

## Biodiesel Methodology

Biodiesel is the name of a clean burning alternative fuel, produced from renewable resources. The most commonly used feedstocks are rapeseed, soy and palm oil. Tallow is also used.

Rapeseed methyl ester (RME) is mainly produced in Europe; soy methyl ester (SME) comes mainly from the Americas and palm methyl ester (PME) from Asia, in particular Malaysia and Indonesia.

Prices of the different products reflect their different cold filter plugging points (cfpp) with lower cfpp levels at a premium.

RME will usually be sold with a guarantee of -14°C cfpp, SME with -4°C and PME 15°C. These numbers represent the cfpp point of the product on its own rather than the overall cfpp point once blended into fossil fuel.

The exact cfpp point may vary according to quality. If a product is outside of normal industry specifications then this will be mentioned in the text rather than included than used in quotes.

Fatty acid methyl ester (FAME) refers to European blends of biodiesel. These blends contain different quantities of the pure vegetable and/or tallow oil methyl esters depending on the cfpp point desired.

ICIS quotes prices in Europe for the three most commonly used FAME cfpp levels: 0, -5 and -10. All FAME quotes are for unadditivated material. All FAME quotes are for unadditivated material.

Biodiesel contains no fossil fuel, but it can be blended at any level with petroleum diesel to create a biodiesel blend. Biodiesel is simple to use, biodegradable, non-toxic, and, if pure and unadditivated, essentially free of sulphur and aromatics.

Biodiesel is made through a chemical process called transesterification whereby the glycerine is separated from the fat or vegetable oil. The process leaves behind two products – methyl esters (the chemical name for biodiesel) and glycerine (a by-product usually sold to be used in soaps and other products).

Biodiesel can be used as a pure fuel or blended with petroleum in any percentage. In France, 5% biodiesel is common, and this has also been introduced in the UK. Vehicle manufacturers' warranties cover use with 5% biodiesel blends. 100% biodiesel must meet EU quality standard EN 14214.

In Europe, the Renewable Energy Directive (RED) stipulates that renewable energy should have a minimum 10% share in transport by 2020 and that this energy should come from sustainable feedstocks. This has resulted in a greater amount of RED certified biodiesel becoming available in the market.

ICIS reports cover all the relevant ongoing RED discussions at both a state and EU level.



Asian biodiesel is made mostly from palm oil and is called Palm Methyl Ester (PME). Palm oil producing countries like Malaysia and Indonesia are the main Asian biodiesel producers.

The use of biodiesel has various environmental benefits. Tests have shown that the toxicity of biodiesel is lower than that of petroleum-based diesel, and that in the environment it degrades more readily.

In terms of storage, handling and distribution, biodiesel is as safe as diesel, and it has a much higher ignition point. Biodiesel can be safely stored without degrading for up to six months. To keep for longer than that stabilising additives are needed.

ICIS pricing quotes Biodiesel in Europe, Asia, the US and Argentina.

Frequency:

Published weekly on Thursdays.

Biodiesel (EUROPE)

Weekly Price Assessments:

Spot prices

RME EN14214 FOB NWE (USD/MT)

RME (RED) FOB NWE (USD/MT)

FAME 0 CFPP FOB ROTTERDAM (USD/MT)

FAME 0 CFPP (RED) FOB ROTTERDAM (USD/MT)

FAME -5 CFPP FOB ROTTERDAM (USD/MT)

FAME -10 CFPP FOB ROTTERDAM (USD/MT)

PME CIF ARA T2 (USD/MT)

PME (RED) CIF ARA T2 (USD/MT)

SME CIF ARA T2 (USD/MT)

Biodiesel (ASIA)

Weekly Price Assessments

Spot prices

PME FOB Asia USD/MT (converted to USD/CBM)

Biodiesel (US)

Weekly Price Assessments:

Domestic spot prices in bid/offers



B100 FOB Midwest (USD/GAL)

B100

FOB

USG

(USD/GAL)

FAME 0 CFPP FOB Midwest (USD/GAL)

### **Biodiesel South America**

Weekly Price Assessments:

Export prices in bid/offers

B100 FOB Rosario

### **General Information:**

Assessment window: Price assessments are based on information supplied by market participants through the week up to close of business on Thursday at 1700 hours in London, Houston and Singapore.

Specifications:

In Europe all prices are quoted on a T2 basis. ICIS pricing assesses rapeseed methyl ester (RME) biodiesel according to international standard EN14214.

Soy methyl ester and Palm methyl are assessed according to industry standards. FAME 0, FAME -5 AND FAME -10 prices are all based on unadditized material.

In the US, there are no industry-wide standards applied to biodiesel trade. ICIS pricing quotes B100 of any feedstock.

Timing: Cargoes loading or delivered within 4-6 weeks from the date of publication.

Terms: 30-60 days after the bill of lading.

Standard cargo size: Typically cargo sizes are 1,000-3,000 tonnes in Europe, while in Asia export cargo sizes are typically 2,000-8,000 tonnes. In the US, biodiesel is generally shipped via standard tank trucks of 45,000 lb or rail cars of 180,000 to 190,000 lb.

Assessment basis: The reports contain market commentary and analysis including details of traced spot transactions, supply/demand issues, export/import information news when applicable, spot prices, contract price negotiations and general sentiment for price direction. In Europe, the price quotes reflect spot transactions for biodiesel in US dollars per tonne, including INCO terms, which vary depending on the product.

The report offers price information and market trends on all mainstream grades of biodiesel. There is product information, production news, feedstock prices, comments on upstream and downstream market developments and general market intelligence including comments on European Union and individual state legislation relating to biodiesel and biofuels.



In the US, prices reflect quotes for B100 and FAME 0 CFPP truck and rail cargoes in generalised areas of the US midwestern states and in Texas for soy methyl esters (SME). In both Europe and the US, the price quotes capture mostly spot parcels and parcels on offer for export.

In South America, Argentina export prices for spot export volumes are quoted for current month or forward month positions. The price is calculated from the Chicago Mercantile Exchange (CME) daily soybean crude oil price settlement and the local premium or discount.

In Asia, most plants sell on European EN 14214 specifications to European buyers and to some in the US. Within Asia, the absence of mandatory regulations on biofuels means very little biodiesel is used, although small amounts are consumed in countries like Philippines, Thailand and Indonesia.

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