

Methodology and Specifications Guide

Bunker Fuels & Tankers

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BUNKER FUELS

Bunker fuel is generally traded as one of four grades: Intermediate Fuel Oil (IFO) 180 centisoke (CST), IFO 380 CST, Marine Diesel (MDO) and Marine Gasoil (MGO).

The worldwide market generally follows similar specifications for these grades in all locations. The specifications followed are generally those found in ISO 8217:1996 (E) - Petroleum products - Fuels (class F) - Specifications of marine fuels.

IFO 380: Specifications generally conform with that for RMG 35. Approximate Kinematic Viscosity: At 100degC, max 25 cst; at 50degC, max 225 cst. Flash point 60degC minimum. Pour point (upper) winter quality, 30degC maximum; summer quality the same. Ash 0.15 m/m maximum. Sulphur, maximum 5%. Vanadium max 500 mg/kg. Aluminium plus silicon, 80 mg/kg max; water, 1% maximum.

IFO 180: Specifications generally confirm with that for RME 25. Approximate Kinematic Viscosity: At 100degC, max 25 cst; at 50degC, max 225 cst. Flash point 60degC minimum. Pour point (upper) winter quality, 30degC maximum; summer quality the same. Ash 0.10 m/m maximum. Sulphur, maximum 5%. Vanadium max 200 mg/kg. Aluminium plus silicon, 80 mg/kg max. ; water, 1% maximum.

Marine Diesel: Specifications generally conform with that for DMB. Kinematic viscosity at 40degC, max 11 cts; Flash point 60degC minimum; Pour point (upper) winter quality, 0 degreesC; pour point upper, summer quality, 6 degC; Ash 0.01% maximum; Sulfur, maximum 2%; ; water, 0.3% maximum.

Marine Gasoil: Specifications generally conform with that for DMA. Kinematic Viscosity at 40DegC, 1.5 minimum CST, maximum 6 cst; Flash point 60degC minimum; Pour point (upper) winter quality, -0.6 degreesC; pour point upper, summer quality, 0 degC; Ash 0.01% maximum; Sulfur, maximum 1.5%. Cetane, minimum 40.

EUROPE

Timing: Platts bunker price assessments are based on typical trading levels during the course of the day, and are based on actual transactable market levels, i.e. confirmed trades, bids and offers. Much of the price direction is derived early in the day at European ports, based on the previous day's outright cargo fuel oil assessments. Prices are typically quoted for product to be supplied 1-8 days ahead

Price: Prices are quoted in \$/metric tonne. There is no maximum range, though generally prices are assessed with a \$1-\$4 spread between low and high. Prices carry a minimum range of 50 cts.

Typical Size: Typical sizes vary from port to port. The sizes attached to the list below are typical, not minimums and

Typical sizes

	IFOs	Distillates
Augusta	300-2200	10-200
Dakar	300-1000	10-100
Falmouth	100-1000	10-100
French Med	500-2200	10-200
Gdansk	200-900	10-100
Genoa	300-1700	10-120
Gibraltar/Algeciras/Ceuta	200-2000	10-200
Great Belt	300-1000	10-100
Hamburg	400-1000	10-100
Istanbul	100-1000	10-100
Kuwait	200-8000	20-350
Las Palmas/Tenerife:	400-2000	10-200
Malta	300-1000	10-100
Northern France/Fr. Atlantic	200-1000	20-100
Piraeus	300-1000	10-100
Suez	300-1000	10-100
St Petersburg	300-1200	10-100
Trieste	250-700	20-50

maximums. However, trades done outside these ranges may be considered atypical in setting an assessment. All figures are in '000's of tones.

Delivery: Bunkers are assessed on either an ex-wharf basis, or a delivered basis, which is delivered at the ship, or in one case, ex-pipe.

The following ports are assessed **ex-wharf:** Northern France, French Med, Augusta, Genoa, Trieste, Dakar and Durban.

The following ports are assessed **delivered:** Rotterdam, Antwerp, Hamburg, Great Belt, Gdansk, St Petersburg, Gibraltar, Algeciras, Ceuta, Las Palmas, Tenerife, Malta, Istanbul, Suez Ports, Piraeus.

Kuwait is assessed **ex-pipe**.

Other specifications: Prices for **Falmouth** are quoted inclusive of barging, agency and pilotage costs. Prices for **Northern France** are for fuel supplied at the ports of Le Havre and Dunkirk.

Marine Diesel/Marine Gasoil: At several ports in Europe, sufficient liquidity exists in trade for both marine diesel (DMB) and marine gasoil (DMA). Values for both grades are reflected, respectively, on the high and low of the distillate price assessment. Those locations in which this practice is part of the assessment are so noted with a footnote in Platts Bunkerwire. They are: Great Belt, Gdansk, St. Petersburg, Gibraltar, Algeciras, Ceuta, Las Palmas and Tenerife.

UNITED STATES & LATIN AMERICA

Timing: Platts bunker assessments in the US reflect deliveries 3-7 days from the date of publication for the US Gulf Coast, the US Atlantic Coast, and Latin America. On the US West Coast, due to differences in market operations there, the range is 3-10 days.

Platts' assessments reflect price levels between 3-5 p.m. East Coast time, but within the context of the broader day. While particular emphasis will be placed on market activity occurring in that period, Platts' specifications permit the consideration of deals done at other parts of the day. Those transactions will be considered against prevailing market circumstances at the time those deals were done, and the market activity toward the 5 p.m. Eastern cutoff. Consideration will include the prior day's so-called "overnight" transactions, which occur in the late West Coast afternoon or early evening, often with Asian counterparties. The market activity of the two hours leading up to 5 p.m. Eastern time will be considered for repeatability and transparency against the broader record of transactions, bids and offers that have occurred in the market prior to that two-hour time period.

Price assessments for all Latin American ports are based on deals done between 9:00 a.m. and 5:00 p.m. New York time.

Price: Prices are quoted in \$/metric tonne. There is no maximum range, though generally prices are assessed with a \$2-\$4 spread between low and high. Prices carry a minimum range of 50 cts.

Size: Typical size ranges are as follows: New York and Houston, 500-2,000 mt; Los Angeles, San Francisco, 1,000-3,000 mt; Seattle, Portland, Philadelphia, 500-2,000 mt; Norfolk, 400-2,000 mt; Montreal, 300-500 mt; New Orleans, 200-1,500 mt. Platts reserves the right to consider other volumes depending on market conditions.

Sulfur content: Per the specifications near the beginning of this document, Platts specifications on IFO 380 and IFO 180 call for a maximum sulfur content of 5%. Higher prices for material reflecting a tighter sulfur specification will be included in the Platts assessment.

California bunker taxes: California has implemented particularly stiff taxes on bunker sales in that state. Those fees are not included in the Platts assessment.

Delivered assessments: Platts delivered bunker assessments are calculated by taking the ex-wharf price and adding a barge rate. That barge rate is determined by a regular survey of the market undertaken by Platts editors. This rate is one figure that is a rough average of the prevailing barge rates in a market. It is not an assessment for a specific-sized barge, but instead is the result of a compilation of several prevailing prices.

ASIA

Singapore-UAE-Korea-Australia

These assessments are done from Platts' Singapore office, and are governed by similar methodology. The Korea assessments are based on market activity in Pusan and Ulsan. With the exception of the ex-wharf prices for Singapore, the other assessments for these regions all are done on a delivered basis.

Timing: Platts' bunker assessments for these three ports are for deliveries 3-7 days out. However, Singapore ex-wharf prices are 3-15 days out. Prices are based on an assessment of the market between 6-6:30 p.m.

However, the prices for Australia, Fujairah and Khor Fakkan in the United Arab Emirates, Korea and Singapore delivered are not done on a Market on Close basis. The Platts' assessment captures the full range of activity in that period. The Platts' ex-wharf assessment for Singapore is done on a Market on Close basis, with the assessment reflecting the price determined by Platts that is prevailing at the end of that half-hour window.

Price: Prices are quoted in \$/metric tonne. There is no maximum range, though generally prices are assessed with a \$2-\$4 spread between low and high. Prices carry a minimum range of 50 cts.

Size: The minimum sized parcel is 500 metric tonnes. There is no maximum size. The typical size range is 500-1,500 mt.

Ex-Wharf vs. Delivered: Platts delivered assessments for Singapore are established in a half hour window, but it is not set as a market on close. Platts ex-wharf assessments for Singapore are settled on a market on close system. As a result, the difference between the two often will be less than the barging differential to move material from the wharf to the customer's ship. When there is no activity in the half-hour window for ex-wharf bunker fuel, ex-wharf will be assessed on the same basis as that practiced in the delivered market.

Hong Kong

Timing: The assessments reflect market activity 3-7 days out from the date of publication.

Price assessments are set on the basis of market activity between 5:30-6:30 pm Hong Kong time. Traders in the Hong Kong bunker market generally wait to see the activity in the Singapore fuel oil window before quoting firm numbers. Transactions done earlier in the day are not included in the assessments.

Price: Prices are quoted in \$/metric tonne. The minimum range is 50 cts, and the maximum range is \$3.

Size: IFO 180 CST prices generally reflect a minimum quantity of 300 metric tonnes, while 380 CST generally reflects at least 500 tonnes. Distillate assessments are for small parcels, often less than 50 mt.

Basis: Hong Kong assessments are set on a delivered basis, and include barging costs.

Japan

Timing: The assessment reflects market activity 3-7 days out from the date of publication.

Platts surveys the Japanese bunker market between 5:30-6:30 p.m. local time, but the range reflects the business activity of the

entire day. However, the bulk of the transactions in the Japanese bunker market occur late in the day.

Price: Prices are quoted in \$/metric tonne. The minimum range is 50 cts, with a \$2 range between low and high usually reflected.

Basis: The Japan assessment is set on a delivered basis. It reflects activity in the Tokyo/Yokohama Bay area.

Size: Platts reflects quantities of 300-2,500 metric tones.

POSTED PRICES

Chinese Petroleum Corp.: The posted prices for bunker fuel sold by CPC are quoted on a delivered basis. They are quoted in \$/mt. Base size is 1,000 mt, but lots larger than that often receive a rebate of \$5/mt. Smaller lot sizes often get a rebate of \$3-\$4/mt.

Delivery is by barge for all key ports, except Hualien, where it is by pipeline. Prices are effective for all key ports, except for IFO 380 CST. In 2003, CPC began quoting two posted prices for 380 CST, with the lower end of the range reflecting prices at Keelung and Kaohsiung, and the high end reflecting prices at other locations.

Chimbusco: Chimbusco is the state-owned Chinese marine fuel marketing agency. It posts \$/mt prices for three separate ports: Shanghai, Dalian and Guangzhou. Chimbusco quotes a high and low end of a price range for its posting, though the two ends do not reflect any quality differences. However, some smaller ports in China will have slightly different prices than the main three cities, and the range reflects that. Chimbusco's distillate price represents marine gasoil. The prices are quoted on a delivered basis.

Saudi Aramco: Prices are quoted in \$/mt for three locations: Jeddah, Dammam and Ras Tanura. The prices are ex-wharf.

SHIPPING

Platts assesses the open market rates for the chartering of both dirty and clean tankers. Dirty tankers are defined as one carrying crude, fuel oil or other "dirty" products such as vacuum gasoil or dirty condensate. Clean tankers carry light ends such as gasoline, distillate or naphtha. In addition, Platts carries separate assessments for smaller dirty tankers dedicated to moving just fuel oil, and assesses a special premium for the movement of jet fuel-designated tankers.

Platts mostly follows general principles for all assessments, with some specifications unique to either clean or dirty tankers.

PORTS

Platts assesses a number of key shipping regions under broad geographic descriptions. A list of those descriptions as they appear in the Tankerwires, and the markets they represent, follows.

UKC:	Bilbao to Hamburg, but not including Portugal. Designation includes southern Sweden and western Norway.
Med:	Everything from Gibraltar to Istanbul
Black Sea:	All ports in Black Sea.
Caribbean:	Venezuela and the islands.
EC Canada:	Atlantic coast, as well as shipments into the St. Lawrence.
USWC:	Seattle to Los Angeles
USGC:	Pascagoula, Mississippi to Corpus Christi
USAC:	North of Cape Hatteras to Portland, Maine.
AG:	All ports in the Arab Gulf, up to the Straits of Hormuz
Indo:	All ports in Indonesia
Skorea:	All ports in South Korea.
Japan:	All ports in Japan
Austr:	All ports in Australia
HK:	All ports in Hong Kong
Rsea:	All ports in the Red Sea
India:	All ports in India
EAfrica:	From the African horn south to Durban, South Africa.

ASSESSMENTS

Timing: Platts tanker rate assessments are published at 4 p.m. London time. They are derived from both fixtures concluded and market levels talked in the period since the previous set of assessments was published. Platts aim is two-fold: a) to provide a reflection of market activity (i.e. fixtures, vessels put on subjects, bids and offers) heard since publication of the previous set of freight assessments b) to publish an indication of the level at which Platts believes chartering activity could occur, given the

movements in other markets. Given that some particular routes can go several days without any significant activity, either actual chartering or bids/offers, Platts will adjust its tanker assessments up or down on the basis of broader market trends and a survey of the market to determine their views on a relative value of a ship charter for a particular route.

Platts tanker assessments do not reflect a standard time period in the assessment basis, given the widely divergent time windows under which markets operate. While a long-haul market such as AG-USGC might see ships chartered weeks in advance, a short-haul rate such as cross-Med traffic often has ships being chartered with just a few day's notice. Platts will make its judgement on tanker assessments within a time range consistent with standard practice in that market.

Basis: Platts tanker assessments are primarily expressed as percentage of the annual Worldscale flat rate that is being agreed upon in open market transactions to charter a ship. For example, if the Worldscale annual flat rate – also known as Worldscale 100 – is set at \$10.00 per metric ton for a specific route, a Platts' assessment of 50 for that route would mean that the class of ship being assessed is being chartered for \$5 per metric tonne of freight on that voyage.

The Worldscale flat rate is published at the beginning of each year by the Worldscale Association.

Lump-sum assessments: In some clean tanker markets, some routes are assessed on a lump sum for the cost of chartering a ship of the specified size. The markets that are assessed on that basis have historically traded in that manner, and the Platts' assessment of a lump sum rather than Worldscale rate simply follows the practice.

In the Clean Tankerwire, assessments that are based on a Worldscale rate carry a designation of W. There are no dirty tanker assessments done on a lump-sum basis.

Size and specifications: The tonnage specified in our assessment tables represents the weight of the cargo carried. Platts will consider charters of different yet approximate sizes when making its assessments, pro-rating the market rates to the size of the ship in the assessment.

Assessments are typically based on double-hull/double-bottom vessels under 20 years of age, or typically under 15 years for voyages involving a European load or destination port. Where there is a broadly equal amount of market activity taking place for both well-approved, modern tonnage and older, less well-approved tonnage in the same market concurrently, Platts' assessment will be based on the higher quality end of the market. The aim is to follow where the bulk of activity is taking place in each of the routes Platts assesses.

NR: NR is a designation that stands for No Recent Rate. It is utilized on a route where Platts sees at least six months of either total or near-total inactivity. NR is not used to reflect a market that is simply quiet for a few days. Platts will always seek to

minimize the use of NR assessments, and a route's designation of NR will always be ended as quickly as possible when information on that route becomes available.

\$/MT assessments: Platts converts its Worldscale and lump-sum rates into \$/mt equivalent assessments. Platts determines \$/mt freight rates based on a basket of Worldscale flat rates on several key routes between the two regions noted. For example, the UKC-USG \$/mt assessment would be based on such routes as Sullom Voe-Houston. Platts' spot Worldscale assessments are applied against this basket, to produce the assessment for a \$/mt rate. The basket is updated annually, when the Worldscale Association establishes new flat rates for the year. For those routes which are assessed basis a US\$ lumpsum, the \$/mt assessment is calculated by dividing the lumpsum total by the size of the cargo assessed.

Fuel oil-only assessments: Platts produces several assessments within the body of its Dirty Tankerwire that represent solely a standard vessel moving dirty petroleum products that do not require heating during transport or storage. This generally is fuel oil, hence the designation of these as fuel oil-only assessments. These movements generally command a premium in the spot chartering rate. Under normal market conditions, assessments loading in the Baltic are based on modern, non-ice class vessels.

The following routes and sizes (in kt) reflect fuel oil-only assessments:

Fuel oil-only routes and sizes	
UKC-UKC:	27.5, 30
UKC-Med:	27.5, 30
UKC-USG:	30
UKC-USG:	55
UKC-Med:	55
Med-Med:	27.5
Med-Med:	30
BSea-Med:	30
Caribs-USG:	50
Caribs-USAC:	50

Suez Canal: Assessments for voyages which would involve a Suez Canal transit are made inclusive of any canal fees.

Jet Fuel Premium: In its Clean Tankerwire and on the tanker pages of Platts Global Alert, Platts publishes a jet fuel premium. The premium represents the amount of Worldscale points to be added to the published Med-UKC 30kt assessment. That final number is used to determine the freight rate that Platts uses to net back the value of Amsterdam-Rotterdam-Antwerp (ARA) jet fuel to the Mediterranean. Platts does not assess an outright CIF Med jet price. The assessment it publishes is netted back from the CIF ARA assessment.