessed by market participants at a differential to the Mogas 95 Ron 10ppm Eurograde barge assessment.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 10,000-15,000t.

The basis is cif Hamburg.

The specifications are 95 Ron, unleaded, 10ppm sulphur, standard Eurograde.

The assessment time is 9.00am to 5.30pm London time.

#### Mogas 91R fob

Motor gasoline 91 Ron (octane).

Prices are in US dollars/tonne.

Prices are assessed as Mogas 91R cif northwest Europe cargoes minus the UK Continental freight cost unless modified by *Argus* according to market conditions.

The UK Continental freight cost will be based on current spot freight rates (WS100 rates) as they apply to an average of specific routes.

These routes are Brofjorden to Rotterdam, Coryton to Le Havre and Le Havre to Hamburg for 22,000t vessels.

The pricing period is for loading 5-15 days forward.

Size is standardised to 10,000-15,000t.

The basis is fob northwest Europe.

The specifications are 91 Ron, unleaded.

The assessment time is 9.00am to 5.30pm London time.

#### Mogas 91R cif

Motor gasoline 91 Ron (octane).

Prices are in US dollars/tonne. Prices are usually assessed by market participants at a differential to the Mogas 95 Ron 10ppm Eurograde barge assessment.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 10,000-15,000t.

The basis is cif Hamburg.

The specifications are 91 Ron, unleaded.

The assessment time is 9.00am to 5.30pm London time.

#### Naphtha 65 Para cif

Naphtha 65% paraffins.

Prices are in US dollars/tonne.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 10,000-25,000t.

The basis is cif northwest Europe standardised to Rotterdam.

The specifications are 65-70% paraffins.

The assessment time is 8.30am to 5.30pm London time.

#### Jet fob

Prices are in US dollars/tonne.

Prices are usually assessed by netting back from the Argus jet cif northwest Europe price using a UK Continental freight cost modified by *Argus* according to market conditions.

The UK Continental freight cost will be based on current spot freight rates (WS100 rates) as they apply to an average of specific routes.

These routes are Brofjorden to Rotterdam, Coryton to Le Havre and Le Havre to Hamburg for 22,000t vessels.

The pricing period is for loading 5-15 days forward.

Size is standardised to 10,000-25,000t.

The basis is fob northwest Europe.

The specifications are Defstan 91-91 latest issue, 0.800 specific gravity, EU qualified.

The assessment time is 8.30am to 5.30pm London time.

#### Jet cif

Prices are in US dollars/tonne.

Prices are calculated using an Ice settlement price as published by the Intercontinental Exchange as a base price.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 10,000-25,000t.

The basis is cif northwest Europe standardised to Rotterdam.

The specifications are Defstan 91-91 latest issue, 0.800 specific gravity, EU qualified.

The assessment time is 8.30am to 5.30pm London time.

#### UK ULSD cif

UK ultra-low sulphur diesel 10ppm sulphur.

Prices are in US dollars/tonne.

Prices are calculated using an Ice settlement price as published by the Intercontinental Exchange as a base price.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 10,000-15,000t.

The basis is cif UK Thames Estuary.

The specifications are 10ppm sulphur, 0.835 specific gravity at 15°C.

The assessment time is 8.30am to 5.30pm London time.

#### French diesel 10ppm fob

Diesel 10ppm sulphur.

Prices are in US dollars/tonne.

Prices are netted back from the Argus Diesel 50ppm cif price using UK Continental freight as assessed by *Argus* modified by any relevant market considerations.

The UK Continental freight cost will be based on current spot freight rates (WS100 rates) as they apply to an average of specific routes.

These routes are Brofjorden to Rotterdam, Coryton to Le Havre and Le Havre to Hamburg for 22,000t vessels.

The pricing period is for loading 5-15 days forward.

Size is standardised to 18,000-25,000t.

The basis is fob northwest Europe.

The specifications are 10ppm sulphur, minimum 51 cetane number, maximum 0.001% sulphur, up to 0.845 specific gravity, (in summer) plus 2°C cloud point, minus 4°C cold filter plugging point, (in winter) minus 5°C cloud point, minus 15°C cold filter plugging point.

Price based on 0.845 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

### French diesel 10ppm cif

Diesel 10ppm sulphur.

Prices are in US dollars/tonne.

Prices are calculated using an Ice settlement price as published by the Intercontinental Exchange as a base price.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 18,000-25,000t.

The basis is cif Le Havre.

The specifications are 10ppm sulphur, minimum 51 cetane number, maximum 0.001% sulphur, up to 0.845 specific gravity, (in summer) plus 2°C cloud point, minus 4°C cold filter plugging point, (in winter) minus 5°C cloud point, minus 15°C cold filter plugging point.

Price based on 0.845 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

### German diesel 10ppm fob

German diesel 10ppm sulphur.

Prices are in US dollars/tonne.

Prices are netted back from the Argus German diesel 10ppm cif price using UK Continental freight as assessed by *Argus* modified by any relevant market considerations.

The UK Continental freight cost will be based on current spot freight rates (WS100 rates) as they apply to an average of specific routes.

These routes are Brofjorden to Rotterdam, Coryton to Le Havre and Le Havre to Hamburg for 22,000t vessels.

The pricing period is for loading 5-15 days forward.

Size is standardised to 10,000t.

The basis is fob northwest Europe.

The specifications are 10ppm sulphur, minimum 51 cetane number, prices exclude WASA (wax anti-settling additive), up to 0.845 specific gravity, (in summer) plus 5°C cloud point, minus 2°C cold filter plugging point, (in winter) minus 7°C cloud point, minus 22°C cold filter plugging point, (intermediate quality) minus 3°C cloud point, minus 13°C cold filter plugging point.

Price based on 0.845 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

### German diesel 10ppm cif

German diesel 10ppm sulphur.

Prices are in US dollars/tonne.

Prices are calculated using an Ice settlement price as published by the Intercontinental Exchange as a base price.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 10,000t.

The basis is cif Hamburg.

The specifications are 10ppm sulphur, minimum 51 cetane number, prices exclude WASA (wax anti-settling additive), up to 0.845 specific gravity, (in summer) plus 5°C cloud point, minus 2°C cold filter plugging point, (in winter) minus 7°C cloud point, minus 22°C cold filter plugging point, (intermediate quality) minus 3°C cloud point, minus 13°C cold filter plugging point.

Price based on 0.845 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

### Heating oil fob 0.1%

Prices are in US dollars/tonne.

Prices are netted back from the Argus Heating Oil cif price using UK Continental freight as assessed by *Argus* modified by any relevant market considerations.

The UK Continental freight cost will be based on current spot freight rates (WS100 rates) as they apply to an average of specific routes.

These routes are Brofjorden to Rotterdam, Coryton to Le Havre and Le Havre to Hamburg for 22,000t vessels.

The pricing period is for loading 5-15 days forward.

Size is standardised to 18,000-25,000t.

The basis is fob northwest Europe.

The specifications are French heating grade, minimum 40 cetane number, plus 2°C cloud point, minus 4°C cold filter plugging point and minus 9°C pour point, maximum 0.1% sulphur.

Price based on 0.845 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

### Heating oil cif 0.1%

Prices are in US dollars/tonne.

Prices are calculated using an Ice settlement price as published by the Intercontinental Exchange as a base price.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 18,000-25,000t.

The basis is cif Le Havre.

The specifications are French heating grade, minimum 40 cetane number, plus 2°C cloud point, minus 4°C cold filter plugging point and minus 9°C pour point, maximum 0.1% sulphur.

Price based on 0.845 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

### German heating oil fob 0.05%

German heating oil.

Prices are in US dollars/tonne.

Prices are netted back from the Argus German Heating Oil cif price using UK Continental freight as assessed by *Argus* modified by any relevant market considerations.

The UK Continental freight cost will be based on current spot freight rates (WS100 rates) as they apply to an average of specific routes.

These routes are Brofjorden to Rotterdam, Coryton to Le Havre and Le Havre to Hamburg for 22,000t vessels.

The pricing period is for loading 5-15 days forward.

Size is standardised to 10,000t.

The basis is fob northwest Europe.

The specifications are German heating grade with 0.05% sulphur.

The assessment time is 8.30am to 5.30pm London time.

### German heating oil cif 0.05%

German heating oil.

Prices are in US dollars/tonne.

Prices are calculated using an Ice settlement price as published by the Intercontinental Exchange as a base price.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 10,000t.

The basis is cif Hamburg.

The specifications are German heating grade with 0.05% sulphur.

The assessment time is 8.30am to 5.30pm London time.

### Russian gasoil cif

Russian gasoil.

Prices are in US dollars/tonne.

Prices are calculated using an Ice settlement price as published by the Intercontinental Exchange as a base price.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 25,000-35,000t.

The basis is cif Rotterdam.

The specifications are up to 0.845 specific gravity, but typically 0.837, minus 12°C pour point, maximum 0.1% sulphur.

The assessment time is 8.30am to 5.30pm London time.

### Fuel oil 1% fob

Fuel oil 1% sulphur.

Prices are in US dollars/tonne.

The pricing period is for loading 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is fob northwest Europe standardised to Rotterdam.

The specifications are maximum 1% sulphur, cracked, 380cst, 0.991 specific gravity, minimum 65°C flash.

The assessment time is 8.30am to 5.30pm London time.

### Fuel oil 1% cif

Fuel oil 1% sulphur.

Prices are in US dollars/tonne.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is cif northwest Europe standardised to Rotterdam.

The specifications are maximum 1% sulphur, cracked, 380cst, 0.991 specific gravity, minimum 65°C flash.

The assessment time is 8.30am to 5.30pm London time.

### Fuel oil 3.5% fob

Fuel oil 3.5% sulphur.

Prices are in US dollars/tonne.

The pricing period is for loading 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is fob northwest Europe calculated by subtracting spot freight from the 3.5% cif northwest Europe assessment. The spot freight is the current WS100 rate applied to an average of the Tallinn to Rotterdam, Ventspils to Antwerp and Tallinn to Hamburg routes for 30,000t vessels.

The specifications are maximum 3.5% sulphur, 380-420cst, 1.005 specific gravity, 200-300ppm vanadium, H<sub>2</sub>S 2ppm.

The assessment time is 8.30am to 5.30pm London time.

### Fuel oil 3.5% cif

Fuel oil 3.5% sulphur.

Prices are in US dollars/tonne.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is cif northwest Europe standardised to Rotterdam/UK Thames Estuary.

The specifications are maximum 3.5% sulphur, 380-420cst, 1.005 specific gravity, 200-300ppm vanadium, H<sub>2</sub>S 2ppm.

The assessment time is 8.30am to 5.30pm London time.

### Straight run fuel oil 0.5% fob differential

Straight run 0.5% fuel oil. Prices are in US dollars/barrel.

The price differential for straight run 0.5% fuel oil is assessed at a differential to Intercontinental Exchange's Ice Brent crude futures price.

The pricing period is for loading 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is fob northwest Europe standardised to UK east coast.

The specifications are maximum 0.5% sulphur.

The assessment time is 8.30am to 5.30pm London time.

### Straight run fuel oil 0.5% fob

Straight run 0.5% fuel oil.

Prices are in US dollars/barrel.

The price is calculated using the formula expressed as the straight run 0.5% fob differential to Ice Brent futures where *Argus* uses a representative Ice Brent futures price, which will usually be the Ice Brent 1 minute marker at 4.30pm London time.

*Argus* reserves the right to make the final decision regarding the representative Ice value used in the calculation.

The pricing period is for loading 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is fob northwest Europe standardised to UK east coast.

The specifications are maximum 0.5% sulphur.

The assessment time is 8.30am to 5.30pm London time.

### Straight run M-100 fuel oil cif differential

Russian straight run M-100 fuel oil.

Prices are in US dollars/tonne.

The price differential for Russian straight run M-100 fuel oil is assessed at a differential to the vol-ume-weighted average of Rotterdam barges.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is cif northwest Europe standardised to Rotterdam.

The specifications are Russian high-sulphur straight-run fuel oil, typically maximum 3% sulphur, maximum viscosity 12°Engler at 80°C, xylene 26/30 maximum, toluene 30 maximum, pvalue 1.9/2.0 minimum, bromine 6 maximum.

The assessment time is 8.30am to 5.30pm London time.

### VGO 0.5% fob

Vacuum gasoil 0.5% sulphur.

Prices are in US dollars/tonne.

The pricing period is for loading 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is fob Rotterdam.

The specifications are maximum 0.5% sulphur, less than 1 ppm metals, typical 90/95 aniline, 0.915 density.

The assessment time is 8.30am to 5.30pm London time.

#### **VGO 0.5% cif**

Vacuum gasoil 0.5% sulphur.

Prices are in US dollars/tonne.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is cif northwest Europe standardised to southern UK.

The specifications are maximum 0.5% sulphur, less than 1 ppm metals, typical 90/95 aniline, 0.915 density.

The assessment time is 8.30am to 5.30pm London time.

#### **VGO 1.6% fob**

Vacuum gasoil 1.6% sulphur.

Prices are in US dollars/tonne.

The pricing period is for loading 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is fob Rotterdam area.

The specifications are maximum 1.6% sulphur, less than 1 ppm metals, typical 80/85 aniline, 0.925 density.

The assessment time is 8.30am to 5.30pm London time.

#### **VGO 1.6% cif**

Vacuum gasoil 1.6% sulphur.

Prices are in US dollars/tonne.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is cif northwest Europe standardised to southern UK.

The specifications are maximum 1.6% sulphur, less than 1 ppm metals, typical 80/85 aniline, 0.925 density.

The assessment time is 8.30am to 5.30pm London time.

## **Barges**

#### **Mogas 98R**

Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

Size is standardised to 1,000-2,000t.

The basis is fob Rotterdam/Amsterdam/Antwerp.

The specifications are 98 Ron, 88 Mon, unleaded, 0.755 specific gravity, "superplus" with benzene limits at 1% maximum, maximum 10ppm sulphur.

The assessment time is 9.00am to 5.30pm London time.

#### **Mogas 95R 10ppm**

Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

Size is standardised to 1,000-2,000t.

The basis is fob Rotterdam/Amsterdam/Antwerp.

The specifications are 95 Ron, 85 Mon, unleaded, 0.755 specific gravity, 10ppm sulphur, standard Eurograde.

The assessment time is 9.00am to 5.30pm London time.

#### **Mogas Euro-bob Oxy**

Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

Size is standardised to 1,000-2,000t.

The basis is fob Rotterdam/Amsterdam/Antwerp.

Prices typically reflect a volume-weighted average of deals done within Argus criteria and published on the Argus Gasoline Bulletin board.

The specifications will reflect grades of gasoline that meet EN228 specifications with a maximum of 10ppm sulphur after they have been blended with 4.8% ethanol of minimum 98.7% purity. Oxy-gen content is limited to 0.9%.

Metal content must not exceed 6 mg/l and effective 1 November 2011, this limit will be decreased to 1 mg/l.

The assessment time is 9.00am to 5.30pm London time.

#### **Mogas Euro-bob non-Oxy**

Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

Size is standardised to 1,000-2,000t.

The basis is fob Rotterdam/Amsterdam/Antwerp.

The specifications will reflect grades of gasoline that meet EN228 specifications with a maximum of 10 ppm sulphur after they have been blended with 4.8% ethanol of 98.7% purity.

The assessment time is 9.00am to 5.30pm London time.

#### **Mogas 91R**

Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

Size is standardised to 1,000-2,000t.

The basis is fob Rotterdam/Amsterdam/Antwerp.

The specifications are 91 Ron, 82.5 Mon, unleaded, 0.745 specific gravity, benzene limits at 1% maximum, 10ppm sulphur, standard Eurograde.

The assessment time is 9.00am to 5.30pm London time.

#### **MTBE**

Prices are in US dollars/tonne.

The pricing period is for loading 2-15 days forward.

Size is standardised to 1,000-2,000t.

The basis is fob Rotterdam.

The specifications are European grade, 98% purity.

The assessment time is 8.30am to 5.30pm London time.

#### **Naphtha 65 Para**

Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

Size is standardised to 1,000-2,000t.

The basis is fob Rotterdam/Amsterdam/Antwerp.

The specifications are 65-70% paraffins.

The assessment time is 8.30am to 5.30pm London time.

#### **Jet**

Prices are in US dollars/tonne.

Prices are calculated using an Ice settlement price as published by the Intercontinental Exchange as a base price. Typically the assessment will reflect a volume-weighted average of deals concluded on an exchange-for-physical basis.

The pricing period is for loading 2-8 days forward, not including weekends.

Size is standardised to 1,000-2,000t.

The basis is fob Rotterdam/Amsterdam/Antwerp/Flushing/Ghent.

The specifications are Defstan 91-91 latest issue, 0.800 specific gravity, EU qualified.

The assessment time is 8.30am to 5.30pm London time.

### German diesel 10ppm

German diesel 10ppm sulphur.

Prices are in US dollars/tonne.

Prices are calculated using an Ice settlement price as published by the Intercontinental Exchange as a base price.

The pricing period is for loading 2-8 days forward.

Size is standardised to 1,000-2,000t.

The basis is fob Rotterdam.

The specifications are 10ppm sulphur, minimum 51 cetane number, prices exclude WASA (wax anti-settling additive), up to 0.845 specific gravity, (in summer) plus 5°C cloud point, minus 2°C cold filter plugging point, (in winter) minus 7°C cloud point, minus 22°C cold filter plugging point, (intermediate quality) minus 3°C cloud point, minus 13°C cold filter plugging point.

Prices based on 0.845 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

### Heating oil 0.1%

Prices are in US dollars/tonne.

Prices are calculated using an Ice settlement price as published by the Intercontinental Exchange as a base price.

The pricing period is for loading 2-8 days forward.

Size is standardised to 1,000-2,000t.

The basis is fob Rotterdam.

The specifications are for German grade, 0.845 specific gravity, 0.1% sulphur, (in summer) typically plus 3°C cloud point, minus 7°C cold filter plugging point and (in winter) 1°C cloud point, minus 11°C cold filter plugging point.

The assessment time is 8.30am to 5.30pm London time.

### Heating oil 0.05%

Prices are in US dollars/tonne.

Prices are calculated using an Ice settlement price as published by the Intercontinental Exchange as a base price.

The pricing period is for loading 2-8 days forward.

Size is standardised to 1,000-2,000t.

The basis is fob Rotterdam.

The specifications are for German grade, 0.845 specific gravity, 0.05% sulphur, (in summer) typically plus 3°C cloud point, minus 7°C cold filter plugging point, (in winter) plus 1°C cloud point, minus 11°C cold filter plugging point.

The assessment time is 8.30am to 5.30pm London time.

### Fuel oil 1%

Fuel oil 1% sulphur.

Prices are in US dollars/tonne.

The pricing period is for loading 3-15 days forward (Monday-Tuesday) and 5-15 days forward (Wednesday-Friday).

The basis is fob Rotterdam/Antwerp.

Size is standardised to 1,000-2,000t.

The specifications are maximum 1% sulphur, 400cst at 50°C, 1.005 specific gravity, minimum 65°C flash.

The assessment time is 8.30am to 5.30pm London time.

### Fuel oil 1.5%

Fuel oil 1.5% sulphur.

Prices are in US dollars/tonne.

The pricing period is for loading 3-15 days forward (Monday-Tuesday) and 5-15 days forward (Wednesday-Friday).

The basis is fob Rotterdam/Antwerp.

Size is standardised to 1,000-2,000t.

The specifications are maximum 1.5% sulphur, 400cst at 50°C, 1.005 specific gravity, minimum 65°C flash.

The assessment time is 8.30am to 5.30pm London time.

### Fuel oil 3.5%

Fuel oil 3.5% sulphur.

Prices are in US dollars/tonne.

The pricing period is for loading 3-15 days forward (Monday-Tuesday) and 5-15 days forward (Wednesday-Friday).

The basis is fob Rotterdam.

Size is standardised to 1,000-2,000t.

The specifications are maximum 3.5% sulphur, 380-420cst at 50°C, 0.991 specific gravity, 50ppm silicon, 30ppm aluminium, 300ppm vanadium, H<sub>2</sub>S 2ppm.

The assessment time is 8.30am to 5.30pm London time.

### Argus HSFO VWA

The Argus Rotterdam high-sulphur fuel oil barge fob trade volume-weighted average (Argus HSFO VWA) is calculated from transactions reported to Argus for publication on the Argus Fuel Oil Bulletin Board.

It is an arithmetic average of transactions that meet the specifications and requirements listed in the Argus HSFO VWA document. These transactions are published on the Argus Fuel Oil Bulletin Board.

For more details see the documents Argus HSFO VWA and Argus Bulletin Board Procedure HSFO.

### VGO 0.5%

Vacuum gasoil 0.5% sulphur.

Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

Size is standardised to 1,000-2,000t.

The basis is fob Rotterdam.

The specifications are maximum 0.5% sulphur, less than 1ppm metals, typical 90/95 aniline, 0.915 density.

The assessment time is 8.30am to 5.30pm London time.

### VGO 1.6%

Vacuum gasoil 1.6% sulphur.

Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

Size is standardised to 1,000-2,000t.

The basis is fob Rotterdam area.

The specifications are maximum 1.6% sulphur, less than 1ppm met-

als, typical 80/85 aniline, 0.925 density.  
The assessment time is 8.30am to 5.30pm London time.

## West Mediterranean

### Mogas 95R 10ppm fob

Prices are in US dollars/tonne.  
Prices will be assessed against the Mogas 95R 10ppm fob price assessment using a price differential obtained from the Argus Rotterdam barge assessments unless *Argus* modifies this differential because of regional market conditions.  
The pricing period is for loading 5-15 days forward.  
Size is standardised to 20,000-30,000t.  
The basis is fob Italian Isles.  
The fob Italian Isles will be set in line with fob northwest Europe unless modified by regional market conditions.  
The specifications are 95 Ron, unleaded, 10ppm sulphur, standard Eurograde (Spanish, Italian and French grades), 0.755 specific gravity, maximum 1% benzene.  
The assessment time is 9.00am to 5.30pm London time.

### Mogas 95R 10ppm cif

Prices are in US dollars/tonne.  
Prices will usually be constructed by adding freight costs to the Mogas 95R 10ppm fob assessment using an Argus cross-Mediterranean freight assessment.  
The pricing period is for delivery 5-15 days forward.  
Size is standardised to 20,000-30,000t.  
The basis is cif Lavera/Genoa calculated by adding to the fob Italian Isles assessment spot freight. The spot freight is the cross-Mediterranean WS100 rate applied to an average of Santa Panagia Bay to Lavera, Zawia to Gibraltar and Marsa el-Brega to Genoa for 30,000t vessels.  
The specifications are 95 Ron, unleaded, 10ppm sulphur, standard Eurograde (Spanish, Italian and French grades), 0.755 specific gravity, maximum 1% benzene.  
The assessment time is 9.00am to 5.30pm London time.

### Naphtha 65 Para fob

Prices are in US dollars/tonne.  
The pricing period is for loading 5-15 days forward.  
Size is standardised to 10,000-25,000t.  
Prices are constructed by netting back from the Argus naphtha 65 para cif northwest Europe assessment using an Argus Mediterranean to northwest Europe freight assessment modified by *Argus* according to regional market conditions.  
The Mediterranean to UK Continent freight cost will be based on current spot freight rates (WS100 rates) as they apply to an average of specific routes. These routes are Alexandria to Rotterdam, Skikda to Hamburg and Ras Lanuf to Antwerp for 30,000t naphtha vessels.  
The specifications are 65-70% paraffins.  
The assessment time is 8.30am to 5.30pm London time.

### Naphtha 65 Para cif

Prices are in US dollars/tonne.  
The pricing period is for delivery 5-15 days forward.  
Size is standardised to 10,000-25,000t.

The basis is cif Lavera/Genoa constructed by adding an Argus assessment for cross-Mediterranean freight to the naphtha 65 paraffinic fob west Mediterranean assessment modified by *Argus* according to regional market conditions.

The cross-Mediterranean freight cost will be based on current spot freight rates (WS 100 rates) as they apply to an average of specific routes. These routes are Skikda to Genoa, Zawia to Lavera and Alexandria to Genoa for 30,000t naphtha vessels.  
The specifications are 65-70% paraffins.  
The assessment time is 8.30am to 5.30pm London time.

### Jet fob

Prices are in US dollars/tonne.  
The pricing period is for loading 5-15 days forward.  
Size is standardised to 20,000-30,000t.  
Jet Mediterranean fob assessments are a netback from northwest Europe calculated using an Argus assessment of the west Mediterranean to northwest Europe freight costs modified by *Argus* according to regional market conditions.  
The Mediterranean to UK Continent freight cost will be based on current spot freight rates (WS100 rates) as they apply to an average of specific routes. These routes are Santa Panagia Bay to Rotterdam, Milazzo to Le Havre and Ras Lanuf to Antwerp for 30,000t vessels.  
The specifications are Defstan 91-91 latest issue, 0.800 specific gravity, EU qualified.  
The assessment time is 8.30am to 5.30pm London time.

### Jet cif

Prices are in US dollars/tonne.  
The pricing period is for loading 5-15 days forward.  
Size is standardised to 15,000-30,000t.  
The specifications are Defstan 91-91 latest issue, 0.800 specific gravity, EU qualified.  
Firstly Argus will consider bids, offers and trades done for jet on a cif Mediterranean basis at a differential to Ice gasoil futures. Second, they will consider premiums paid to jet fob Mediterranean assessments for cif deliveries of 15,000-30,000t into Genoa or Lavera. Prices of jet fuel delivered to the eastern Mediterranean will also be considered, once freight cost adjustments have been made. Part cargoes will also be considered. The differentials to Ice gasoil and jet fob Mediterranean benchmarks will be published separately.

### French diesel 10ppm fob

Diesel 10ppm sulphur.  
Prices are in US dollars/tonne.  
Prices are calculated subtracting an Argus assessment of cross-Mediterranean freight from the Argus Diesel 10ppm cif assessment modified by *Argus* according to regional market conditions.  
The cross-Mediterranean freight cost will be based on current spot freight rates (WS100 rates) as they apply to an average of specific routes. These routes are Skikda to Genoa, Zawia to Lavera and Alexandria to Genoa for 30,000t vessels.  
The pricing period is for loading 5-15 days forward.  
Size is standardised to 25,000-30,000t. The basis is fob Italian Isles.  
The specifications are maximum 0.005% sulphur, minimum 51 cetane number, up to 0.845 specific gravity, (in summer) plus 2°C

cloud point, minus 4°C cold filter plugging point, (in winter) minus 5°C cloud point, minus 15°C cold filter plugging point.

Price based on 0.845 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

### French diesel 10ppm cif

Diesel 10ppm sulphur.

Prices are calculated using an Ice settlement price as published by the Intercontinental Exchange as a base price.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is cif Lavera/Genoa.

The specifications are maximum 0.001% sulphur, minimum 51 cetane number, up to 0.845 specific gravity, (in summer) plus 2°C cloud point, minus 4°C cold filter plugging point, (in winter) minus 5°C cloud point, minus 15°C cold filter plugging point.

Price based on 0.845 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

### Heating oil 0.1% fob

Prices are in US dollars/tonne.

Prices are calculated subtracting an Argus assessment of cross-Mediterranean freight from the Argus Heating Oil cif assessment modified by *Argus* according to regional market conditions.

The cross-Mediterranean freight cost will be based on current spot freight rates (WS100 rates) as they apply to an average of specific routes. These routes are Skikda to Genoa, Zawia to Lavera and Alexandria to Genoa for 30,000t vessels.

The pricing period is for loading 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is fob Italian Isles.

The specifications are French heating grade, minimum 40 cetane number, plus 2°C cloud point, minus 4°C cold filter plugging point and minus 9°C pour point, maximum 0.1% sulphur.

Price based on 0.845 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

### Heating oil 0.1% cif

Prices are in US dollars/tonne.

Prices are calculated using an Ice settlement price as published by the Intercontinental Exchange as a base price.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is cif Lavera/Genoa.

### Russian gasoil fob

Russian gasoil.

Prices are in US dollars/tonne.

Prices are calculated subtracting an Argus assessment of Black Sea to Mediterranean freight from the Gasoil Russian cif assessment modified by *Argus* according to regional market conditions.

The Black Sea to Mediterranean freight cost will be based on current spot freight rates (WS100 rates) as they apply to an average of specific routes. These routes are Novorossiysk to Genoa, Tuapse to Lavera and Tuapse to Genoa for 30,000t vessels.

The pricing period is for loading 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is fob Tuapse/Novorossiysk.

The specifications are up to 0.845 specific gravity, but typically 0.837, minus 12°C pour point, maximum 0.2% sulphur.

The assessment time is 8.30am to 5.30pm London time.

### Russian gasoil cif

Russian gasoil. Prices are in US dollars/tonne.

Prices are calculated using an Ice settlement price as published by the Intercontinental Exchange as a base price.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 25,000-30,000t.

The basis is cif Lavera/Genoa.

The specifications are up to 0.845 specific gravity, but typically 0.837, minus 12°C pour point, maximum 0.2% sulphur.

The assessment time is 8.30am to 5.30pm London time.

### Fuel oil 1% fob

Fuel oil 1% sulphur.

Prices are in US dollars/tonne.

The price will usually be netted back from the Argus 1% cif Mediterranean price assessment using an Argus assessment of cross-Mediterranean freight modified by regional market conditions.

The cross-Mediterranean freight cost will be based on current spot freight rates (WS100 rates) as they apply to an average of specific routes. These routes are Santa Panagia Bay to Lavera, Zawia to Gibraltar and Marsa el-Brega to Genoa for 30,000t vessels.

The pricing period is for loading 5-15 days forward.

Size is standardised to 30,000-35,000t.

The basis is fob Italian Isles.

The specifications are maximum 1% sulphur, cracked, 380cst, 0.991 specific gravity, minimum 65°C flash.

The assessment time is 8.30am to 5.30pm London time.

### Fuel oil 1% cif

Fuel oil 1% sulphur.

Prices are in US dollars/tonne.

The price will usually be netted back by subtracting freight from the Argus 1% cif northwest Europe price assessment using an Argus assessment of Baltic to Mediterranean freight modified by regional market conditions.

The Baltic to Mediterranean freight cost will be based on current spot freight rates (WS100 rates) as they apply to an average of specific routes. These routes are Tallinn to Genoa, Ventspils to Lavera and Tallinn to Malta for 30,000t vessels.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 30,000-35,000t.

The price is representative of basis cif Milazzo.

The specifications are maximum 1% sulphur, cracked, 380cst, 0.991 specific gravity, minimum 65°C flash.

The assessment time is 8.30am to 5.30pm London time.

### Fuel oil 3.5% 0.998 fob

Fuel oil 3.5% sulphur.

Prices are in US dollars/tonne.

The pricing period is for loading 5-15 days forward.

The price will be calculated by taking the 3.5% 0.998 cif west Mediterranean price assessment and subtracting from it cross-Mediterranean spot freight. The cross-Mediterranean spot freight will be based on

current spot freight rates (WS100 rates) as they apply to an average of specific routes. These are Santa Panagia Bay to Lavera, Zawia to Gibraltar and Marsa el-Brega to Genoa for 30,000t vessels.

Size is standardised to 30,000-35,000t.

The basis is fob Italian Isles.

The specifications are maximum 3.5% sulphur, 380-420cst, 0.998 specific gravity, 200-300ppm vanadium, H<sub>2</sub>S 2ppm.

The assessment time is 8.30am to 5.30pm London time.

### Fuel oil 3.5% 0.998 cif

Fuel oil 3.5% sulphur.

Prices are in US dollars/tonne.

The pricing period is for delivery 5-15 days forward.

Size is standardised to 30,000-35,000t.

The basis is cif Lavera/Genoa.

The specifications are maximum 3.5% sulphur, 380-420cst, 0.998 specific gravity, 200-300ppm vanadium, H<sub>2</sub>S 2ppm.

The assessment time is 8.30am to 5.30pm London time.

### VGO 0.5% fob

Vacuum gasoil 0.5% sulphur.

Prices are in US dollars/tonne.

The price assessment will be in line with the Argus VGO 0.5% fob northwest Europe assessment modified by *Argus* according to market conditions.

The pricing period is for loading 5-15 days forward.

Size is standardised to 30,000-35,000t.

The basis is fob Italian Isles.

The specifications are maximum 0.5% sulphur, less than 1ppm metals, typical 90/95 aniline, 0.870 density.

The assessment time is 8.30am to 5.30pm London time.

### VGO 1.6% fob

Vacuum gasoil 1.6% sulphur.

Prices are in US dollars/tonne.

The price assessment will be in line with the Argus VGO 1.6% fob northwest Europe assessment modified by *Argus* according to market conditions.

The pricing period is for loading 5-15 days forward.

Size is standardised to 30,000-35,000t.

The basis is fob Italian Isles.

The specifications are maximum 1.5% sulphur, less than 1ppm metals, typical 80/85 aniline, 0.915 density.

The assessment time is 8.30am to 5.30pm London time.

## Forward prices

### Gasoline swaps

Gasoline forward assessments are provided for the fob barge swaps market up to three months and two quarters forward.

The swaps are against the Argus 95 Ron 10ppm fob ARA barge quotation until the end of 2009 and the Argus Euro-Bob Oxy fob ARA barge quotation from 2010.

The last day of quotation of the first month of the forward swaps table will be the 15th of that month.

### Naphtha swaps

Naphtha forward assessments are provided for the naphtha fob barge swaps market up to three months and two quarters forward.

The last day of quotation of the first month of the forward swaps table will be the 15th of that month.

### Jet swaps

Jet assessments are provided for the jet swaps market up to three months and two quarters forward.

The last day of quotation of the first month of the forward swaps table will be the 15th of that month.

### Heating oil swaps

Heating oil assessments are provided for the swaps market up to three months and two quarters forward.

The last day of quotation of the first month of the forward swaps table will be the 15th of that month.

Prices reflect barges fob Amsterdam/Rotterdam/Antwerp.

### Diesel swaps

Diesel assessments are provided for the swaps market up to three months and two quarters forward.

The last day of quotation of the first month of the forward swaps table will be the 15th of that month.

Prices reflect 10ppm French cargoes cif northwest Europe.

### High-sulphur fuel oil barge swaps

High-sulphur fuel oil assessments are provided for the swaps markets in barges up to three months and two quarters forward.

The last day of quotation of the first month of the forward swaps table will be the 15th of that month.

### Low-sulphur fuel oil cargo swaps

Low sulphur fuel oil assessments are provided for the swaps market up to three months and two quarters forward.

The last day of quotation of the first month of the forward swaps table will be the 15th of that month.

## Bunkers

### Rotterdam dob

#### 180cst 3.5%

Bunker fuel 180cst.

Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

The basis is delivered on board Rotterdam.

Size is standardised to 1,000-2,000t.

The specifications are maximum 3.5% sulphur, 180cst, 0.991 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

#### 380 cst 3.5%

Bunker fuel 380cst. Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

The basis is delivered on board Rotterdam.

Size is standardised to 1,000-2,000t.

The specifications are maximum 3.5% sulphur, 380cst, 0.991 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

**180cst 1.5%**

Bunker fuel 180cst.

Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

The basis is delivered on board Rotterdam.

Size is standardised to 1,000-2,000t.

The specifications are maximum 1.5% sulphur, 180cst, 0.991 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

**380 cst 1.5%**

Bunker fuel 380cst.

Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

The basis is delivered on board Rotterdam.

Size is standardised to 1,000-2,000t.

The specifications are maximum 1.5% sulphur, 380cst, 0.991 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

**Antwerp dob**

**180cst 3.5%**

Bunker fuel 180cst.

Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

The basis is delivered on board Antwerp.

Size is standardised to 1,000-2,000t.

The specifications are maximum 3.5% sulphur, 180cst, 0.991 spe-

cific gravity.

The assessment time is 8.30am to 5.30pm London time.

**380cst 3.5%**

Bunker fuel 380cst.

Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

The basis is delivered on board Antwerp.

Size is standardised to 1,000-2,000t.

The specifications are maximum 3.5% sulphur, 380cst, 0.991 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

**180cst 1.5%**

Bunker fuel 180cst.

Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

The basis is delivered on board Antwerp.

Size is standardised to 1,000-2,000t.

The specifications are maximum 1.5% sulphur, 180cst, 0.991 specific gravity.

The assessment time is 8.30am to 5.30pm London time.

**380cst 1.5%**

Bunker fuel 380cst.

Prices are in US dollars/tonne.

The pricing period is for loading 2-8 days forward.

The basis is delivered on board Antwerp.

Size is standardised to 1,000-2,000t.

The specifications are maximum 1.5% sulphur, 380cst, 0.991 specific gravity.

The assessment time is 8.30am to 5.30pm London time.