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## ***ARGUS GERMAN FUELS (ARGUS HANDEL)***

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

## Methodology overview

### Methodology rationale

Argus strives to construct methodologies that reflect the way the market trades. Argus aims to produce price assessments, which are reliable indicators of commodity market values, free from distortion and representative of spot market values. As a result, the specific currencies, volume units, locations and other particulars of an assessment are determined by industry conventions.

In the German downstream markets, Argus publishes physical market prices in the open spot market as laid out in the specification and methodology guide. Argus uses the trading period deemed by Argus to be most appropriate, in consultation with industry, to capture spot liquidity.

Argus may assess some clean product markets as a basis differential to Ice gasoil to arrive at fixed prices because the futures settlement price is a representative futures price reference.

In order to be included in the assessment process, deals must meet the minimum volume, delivery, timing and specification requirements in our methodology. In illiquid markets, Argus assesses the range within which product could have traded by applying a strict process outlined later in this methodology.

### Survey process

Argus price assessments are informed by information received from a wide cross section of market participants, including producers, consumers and intermediaries. Argus reporters engage with the industry by proactively polling participants for market data. Argus will contact and accept market data from all credible market sources including front and back office of market participants and brokers. Argus will also receive market data from electronic trading platforms and directly from the back offices of market participants. Argus will accept market data by telephone, instant messenger, email or other means.

Argus encourages all sources of market data to submit all market data to which they are a party that falls within the Argus stated methodological criteria for the relevant assessment. Argus encourages all sources of market data to submit transaction data from back office functions.

Throughout all markets, Argus is constantly seeking to increase the number of companies willing to provide market data. Reporters are mentored and held accountable for expanding their pool of contacts. The number of entities providing market data can vary significantly from day to day based on market conditions.

For certain price assessments identified by local management, if more than 50pc of the market data involved in arriving at a price assessment is sourced from a single party the supervising editor will engage in an analysis of the market data with the primary reporter to ensure that the quality and integrity of the assessment has not been affected.

### Market data usage

In each market, Argus uses the methodological approach deemed to be the most reliable and representative for that market. Argus will utilise various types of market data in its methodologies, to include:

- Transactions
- Bids and offers
- Other market information, to include spread values between grades, locations, timings, and many other data.

In many markets, the relevant methodology will assign a relatively higher importance to transactions over bids and offers, and a relatively higher importance to bids and offers over other market information. Certain markets however will exist for which such a hierarchy would produce unreliable and non-representative price assessments, and so the methodology must assign a different relative importance in order to ensure the quality and integrity of the price assessment. And even in markets for which the hierarchy normally applies, certain market situations will at times emerge for which the strict hierarchy would produce non-representative prices, requiring Argus to adapt in order to publish representative prices.

### Verification of transaction data

Reporters carefully analyse all data submitted to the price assessment process. This data include transactions, bids, offers, volumes, counterparties, specifications and any other information that contributes materially to the determination of price. This high level of care described applies regardless of the methodology employed. Specific to transactions, bids, and offers, reporters seek to verify the price, the volume, the specifications, location basis, and counterparty. In some transactional average methodologies, reporters also examine the full array of transactions to match counterparties and arrive at a list of unique transactions. In transactional average methodologies, details of the transactions verified are published electronically and are accessible by subscribers. The number of transactions and volumes are also published in the daily report.

Several tests are applied by reporters in all markets to transactional data to determine if it should be subjected to further scrutiny. If a transaction has been identified as failing such a test, it will receive further scrutiny. For assessments used to settle derivatives and for many other assessments, Argus has established internal procedures that involve escalation of inquiry within the source's company and escalating review within Argus management. Should this process determine that a transaction should be excluded from the price assessment process, the supervising editor will initiate approval and, if necessary, documentation procedures.

### Primary tests applied by reporters

- Transactions not transacted at arms length, including deals between related parties or affiliates.
- Transaction prices that deviate significantly from the mean of all transactions submitted for that day.
- Transaction prices that fall outside of the generally observed lows and highs that operated throughout the trading day.
- Transactions that are suspected to be a leg of another transaction or in some way contingent on an unknown transaction.

- Single deal volumes that significantly exceed the typical transaction volume for that market.
- Transaction details that are identified by other market participants as being for any reason potentially anomalous and perceived by Argus to be as such.
- Transaction details that are reported by one counterparty differently than the other counterparty.
- Any transaction details that appear to the reporter to be illogical or to stray from the norms of trading behaviour. This could include but is not limited to divergent specifications, unusual delivery location and counterparties not typically seen.
- Transactions that involve the same counterparties, the same price and delivery dates are checked to see that they are separate deals and not one deal duplicated in Argus records.

### Secondary tests applied by editors for transactions identified for further scrutiny

#### Transaction tests

- The impact of linkage of the deal to possible other transactions such as contingent legs, exchanges, options, swaps, or other derivative instruments. This will include a review of transactions in markets that the reporter may not be covering.
- The nature of disagreement between counterparties on transactional details.
- The possibility that a deal is directly linked to an offsetting transaction that is not publicly known, for example a “wash trade” which has the purpose of influencing the published price.
- The impact of non-market factors on price or volume, including distressed delivery, credit issues, scheduling issues, demurrage, or containment.

#### Source tests

- The credibility of the explanation provided for the outlying nature of the transaction.
- The track record of the source. Sources will be deemed more credible if they
  - Regularly provide transaction data with few errors.
  - Provide data by Argus’ established deadline.
  - Quickly respond to queries from Argus reporters.

### Assessment guidelines

When insufficient, inadequate, or no transaction information exists, or when Argus concludes that a transaction based methodology will not produce representative prices, Argus reporters will make an assessment of market value by applying intelligent judgment based on a broad array of factual market information. Reporters must use a high degree of care in gathering and validating all market data used in determining price assessments, a degree of care equal to that applying to gathering and validating transactions. The information used to form an assessment could include deals done, bids, offers, tenders, spread trades, exchange trades, fundamental supply and demand information and other inputs.

### Bids and offers

If a sufficient number of bids and offers populate the market, then the highest bid and the lowest offer can be assumed to define the boundaries between which a deal could be transacted.

### Comparative metrics

The relative values between compared commodities are readily discussed in the market and can be discovered through dialogue with market participants. These discussions are the precursor to negotiation and conclusion of transactions.

- Comparison to the same commodity in another market centre.
- Comparison to a more actively traded but slightly different specification commodity in the same market centre.
- Comparison to the commodity’s primary feedstock or primary derived product(s).
- Comparison to trade in the same commodity but in a different modality (as in barges versus trucks) or in a different total volume.

### Volume minimums and transaction data thresholds

Because of the varying transportation infrastructure found in all commodity markets, Argus typically does not establish thresholds strictly on the basis of a count of transactions, as this could lead to unreliable and non-representative assessments. Instead, minimum volumes are typically established which may apply to each transaction accepted, to the aggregate of transactions, to transactions which set a low or high assessment or to other volumetrically relevant parameters.

For some price assessments, Argus will seek to establish minimum transaction data thresholds and when no such threshold can be established Argus will explain the reasons. These thresholds will often reflect the minimum volumes necessary to produce a transaction-based methodology, but may also establish minimum deal parameters for use by a methodology that is based primarily on judgment.

Should no transaction threshold exist, or should submitted data fall below this methodology’s stated transaction data threshold for any reason, Argus will follow the procedures outlined elsewhere in this document regarding the exercise of judgment in the price assessment process.

### Transparency

Argus values transparency in energy markets. Deals will be published through electronic Argus Deals Done Databases and may be published in the report, but will not reveal names of counterparties. The deal tables allow subscribers to cross check and verify the deals against the prices. Argus feels transparency and openness is vital to developing confidence in the price assessment process.

### Corrections to assessments

Argus will on occasion publish corrections to price assessments after the publication date. We will correct errors that arise from clerical mistakes, calculation errors, or a misapplication of our stated methodology. Argus will not retroactively assess markets based on new information learned after the assessments are published. We

make our best effort to assess markets based on the information we gather during the trading day assessed.

### Ethics and compliance

Argus operates according to the best practices in the publishing field, and maintains thorough compliance procedures throughout the firm. We want to be seen as a preferred provider by our subscribers, who are held to equally high standards, while at the same time maintaining our editorial integrity and independence. Argus has a strict ethics policy that applies to all staff. The policy can be found on our website at [www.argusmedia.com](http://www.argusmedia.com). Included in this policy are restrictions against staff trading in any energy commodity or energy related stocks, and guidelines for accepting gifts. Argus also has strict policies regarding central archiving of email and instant messenger communication, maintenance and archiving of notes, and archiving of spreadsheets and deal lists used in the price assessment process. Argus publishes prices that report and reflect prevailing levels for open-market arms length transactions (please see the Argus Global Compliance Policy for a detailed definition of arms length).

### Consistency in the assessment process

Argus recognises the need to have judgment consistently applied by reporters covering separate markets, and by reporters replacing existing reporters in the assessment process. In order to ensure this consistency, Argus has developed a programme of training and oversight of reporters. This programme includes:

- A global price reporting manual describing among other things the guidelines for the exercise of judgment.
- Cross-training of staff between markets to ensure proper holiday and sick leave backup. Editors that float between markets to monitor staff application of best practices.
- Experienced editors overseeing reporting teams are involved in daily mentoring and assisting in the application of judgment for illiquid markets.
- Editors are required to sign-off on all price assessments each day, thus ensuring the consistent application of judgment.

### Review of methodology

The overriding objective of any methodology is to produce price assessments which are reliable indicators of commodity market values, free from distortion and representative of spot market values. As a result, Argus editors and reporters are regularly examining our methodologies and are in regular dialogue with the industry in order to ensure that the methodologies are representative of the physical market being assessed. This process is integral with reporting on a given market. In addition to this ongoing review of methodology, Argus conducts reviews of all of its methodologies and methodology documents on at least an annual basis.

Argus market report editors and management will periodically and as merited initiate reviews of market coverage based on a qualitative analysis that includes measurements of liquidity, visibility of market data, consistency of market data, quality of market data and industry usage of the assessments. Report editors will review:

- Appropriateness of the methodology of existing assessments
- Termination of existing assessments
- Initiation of new assessments

The report editor will initiate an informal process to examine viability. This process includes:

- Informal discussions with market participants
- Informal discussions with other stakeholders
- Internal review of market data

Should changes, terminations, or initiations be merited, the report editor will submit an internal proposal to management for review and approval. Should changes or terminations of existing assessments be approved, then formal procedures for external consultation are begun.

### Changes to methodology

Formal proposals to change methodologies typically emerge out of the ongoing process of internal and external review of the methodologies. Formal procedures for external consultation regarding material changes to existing methodologies will be initiated with an announcement of the proposed change published in the relevant Argus report. This announcement will include:

- Details on the proposed change and the rationale
- Method for submitting comments with a deadline for submissions

Argus will provide sufficient opportunity for stakeholders to analyse and comment on changes, but will not allow the time needed to follow these procedures to create a situation wherein unrepresentative or false prices are published, markets are disrupted, or market participants are put at unnecessary risk. Argus will engage with industry throughout this process in order to gain acceptance of proposed changes to methodology. Argus cannot however guarantee universal acceptance and will act for the good order of the market and ensure the continued integrity of its price assessments as an overriding objective.

Following the consultation period, Argus management will commence an internal review and decide on the methodology change. This will be followed by an announcement of the decision, which will be published in the relevant Argus report and include a date for implementation.

## Argus Handel — Argus German Fuels

| Region            | Locations   |
|-------------------|---|
| South:            | Ingolstadt, Neustadt, Vohburg                                     |
| Southwest:        | Karlsruhe   |
| Rhine-Main:       | Basis Frankfurt, with Flörsheim, Hanau and Aschaffenburg          |
| Niederrhein-Ruhr: | Basis Duisburg, Gelsenkirchen and Essen with Düsseldorf and Neuss |
| North:            | Hamburg   |
| Cologne Lowland:  | Cologne, Cologne-Godorf, Wesseling                                |
| Southeast:        | Cunnersdorf, Gera, Hartmannsdorf, Leuna, Rhäsa, and Thüringen     |
| Magdeburg         | Magdeburg   |
| Seefeld-Schwedt   | Seefeld, PCK Schwedt  |

### Price assessments

FCA-truck spot transactions form the basis of the price assessments. Volumes are shown in cubic meters (m<sup>3</sup>) and the currency in euros (€). Prices are reported in €/100l.

Inland price assessments are for the following products:

- 95 Ron E5
- 95 Ron E10
- 98 Ron
- Diesel EN 590 10ppm
- Heating oil 50ppm

Transaction data are used to calculate a volume-weighted average for 95 Ron E5, diesel EN 590 10ppm and heating oil 50ppm when a minimum of three sources have submitted data to Argus covering a minimum of 300m<sup>3</sup> in total per region and product.

If these conditions are not met, Argus uses its discretion in deciding whether to include transaction data with a combined volume below 300m<sup>3</sup> or received from fewer than three sources.

Argus will take into account the verifiability of transaction data and other market information when making such decisions.

If no transaction data have been received, the assessment will be made using other market data such as bids, offers and activity on the international market.

95 Ron E10 and 98 Ron follow a different methodology outlined in the following sections.

Argus gathers pricing information daily up to 5:00pm Central European Time.

### Data handling and storage

All transaction data submitted to Argus as part of the *Argus German Fuels Report* will be handled and stored in accordance with the EU Data Protection Directive (EU Directive 95/46/EC). Counterparty information including, but not limited to, company names or addresses will not be published without the express written consent of the counterparty. More

information on data and data security policies can be found at <http://www.argusmedia.com/About-Argus/How-We-Work>

### Verification and use of transaction data

Transaction data will be used to form the basis of the Argus German Fuels Report. These data include transactions, bids, offers, volumes, counterparties, specifications and any other information that contributes materially to the determination of price. For transaction data to be included in the regional FCA truck price assessments it must meet the following requirements:

- For delivery within Germany
- Transactions at arms length (please see the Argus Global Compliance Policy for a detailed definition of arms length).
- Product specifications meet those standards outlined within this methodology

Transactional data may be excluded for the following reasons:

- Transactions not transacted at arms length, including deals between related parties or affiliates
- Price or volume corrections, in particular those which do not take place on the same day as the reported transaction
- Transaction prices that fall outside of the generally observed lows and highs that operated throughout the trading day

### Indications of highs and lows

Argus publishes indications that reflect the highest and lowest transactions of the day. In the event that no transactions were reported to Argus, no high or low is shown.

### Weekly and monthly averages

Argus publishes weekly and monthly average assessments that are the arithmetic average of end-of-day price assessments.

Weekly average assessments are published on Friday, or the last publication day of the week if Friday is not a publication day. Monthly average assessments are published on the last publication day of the month.

A publication schedule is available at [www.argusmedia.com](http://www.argusmedia.com)

### 98 Ron gasoline assessment methodology

98 Ron gasoline is assessed on the basis of reported transactions and a daily market survey of offers.

Regional assessments are published as ranges of the lowest and highest traded or offered 98 Ron price differentials to the E5 price assessment in the regional market on the day of publication. For each region an outright 98 Ron price is also published as the regional E5 price assessment plus the national consensus 98 Ron price discussed below.

Argus also publishes a national consensus 98 Ron market price. The consensus is indicative of the preponderance of traded or offered prices in the market at the time of assessment and is intended to exclude trades or offers that are unrepresentative of the market

as a whole. The consensus price is independent of any of the regional low and high prices — depending on market conditions, the low, high and consensus prices may be the same, the consensus price may be equal to either the low or the high of the published range, or the consensus price may be equal to neither the low nor the high of the published range. The consensus price will never be below the lowest or above the highest of the published regional low-high prices.

Only price information for 98 Ron offered or sold as part of a “Tankstellenmix” or “petrol station mix” which includes E5 or other motor fuels as part of a combined shipment to retailers will be considered for inclusion in the assessments.

### 95 Ron E10 gasoline assessment methodology

Argus publishes regional 95 Ron E10 gasoline price assessments for each region included in the report, except the southeast. All 95 Ron E10 gasoline price assessments are based on a differential to published 95 Ron E5 gasoline prices, but the method of calculating that differential and the resulting outright price depends on the liquidity of the regional 95 Ron E10 gasoline market. The two methods of calculating 95 Ron E10 gasoline price assessments are outlined below.

#### Trades reported as a differential

95 Ron E10 trades are typically reported to Argus as an outright price. In some cases, 95 Ron E10 trades are reported to Argus as a price differential to a corresponding E5 trade. In those cases an outright a 95 Ron E10 price is derived and used in subsequent calculations.

#### Calculating a 95 Ron E10 – 95 Ron E5 price differential

For every reported 95 Ron E10 trade, a differential is calculated by subtracting the 95 Ron E10 trade price from the Argus 95 Ron E5 price assessment for the same region on the same day.

Those differentials are used in all subsequent calculations.

#### Liquid and illiquid markets

Argus uses one of two methods to calculate regional 95 Ron E10 gasoline prices depending on the liquidity of the regional market.

Argus continually monitors the liquidity of regional 95 Ron E10 gasoline markets. The North, Southwest and South regions are considered liquid for the purpose of price assessment methodology and the Rhine-Main, Niederrhein-Ruhr, Cologne Lowland, Southeast, Seefeld-Schwedt, and Magdeburg regions are considered illiquid for the purpose of price assessment methodology.

Argus will announce any change to the designation of a region as liquid or illiquid.

#### For liquid markets

For liquid markets, Argus calculates a region-specific volume-weighted average price based on at least five completed transactions in the region and publishes the outright price of 95 Ron E10 gasoline and the differential to 95 Ron E5 gasoline in the same region.

If fewer than five 95 Ron E10 trades are reported on the day of publication, Argus will include trades reported on previous days, working back chronologically through publication days until at least five trades are available for inclusion in the calculation of a volume weighted average.

In the example, three trades were reported on the day of publication, one trade on the previous day, and two trades were reported two days before the day of publication.

Note that in both examples, all six trades are included in the calculation of the 95 Ron E10 price.

| Example: more than five E10 trades on the day of publication   |                 |                  |                     |   |
|--|-----------------|------------------|---------------------|---|
| E10 trade  | E10 trade price | E10 trade volume | E5 price assessment | E10 differential to E5 price assessment |
| Day of publication   |                 |                  |                     |   |
| Trade 1  | 112.62          | 4                | 113.08              | -0.46                                   |
| Trade 2  | 112.43          | 10               |                     | -0.65                                   |
| Trade 3  | 111.8           | 6                |                     | -1.28                                   |
| Trade 4  | 112.89          | 7                |                     | -0.19                                   |
| Trade 5  | 112.37          | 2                |                     | -0.71                                   |
| Trade 6  | 111.53          | 7                |                     | -1.55                                   |
| Volume weighted average of E10 trades (price1*volume1 + ... pricen*volumen)/(volume1 + ...volumen)             |                 |                  |                     |   |
| 112.26   |                 |                  |                     |   |
| Differential of volume weighted average of E10 trades to E5 assessment   |                 |                  |                     |   |
| -0.82  |                 |                  |                     |   |
| Outright E10 assessment: Differential + E5 price assessment  |                 |                  |                     |   |
| 112.26   |                 |                  |                     |   |
| Total number of E10 trades included  |                 |                  |                     |   |
| 6 <i>Note that all six trades reported on the day are included in the calculation of the 95 Ron E10 price.</i> |                 |                  |                     |   |

| Example: Fewer than five E10 trades on the day of publication   |                 |                  |               |   |
|---|-----------------|------------------|---------------|---|
| E10 trade   | E10 trade price | E10 trade volume | E5 assessment | E10 differential to E5 price assessment |
| Day of publication  |                 |                  |               |   |
| Trade 1   | 112.51          | 30               | 113.21        | -0.7                                    |
| Trade 2   | 111.71          | 30               |               | -1.5                                    |
| Trade 3   | 112.62          | 10               |               | -0.59                                   |
| Day of publication - 1  |                 |                  |               |   |
| Trade 4   | 114.11          | 2                | 115           | -0.89                                   |
| Day of publication - 2  |                 |                  |               |   |
| Trade 5   | 113.31          | 36               | 114.52        | -1.2                                    |
| Trade 6   | 113.19          | 5                |               | -1.3                                    |
| Volume weighted average of E10 differentials (price1*volume1 + ... pricen*volumen)/(volume1 + ...volumen)       |                 |                  |               |   |
| -1.10   |                 |                  |               |   |
| Outright E10 assessment: weighted average differential + regional E5 price assessment on the day of publication |                 |                  |               |   |
| 112.11  |                 |                  |               |   |



### For illiquid markets

For illiquid markets, Argus calculates regional 95 Ron E10 price assessments by applying a nation-wide 95 Ron E10-95 Ron E5 differential to the regional 95 Ron E5 price assessment.

For each reported 95 Ron E10 gasoline trade, a differential is calculated to the same region's published E5 price assessment on the same day.

If 10 or more 95 Ron E10 trades are reported across all regions on the day of publication, a national E10-E5 price differential is established by taking the volume weighted average of the differential of each 95 Ron E10 trade price to the same region's published 95 Ron E5 price assessment.

That national differential is then applied to the illiquid region's 95 Ron E5 price assessment to calculate the outright 95 Ron E10 price assessment.

In this example, 11 trades are reported across all regions on the day of publication and all 11 are included in the calculation.

A volume-weighted average national differential is calculated from all of the trades. In this example, the volume weighted average differential is -1.32.

That differential is added to the regional 95 Ron E5 price assessment to produce the outright regional 95 Ron E10 price assessment for each of the illiquid market regions.

For example, in Region A, the 95 Ron E10 price assessment would be the national differential plus the regional 95 Ron E5 price assessment (-1.32 + 104.51 = 103.19)

If fewer than 10 95 Ron E10 trades are reported across all regions on the day of publication, Argus will include trades reported on previous days, working back chronologically through publication days until at least 10 95 Ron E10 trades are available for inclusion of a volume-weighted average.

In the example, across all regions, five trades are reported on the day of publication, three trades were reported the previous day and three trades were reported two days before the day of publication.

Note that all 11 trades are included in the calculation of the nation-wide E10-E5 price differential.

A volume-weighted average national differential is calculated from all of the trades, in this example, the volume weighted average differential is -1.33.

For each illiquid market region, an outright 95 Ron E10 price is calculated by applying the differential to the regional 95 Ron E5 price assessment for the day of publication.

In the example, for region A, the nation-wide E10-E5 price differential (-1.33) is added to the E5 price assessment for region A on the day of publication (104.41) resulting in a regional E10 price of 103.08.

#### Example: 10 or more E10 trades across all regions on the day of publication

| Region             | E10 trade | E10 trade price | Regional E5 price assessment | E10 trade differential to regional E5 price assessment | E10 Trade volume |
|--------------------|-----------|-----------------|------------------------------|--|------------------|
| Day of publication |           |                 |                              |  |                  |
| A                  | Trade 1   | 104.3           | 104.51                       | -0.21  | 10               |
| A                  | Trade 2   | 104.28          | 104.51                       | -0.23  | 6                |
| A                  | Trade 3   | 103.09          | 104.51                       | -1.42  | 10               |
| B                  | Trade 4   | 112.78          | 113.32                       | -0.54  | 4                |
| B                  | Trade 5   | 111.8           | 113.32                       | -1.52  | 10               |
| B                  | Trade 6   | 111.88          | 113.32                       | -1.44  | 6                |
| B                  | Trade 7   | 112.39          | 113.32                       | -0.93  | 7                |
| C                  | Trade 8   | 100.44          | 102.08                       | -1.64  | 30               |
| C                  | Trade 9   | 100.23          | 102.08                       | -1.85  | 15               |
| C                  | Trade 10  | 100.74          | 102.08                       | -1.34  | 20               |
| D                  | Trade 11  | 104.25          | 106.01                       | -1.76  | 5                |

#### Example: fewer than 10 E10 trades across all regions on the day of publication

| Region                | E10 trade | E10 trade price | Regional E5 price assessment | E10 trade differential to regional E5 price assessment | E10 Trade Volume |
|-----------------------|-----------|-----------------|------------------------------|--|------------------|
| Day of publication    |           |                 |                              |  |                  |
| A                     | Trade 1   | 103.79          | 104.41                       | -0.62  | 10               |
| A                     | Trade 2   | 104.11          | 104.41                       | -0.30  | 6                |
| B                     | Trade 3   | 112.7           | 113.09                       | -0.39  | 4                |
| B                     | Trade 4   | 112.01          | 113.09                       | -1.08  | 10               |
| C                     | Trade 5   | 99.95           | 101.72                       | -1.77  | 30               |
| Day of publication -1 |           |                 |                              |  |                  |
| A                     | Trade 6   | 103.7           | 105.55                       | -1.85  | 5                |
| C                     | Trade 7   | 101.87          | 103.66                       | -1.79  | 12               |
| D                     | Trade 8   | 103.04          | 103.82                       | -0.78  | 20               |
| Day of publication -2 |           |                 |                              |  |                  |
| B                     | Trade 9   | 102.08          | 103.14                       | -1.06  | 40               |
| E                     | Trade 10  | 99.71           | 101.87                       | -2.16  | 28               |
| F                     | Trade 11  | 100.28          | 101.21                       | -0.93  | 6                |

## Specifications

### 95 Ron E5

The specifications are 95 Ron, unleaded 10ppm sulphur, meeting all requirements of the latest official version of DIN EN228, 0.755 specific gravity at 15°C, and a maximum ethanol content of 5pc. Prices include typical industry performance additives.

The loading window ends no later than 28 calendar days after the transaction was made.

### 95 Ron E10

The specifications are 95 Ron, unleaded, 10ppm sulphur, meeting all requirements of the latest official version of DIN EN228, 0.755 specific gravity at 15°C, and a maximum ethanol content of 10pc. Prices include typical industry performance additives.

The loading window ends no later than 28 calendar days after the transaction was made.

### 98 Ron

The specifications are 98 Ron, unleaded, 10ppm sulphur, meeting all requirements of the latest official version of DIN EN228, 0.755 specific gravity at 15°C. Prices include typical industry performance additives.

The loading window ends no later than 28 calendar days after the transaction was made.

### Diesel EN 590 10ppm

The specifications are 10ppm sulphur, meeting all requirements of the latest official version of DIN EN590. Prices include typical industry performance additives.

The loading window ends no later than 28 calendar days after the transaction was made.

### Heating oil 50ppm

The specifications are 50ppm max sulphur, 0.845 specific gravity at 15°C, heating oil meeting the latest version of DIN EN 51603-1.

The loading window ends no later than 28 calendar days after the transaction was made.

IWO tax is not included in heating oil price assessments.

## Markets assessed

### South price assessments

- 95 Ron E5
- 95 Ron E10
- 98 Ron
- Diesel EN 590 10ppm
- Heating oil 50ppm

### Southwest price assessments

- 95 Ron E5
- 95 Ron E10
- 98 Ron
- Diesel EN 590 10ppm
- Heating oil 50ppm

### Rhine-Main price assessments

- 95 Ron E5
- 95 Ron E10

- 98 Ron
- Diesel EN 590 10ppm
- Heating oil 50ppm

Transactions in Flörsheim, Frankfurt, Hanau and Aschaffenburg are taken into account for the assessment.

Prices are assessed at Frankfurt, with transaction and offer prices in the other locations considered with a freight adjustment.

Freight adjustment rates are updated and published daily in the daily Argus Handel report. Daily freight rate assessments provided by PJK International are used to calculate adjustment rates.

### Niederrhein-Ruhr price assessments

- 95 Ron E5
- 95 Ron E10
- 98 Ron
- Diesel EN 590 10ppm
- Heating oil 50ppm

Transactions in Duisburg, Gelsenkirchen, Essen, Düsseldorf and Neuss are taken into account for the assessment.

Prices are assessed at Duisburg, Gelsenkirchen and Essen with transaction and offer prices in the other locations considered with a freight adjustment.

Freight adjustment rates are published in the daily Argus Handel report. Argus will periodically update the freight rates to reflect the market and reserves the right to do so without prior notification.

### North price assessments

- 95 Ron E5
- 95 Ron E10
- 98 Ron
- Diesel EN 590 10ppm
- Heating oil 50ppm

### Cologne Lowland price assessments

- 95 Ron E5
- 95 Ron E10
- 98 Ron
- Diesel EN 590 10ppm
- Heating oil 50ppm

### Southeast

- 95 Ron E5
- 95 Ron E10
- 98 Ron
- Diesel EN 590 10ppm
- Heating oil 50ppm

### Magdeburg

- 95 Ron E5
- 95 Ron E10
- 98 Ron



Diesel EN 590 10ppm  
Heating oil 50ppm

### Seefeld-Schwedt

95 Ron E5  
95 Ron E10  
98 Ron  
Diesel EN 590 10ppm  
Heating oil 50ppm

## Import prices

Argus Handel import prices are the calculated price of gasoline, diesel and heating oil from northwest Europe delivered to regional markets in Germany.

Import prices are the Argus assessment of the price of the product in the ARA region (Amsterdam-Rotterdam-Antwerp) plus the freight rate between ARA and each of the destination markets and associated costs.

Prices are published for Duisburg, Dortmund, Cologne, Frankfurt and Karlsruhe.

### Underlying price assessments

Gasoline Eurobob oxy barge  
German heating oil 0.005% fob barge  
German diesel 10ppm fob barge

See the [Argus European Products methodology](#).

### Rhine freight rates

Argus uses a third-party daily freight rate assessment for barges of 1,000-1,200t from Amsterdam-Rotterdam to Duisburg, Dortmund, Cologne, Frankfurt and Karlsruhe.

### Associated costs

Associated costs are included in the calculation, such as mineral oil charges (including energy tax) and EBV fee (German National Petroleum Stock Piling Agency). Prices do not include VAT, biofuel components and handling costs.

Tax rates are reviewed on a regular basis and adjusted if necessary.

### Exchange rates and conversion factors

Exchange rates are updated each afternoon.

The conversion from tonnes to litres is based on the following densities:

- Gasoline Eurobob oxy barge — 0.755 g/l
- German heating oil 0.005% fob barge — 0.845 g/l
- German diesel 10ppm fob barge — 0.845 g/l