

Methodology and specifications guide

Americas petrochemicals

Latest update: December 2018

Introduction	2	Part VI: Requests for clarifications of data and complaints	12
How this methodology statement is organized	2		
Part I: Input data	2	Part VII: Definitions of the trading locations for which Platts publishes daily indexes or assessments	13
Reporting data to Platts	3	Olefins	14
What to report	3	US aromatics	17
How to report	3	Latin American aromatics	20
MOC data publishing principles	3	US polymers	22
Part II: Security and confidentiality	7	Latin American polymers	26
Part III: Determining assessments	8	US intermediates	29
MOC price assessment principles	8	US hydrocarbon solvents	31
Normalization price adjustment techniques	8	US chlor alkali	32
Prioritizing data	9	US oxygenated solvents	33
Assessment Calculations	9	Liquid and gas chemical freight	35
Part IV: Platts editorial standards	12	S&P Global Platts global petrochemical indices	35
Part V: Corrections	12	Revision history	36

INTRODUCTION

Platts methodologies are designed to produce price assessments that are representative of market value, and of the particular markets to which they relate. Methodology documents describe the specifications for various products reflected by Platts assessments, the processes and standards Platts adheres to in collecting data, and the methods by which Platts arrives at final assessment values for publication.

Platts discloses publicly the days of publication for its price assessments, and the times during each trading day in which Platts considers transactions in determining its assessments levels. This schedule of publication is available on Platts website, at the following link: <http://www.platts.com/HolidayHome>.

The dates of publication and the assessment periods are subject to change in the event of outside circumstances that affect Platts ability to adhere to its normal publication schedule. Such circumstances include network outages, power failures, acts of terrorism and other situations that result in an interruption in Platts operations at one or more of its worldwide offices. In the event that any such circumstance occurs, Platts will endeavor, whenever feasible, to communicate publicly any changes to its publication schedule and assessment periods, with as much advance notice as possible.

Platts methodologies have evolved to reflect changing market conditions through time, and will continue to evolve as markets change. A revision history, a cumulative summary of changes to this and previous updates, is included at the end of the methodology. Methodology is reviewed regularly to ensure it reflects current market reality. Such reviews are carried out by Platts reporters and their managers, supplemented and supported by price methodology specialists who operate separately from the reporting teams. Platts follows a clearly defined process for public consultation on material changes to its methodologies. This process is based on full transparency and communication with industry stakeholders aimed at gaining

market acceptance for any proposed introduction or changes to methodology. For more information on the review and approval procedures, please visit: <https://www.spglobal.com/platts/en/our-methodology/methodology-review-change>

All Platts methodologies reflect Platts commitment to maintaining best practices in price reporting.

How this methodology statement is organized

This description of methodology for assessments is divided into seven major parts (I-VII) that parallel the entire process of producing the end-of-day price values.

- Part I describes what goes into Platts assessments, including details on what data market participants are expected to submit, the process for submitting data and criteria for timeliness of market data submissions, as well as the editorial collection of input data from market sources.
- Part II describes any security and confidentiality practices that Platts uses in handling and treating data, including the separation between Platts price reporting and its news reporting.
- Part III is a detailed account of how Platts collects bids, offers, trades and other market data, and what Platts does with the data to formulate its assessments. It includes descriptions of the methods that Platts uses for reviewing data, and the methods used to convert raw data into assessments. This also includes the procedures used to identify anomalous data. This section describes how and when judgment is applied in this process, the basis upon which transaction data may be excluded from a price assessment, and the relative importance assigned to each criterion used in forming the price assessment. This section describes the minimum amount of transaction data required for a particular price assessment to be published. This is based on reported transactions and other market information. Finally, this section describes how Platts addresses assessment periods

where one or more reporting entities submit market data that constitute a significant proportion of the total data upon which the assessment is based.

- Part IV explains the process for verifying that published prices comply with Platts standards.
- Part V lays out the verification and correction process for revising published prices and the criteria Platts uses to determine when it publishes a correction.
- Part VI explains how users of Platts assessments can contact Platts for clarification of data that has been published, or to share a complaint. It also describes how to find out more about Platts complaint policies.
- Part VII is a list of detailed specifications for the trading locations and products for which Platts publishes assessments for a particular commodity. This section describes why specific units of measurement are used, and what conversion factors are used to move between units of measurement, where relevant.

PART I: INPUT DATA

Platts objective is to ensure that input data that editors use as the basis for their price assessments is of the highest quality. Ensuring that data used in Platts assessments is of high quality is crucial to maintaining the integrity of Platts various price assessment processes.

Platts encourages entities that submit any input data for consideration in its assessment processes to submit all market data that they have which may be relevant to the assessment being made. Platts aim is to determine the full circumstances surrounding all reported transactional data, including details of quality, specifications, order sizes, dimensions, lead times and any locational and loading/delivery information. Platts uses that

information to determine a typical and repeatable market level for the commodity being assessed.

Reporting data to Platts

Platts assesses a variety of different markets and commodities. In some of these Platts receives information from back office functions. However, in many markets back office functions are not best placed to communicate relevant market data to Platts editors, and in these instances Platts has processes in place to ensure that data is corroborated either through reviews of entities participating in its process, or through source validation and publication of information.

As part of its standard editorial practise, Platts routinely reviews the companies participating in its price assessment processes. These reviews ensure the suitability of data and information that are used to formulate Platts end-of-day price assessments. These reviews are conducted on a regular basis, and may take into consideration an array of issues including, but not limited to, adherence to editorial guidelines, operational and logistical issues, as well as counterparty acceptance. Further details concerning Platts MOC Participation Guidelines can be found online at <https://www.platts.com/market-on-close>.

The reviews are not designed to impede a company's ability to bilaterally engage in market transactions; the objective at all times is to ensure the integrity of published price assessments. Platts does not disclose the nature or scope of routine reviews of data providers that participate in its price assessment activities.

Platts may consider verifiable data reported and published through the day as provided for publication by individual sources, through established editorial methods.

Platts has developed guidelines for Management of Sources that address source identification, source evaluation, source development, using source information and source dependency. Individual sources are verified as per Platts Source Management Guidelines.

Platts considers several criteria as whether to use source information. These criteria include:

- Company reputation
- Source position within a company
- Source understanding and knowledge of the market in question
- Ability of source to provide relevant, valuable information
- Ability of Platts to verify information with other sources
- Source credibility

What to report

Platts encourages all market participants to submit all data that may be relevant to Platts assessments, including but not limited to:

- Firm bids that are open to the marketplace as a whole, with standard terms
- Firm offers that are open to the marketplace as a whole, with standard terms
- Expressions of interest to trade with published bids and offers, with standard terms
- Confirmed trades
- Indicative values, clearly described as such
- Reported transactional activity heard across the market, clearly described as such
- Other data that may be relevant to Platts assessments

How to report

Platts accepts any reasonable method of delivery/communication for information provided for publication in real-time, including for bids, offers and transactions. Platts editors typically communicate with market participants through phone, eWindow (if relevant) and/or online instant messaging systems.

Platts tries to accommodate the communication needs of its customers and will endeavor to open any additional communication channels required. Other means of communication, such as emails during the assessment process, are acceptable but are considered to be atypical. If a market participant chooses to communicate with Platts editorial using such atypical means, this needs to be highlighted well ahead of the assessment process.

The following reporting methods are accepted by Platts editorial staff:

- Commonly used Instant Messaging software
- eWindow
- Telephone
- Email

Reporters covering the markets in Asia and the Middle East are contactable from around 09:30 to around 18:30 Singapore time, those covering Europe and Africa from around 09:30 to around 18:30 London time, and those covering the Americas from around 08:30 to around 17:30 Houston time.

MOC data publishing principles

The Platts Market on Close (MOC) assessment process establishes core standards for how data is collected and published, how data is prioritized by value, and ultimately how data is analyzed in the course of completing Platts assessments.

Transparency underpins Platts data publishing processes. Under Platts MOC guidelines for collecting and publishing data, Platts publishes market information including but not limited to firm bids and offers, expressions of interest to trade and confirmed trades that are received from market participants throughout the day.

This information is published in real-time, as it is received, on Platts information services. Platts publishes all information received so that it can be fully tested by the market at large. Information collected and published includes the identities of buyers and sellers, confirmed prices, volumes, location, and stated trading terms.

Platts assessments are designed to reflect repeatable market value at the close of the assessment process. Platts tracks market price evolution during the entire day, and publishes a wide range of data relating to market value as it does so. All data that has been published through the day is analyzed during the assessment process. Towards the close of the day, Platts focuses its assessment process to publish named firm bids and offers, expressions of interest to trade and confirmed trades, with all relevant details. This transparent data is prioritized in the assessment process, because it is available to the entire market for testing.

In order to ensure that all firm bids and firm offers that still stand at the close of the assessment process have been fully tested in the market at large, Platts has established clearly defined time cut-offs that apply when publishing firm bids and firm offers in the MOC process. Time cut-offs for the submission and subsequent publication of new bids and offers are applied so that MOC participants cannot bid or offer late in the process, and to ensure that every bid and offer published by Platts is logistically executable.

Bids and offers published by Platts are considered to be firm until Platts is informed otherwise, or until the close of the assessment process for the day, whichever comes first. Platts expects all participants in the MOC process to be contactable at all times.

Platts will consider all firm bids and offers as open to the market at large and executable unless informed otherwise by the counterparty submitting the market information. If no communication is made to Platts to withdraw or change the parameters of the bid or offer it is assumed that it is available to the marketplace. Platts seeks verification of any transaction originating from a bid or offer submitted for inclusion in the Platts MOC process.

Input data may also include fully and partially confirmed bids, offers and trades, notional trading values and other market information as provided for publication by individual sources, through established editorial methods.

Market reporters endeavor to verify all market information they receive, including by testing it within the market through the publishing process. Trades reported as executed are verified as being executed and Platts ensures that any firm bids/offers reported are available to the market as a whole.

Platts uses various techniques to confirm the quality of data it receives, including cross checks with counterparties as well as requests for supporting documentation. Platts eliminates data in the price assessment process that cannot be verified in the market to the extent deemed appropriate.

All Platts market reporters are trained to analyze the data they receive and to question sources to establish the fullest set of information possible around price data. Reporters are trained to seek a wide variety of information to test reported transactional activity, including the specific price agreed, the counterparty to the trade, the point of origin and destination for delivery of the commodity, the size of the transaction, any physical quality commitments agreed as part of the trade, the terms and conditions of a trade and when a trade was agreed.

Platts publishes the most relevant information collected that meets its methodological standards, typically through real-time information services and with as much transparency as possible in order to test information within the market.

MOC data submission process

Platts has specific guidelines around data submissions to ensure high quality of information in the assessment process. This includes detailed guidelines on timings for submissions, which can be found in the specific guide for each commodity process. The purpose of the time cut-offs is primarily to ensure logistical executability and standards of incrementability and repeatability to ensure an orderly assessment process. As such, they may be changed at short notice if evolving market conditions require.

To ensure proper dissemination of market information, new bids and offers for publication by Platts must be received by Platts no later than stated cut-off periods.

In order to ensure that all published data is fully tested in the market, Platts has established guidelines around how quickly bids and offers may be improved when they have been published, and by what amount. These incrementability guidelines define the quantum and speed at which bids and offers may typically be improved in the MOC assessment process. Incrementability does not apply to bids and offers that are moving away from market value, though Platts analyzes bids and offers that are moved lower, and higher, respectively, to ensure reasonability.

Platts may notify the market of any adjustment to the standard increments in the event of market volatility or a disruptive event. A market participant can withdraw a bid or offer from Platts MOC process at any time, so long as no other potential trading counterparty has indicated that it has interest to buy or sell into the bid/offer.

Platts expects that market participants bidding and offering in the MOC process should perform on their bid/offer with the first company of record to express interest to Platts for publication during the MOC process. In the event of a dispute on the timing, Platts will review its records and determine which company communicated to Platts first its intention to execute on a bid/

offer displayed on the Platts systems. Platts prioritizes data on the basis of timeliness. This sequence is critical for an orderly assessment process.

Platts editorial guidelines governing its assessment process require it must consider only those transactions, bids or offers where market participants perform under typical contractual terms. Platts accepts that individual companies may have trading limits with counterparties and that national legislation may prevent companies from dealing in materials of certain origins. Such counterparty issues are dealt with on a case-by-case basis.

All bids and offers are firm from the moment of submission.

Submissions of bids, offers or transactions should not be considered as received by Platts unless acknowledged as received by Platts. For communication initiated by phone Platts will consider the time when the trader actually communicated the bid/offer or transaction. Acknowledgment may take the form of “yes,” “OK,” “y,” “k,” or any other reasonable forms, including by sending back the published information. Platts recognizes the time of receiving a message of a company’s intent to buy/sell, as opposed to the time a message was sent by the trading party.

Bids and offers submitted on time but in an incomplete form, where the terms are only clarified after the cut-off deadline, will not be used in the assessment process.

As a general recommendation Platts advises market participants not to wait for the last possible minute before the cut-off deadlines for bids and offers, as the communication may not be completed on time.

A buyer or seller can communicate with Platts directly to express buying or selling interest. Platts may also take into consideration bids and offers made via a broker, provided the buyer or seller have communicated to Platts that they have authorized the broker to speak on their behalf.

Platts only considers for publication and assessment transactional interest that is expressed by participants for bids or offers that have already been published by Platts. Interest in bids or offers at prices that have not been published, and therefore may not be fully available for testing in the marketplace as a whole, may be disregarded. Should a buyer lower its bid or a seller increase its offer, an expression to trade at a previously published level will not be considered.

Platts editorial processes require full clarity when communicating bids/offers and intentions to trade. When expressing an intention to hit a bid or lift an offer in the MOC processes, any message should typically include the specific price of the trade and the name of the counterparty. Information may not be published if it is not sufficiently clear when communicated to Platts.

Following any trade, an intention to rebid or reoffer must be received by Platts as soon as is possible and within a reasonable time frame, as per incrementability guidelines.

Unless sellers/buyers expressly inform Platts of their continued interest to buy/sell after a deal, Platts will presume the original buyers or sellers are not there for additional volume.

A rebid or reoffer must match the initial position’s parameters, with the exception of price. A rebid or reoffer can be made at the same level or inferior to the traded price. For example Company B hits Company A’s bid for \$100/mt during the MOC. Company A can rebid at \$100/mt or below this level. If the MOC process for the market includes a “freeze” period at the close of the process, bids and offers may only be repeated at the last published price.

When there are multiple bids or offers at the same level, the first participant to reach that level should be the first to be traded. Subsequent deals will go to the second, third and fourth participant at the same level. When a participant is traded, any repeat of their bid/offer will move to the back of the bid/offer queue.

Platts will consider the first participant to express their interest in a bid or offer to be the counterparty for the subsequent trade. Platts will monitor time stamps in the event of a dispute to determine who the first buyer or seller was. In the event of a bid or offer being repeated, the queue of participants expressing interest in that position will be reset. Platts will not consider any interest expressed in a rebid or reoffer before the position is published to be executable during the MOC assessment process.

After a bid or offer is published, only price can be changed, while in certain markets volume may be adjusted to be multiples of a minimum volume. The quality or loading/delivery timing cannot be changed. Buyers or sellers can withdraw bids/offers at any time, provided no prior interest to transact has been expressed by any potential counterparty. If a participant trades another position during the MOC assessment process, they must communicate to Platts if they wish to withdraw their existing position following the trade. Otherwise, it is assumed the participant’s own position remains active.

All participants that have reported bids and offers for publishing in the Platts process are expected to promptly report any transactions stemming from available bids or offers reported to Platts as part of the MOC assessment process.

Platts synchronizes its computer clocks every day precisely, and will compare the time of any submitted bid, offer or transactional interest against this synchronized time. Please note that Platts applies the timing deadlines strictly.

For the purposes of clock synchronization, market participants may find the following internet link to be helpful: www.time.gov. This link offers an atomic clock reading for US time zones.

In markets where Platts eWindow is in operation, the eWindow clock will be used to determine the correct sequence of events when a bid or offer is amended, withdrawn, or traded by an interested counterparty. Bids or offers submitted by phone, or any other medium, such as instant messaging software, shall be

clocked at the time the bid, offer or trade indication is actually transmitted through the Platts eWindow system. As per Platts methodology, buyers or sellers can withdraw bids/offers at any time when communicating through eWindow, provided no prior interest to transact has been expressed by any potential counterparty. All bids and offers are firm from the moment submitted into Platts eWindow to the moment they are traded, the window period closes or the bid/offer is withdrawn from the system by the trader or a Platts editor.

Platts is an information company and it aims to publish any credible bid or offer reported to it. Platts makes no commitment to publish every bid or offer submitted to it, however. For instance, frivolous bids and offers may not be published.

Terms of trade such as quality, delivery port, timing of delivery/loading and price are fully up to the company submitting the bid or offer.

Platts cannot make any guarantee in advance about how and whether market information received and published but not fully adhering to its defined methodology will be incorporated in its final assessments.

Atypical bids, offers, trades

Platts may publish bids, offers and trades with atypical pricing terms, including benchmark bases and timing. Market information with atypical pricing inherently differs in value from the typical and commonly observable information in the market.

Bids and offers which are deemed as atypical relative to the market may not be fully taken into consideration for the assessment process. In the absence of an associated, liquid derivative instrument atypical pricing bases may be difficult or impossible to evaluate on an outright price equivalent.

Such bids/offers or transactions would be at best indicators of an overall market condition but they would not be seen as exact indicators of market price.

Any unusual condition or request regarding a commodity should be specified at the moment the initial bid or offer is made. Any unusual request that surfaces at the time a counterparty is ready to trade and that impedes the normal flow of a transaction could be seen as an impediment to trade.

Information reported by market participants that may have legal implications, including but not limited to potential libel, will not be published.

Market participants are encouraged to inform Platts when they cannot trade with another typical market participant due to performance, credit or legal issues before the cut off deadlines for initial bids and offers. Platts may ask market participants to provide supporting documentation to ensure the integrity of its assessment process.

Law

Contracts using English law are considered standard in the assessment process.

Embargoed products

Laws stating that nationals from specific countries may not buy products from embargoed countries may prevent market participants from lawfully executing transactions. A seller therefore may not assume that a buyer has the obligation to buy embargoed materials. Under Platts Market on Close assessment guidelines, commodities supplied from countries or entities that are subject to trading embargoes and sanctions recognized under international law should not be delivered against transactions concluded during the Platts MOC assessment processes. Bids and offers that contain statements surrounding delivery of embargoed materials will be considered by Platts for publication, and if published after review may be subject to normalization in value.

Late performance

Platts is aware that physical conditions regarding logistics which are beyond the control of the seller or buyer may result in lateness, quality issues or conditions seen as a deviation from the original wording in the contract, for example late delivery/loading.

These deviations will be seen in the larger context of physical trading, and should not be seen as an indication of Platts condoning lateness.

Platts will review patterns of logistical performance, as adjustments due to late performance and/or quality issues should be extraordinary and not recurring events.

Participants who are intending to sell should not offer when there is a known and distinct possibility that loading/delivery may be delayed. If congestion or delays prevent performance under the contractual terms, the seller should make reasonable and timely efforts to supply from an alternative source, or the seller should engage in other measures to alleviate the buyer's exposure.

Equally, a buyer should not over-commit and then aggregate nominations in a way that makes it logistically impossible for the seller to perform.

Platts will take appropriate steps to ensure the integrity of its assessments if issues of non-performance should arise.

In summary, performance is paramount and all bids and offers must be firm and transactions should be performable within the contractual parameters.

Platts only recognizes bids, offers and transactions where no party claims a right to unilaterally cancel a transaction. If a transaction becomes difficult the party causing the issue must seek resolution including alternative loadings, qualities, dates or book outs.

Compensation

Platts publishes bids, offers and transactions on the basis that participants will fulfil the full value of the physical contract.

A party deemed to have underperformed or not performed under the original contract is expected to compensate the affected party.

In almost all circumstances, the compensation is not, and should not be due to a flat price change, but should include parameters such as backwardation, logistics, and the inconvenience for the buyer in the case of a seller not performing, or contango, logistics and the inconvenience for the seller in the case of a buyer not performing. Compensation should not include consequential costs.

Such adjustments should be fair and in line with market practice, and should be reciprocal in the event that the inverse situation occurs in the future.

Compensation is subject to editorial review to ensure market practices and overall fairness in the transaction have been followed. Platts review may include an analysis of reasonable compensation. Platts views compensation as a part of full performance due under the parameters of a trade reported in the assessment process.

Force majeure

Force majeure is part of trading and may be invoked under very special circumstances. Platts editors will monitor the application of it to ensure that force majeure is not invoked frivolously.

Booking out trades

Booking out trades done during the Platts Market on Close assessment process is acceptable under exceptional circumstances. A stressed party may request to book out a trade, but its counterparty is under no obligation to accept such request.

In those exceptional cases where both counterparties agree to book out a trade, Platts expects the original spirit of the contract to be fulfilled where the non-performing party offers to buy/sell back the position and compensates the affected party.

In almost all circumstances, the adjustment is not and should not be due to a flat price change, but should be to include parameters such as market structure, logistics and the inconvenience for the buyer or seller expecting a normal

transaction. Such adjustments should be fair and in line with market practice, and should be reciprocal in the event that the inverse situation occurs in the future.

Furthermore, circle outs may occur when the original seller sells a parcel that is later sold into a third party that has a sale into the primary seller. Such “circle outs” are considered a normal part of trading as sometimes chains originate and finish at the same point.

Book outs and circle outs are subject to editorial review to ensure market practices and overall fairness in the transaction have been followed. Platts review may include proposals/arrangements to protect the integrity of its assessment process.

Review of trades

Platts may track all aspects of performance on trades reported during its MOC assessment process. Platts not only focuses on the performance of the transaction at the time of trade, but also on any significant issues stemming from such trades, including logistics and eventual delivery. Trades executed through the Platts Market On Close assessment process may be reviewed from time to time for performance completion. Platts therefore may request documentary material to determine performance and validity. Such material may include details of quality, location, vessel and laycan nominations. MOC trades may be subject to editorial review to ensure market practices and performance in the transaction have been followed.

A failure to meet Platts guidelines for participation and performance in the MOC may lead to an event driven review. Event driven reviews are designed to help ensure that transactional information and other data inputs used as the basis for Platts price assessments are representative of market value on an ongoing basis.

Post-deal tracking enables Platts to determine the actual performance of the participants in the trade and the validity of their inputs. Platts may publish confirmation of trade performance information.

Specification

Platts assessments reflect typically traded qualities of commodities. Specifications are available in individual specifications guides, published on the Platts website www.platts.com.

Testing of products

Traded commodities are subject to standard testing techniques and protocols to determine contractual performance. Platts typically follows the standards already in place in the trading market, although it may monitor these to ensure that the standards are adequate.

Implied guarantees in specifications

Bids and offers submitted to Platts that include numerical specifications will be assumed to have a series of zeroes to the right of the decimal point or to the right of the last digit to the right of the decimal point.

As an example, a fuel oil cargo with a maximum guarantee of 0.1 Shell Hot Filtration will be considered as 0.1000 etc. If the specification guarantees are otherwise, the buyer or seller should specify it clearly to avoid potential disputes.

Merchantability

Platts only considers in its assessments commodities that are merchantable. Hence, buyers may assume that offers or transactions are for a commodity that is merchantable. Sellers must ensure their offers or transactions are for merchantable commodities.

PART II: SECURITY AND CONFIDENTIALITY

Data is stored in a secure network, in accordance with Platts policies and procedures. Platts assessments are produced in accordance with Platts Market on Close assessment methodology. This means that all data for use in Platts assessments may be published by Platts editorial staff while assessing the value of the markets.

Platts does not have confidentiality agreements in place for information that is sent for use in its assessments.

PART III: DETERMINING ASSESSMENTS

The following section describes how Platts uses concluded and reported transactions, bids, offers and any other market information it has collected in the manner described in section one, to formulate its price assessments. Additionally, this section describes other information, including the normalization of market data, assumptions and extrapolations that are considered when making a final assessment.

MOC price assessment principles

Through the MOC assessment process, Platts considers market information gathered throughout the normal trading day, and publishes such information throughout the day. Platts analyzes all published information in determining its final published price assessments.

Platts seeks to establish and publish the value of markets that prevail at the close of the assessment process. Platts has aligned the timestamps reflected in its assessments with what typically is a period of high activity in the markets that Platts observes. Platts believes that aligning its price assessments to typical periods of greater market activity and liquidity provides a robust basis upon which to derive an assessment of market value. Timestamps for each assessment are included in the specifications guide for that assessment.

Platts has adopted the MOC methodology in order to provide complete clarity over the precise point in time reflected in its market assessments. Like the quality of a commodity, its delivery location, delivery dates, contract terms, and the volume to be supplied, the time of commercial activity is an important attribute considered in Platts price assessments. The time that a bid or offer is shown to the market, or a transaction concluded, is vitally important in understanding the market value of the respective

commodity, in the same way that the quality of the commodity, where it will be delivered and when it will be delivered are important factors. By clearly reflecting value at a defined point in time Platts is able to properly reflect outright and spread value.

The clarity established by providing a well-defined timestamp is also important for understanding the relationships between the markets that Platts assesses. By ensuring that all assessments within a region reflect market value at the same moment in time, spreads that exist between commodities are also able to be fully and properly reflected. For example, comparing the value of a raw material to a processed commodity is possible when both values have been determined at the same moment in time. By contrast, comparing the price of raw material in the morning, to processed material in the afternoon, might deeply impair the relationship between the commodities – particularly when the respective market prices move independently during the intervening period.

By providing clear timestamps for assessments, the Platts MOC process is designed to provide assessments that properly reflect outright and spread value during times of high volatility equally well as in times of modest volatility.

MOC guidelines are designed to avoid distortion of the final price assessments by eliminating inputs that are not fully verifiable, and by disregarding one-offs or unrepeatable transactions, or those that may distort the true market level. Transactions between related parties are, for instance, not considered in the assessment process.

Deals done below the level of prevailing bids or above the level of prevailing offers (i.e., selling through the bid or buying through the offer) will not be reflected in Platts assessments. Platts will only publish expressions of interest to trade with the most competitive, tradeable bid or offer available.

Platts does not specify a minimum amount of transaction data, or a transaction data threshold, for the publication of its price assessments. Physical commodity markets vary in liquidity. Any

particular market analyzed on its own will typically demonstrate rising and falling levels of transactional activity through time. Platts is committed to providing an assessment of value for every market that it covers, equally well in times of heightened or reduced liquidity.

Platts seeks to receive market information from as broad a cross section of the market as possible. If a very limited number of market-makers are active in the market, or if a limited number submit data that constitutes a significant proportion of the total data upon which the assessment is based, Platts will continue to seek fully transparent and verifiable data from the market at large and to apply Platts methodology principles of transparency and time sensitivity. Platts considers data for assessment of any market where a single company provides more than half of all available information to be one where such a company provides a significant proportion of data. For consideration in the MOC process such a company's bids or offers must be clearly available for execution by any other potential MOC trading counter party.

Normalization price adjustment techniques

Platts seeks to align the standard specifications for the markets it assesses and the timestamps reflected in its assessments with standard industry practice. However, physical commodity markets are generally heterogeneous in nature. Key attributes often vary from the base standard reflected in Platts assessments as material is supplied to market.

The quality, delivery location and other specific terms of trade may vary in the physical commodity markets assessed by Platts. This means that simple averages of trades may not produce a representative assessment value of a physically heterogeneous market.

Because of the complex nature of the physical markets, market data typically must be aligned with standard definitions to allow for a fully representative final published assessment. Platts aligns data collected through an analysis of the physical markets with

its standard assessment specifications through a process called normalization.

Normalization is an essential price adjustment technique used to align reported market information to the base standard reflected in Platts price assessments.

Platts establishes the level of normalization by surveying markets and observing the economic impact of variance from the base standard. This is done by analyzing freight rates (for locational differences), quality premiums (for quality differences), the movements of all markets through time (for time differences) and other premiums associated with the size of trades and delivery terms.

Normalization for time may be done by analyzing movement in a related market observed through time, and that movement may provide a basis by which to align market value of an earlier reported bid, offer or transaction to market value at the MOC close. The alignment for time is essential to ensure that Platts price assessments reflect the prevailing value of a market at the close of the MOC process.

Prioritizing data

Transparency underpins Platts assessment process, just as it does Platts data publishing processes. Platts assessment process considers firm bids, firm offers and arms-length transactions that are transparent and open to sufficient, credible counterparties. Bids, offers or transactions that are not transparent may not be considered in the assessment process; bids above transparent offers or offers below transparent bids are not considered in the assessment process. Platts considers changes to bids or offers when those changes are made transparently and in normal increments.

When determining a final market assessment, Platts gives the greatest priority to fully verifiable and transparent market information. A firm bid or offer that has been published by Platts in accord with its data publishing standards, as outlined in part

1 above, and which still stands open to the marketplace at the close of the assessment process, will establish clear parameters for Platts final published assessments. Platts will typically assess market value between the best firm bid and best firm offer open to the market at the close. This ensures that Platts assessments reflect the transactable value at the close.

Completed, transparent transactions that are fully published by Platts are important in helping establish where trading interest prevails in the market, and may help determine where, in a bid/offer spread, Platts may assess value for publication.

Firm bids and offers that are available to the entire market may take precedence over trades that have been concluded earlier in the assessment process when establishing the value of the market, particularly if bids are available at the close above previously traded levels, or offers are available to the market below previously traded levels. Value is a function of time.

Similarly, firm bids and offers that are available to the entire market take precedence over transactional activity reported to Platts after completion.

The level of each bid or offer must stand firm in the marketplace long enough for any counterparty to transact; otherwise the bid or offer may be deemed non-executable. Platts may not consider bids, offers or transactions that are the result of market gapping. Gapping occurs when a bid and an offer are more than one increment apart and a trade occurs. Platts will analyse and evaluate such trades for their representative value. They may not be fully reflected in the final assessment.

Platts assessment guidelines are designed to avoid any distortion of the final price assessment and so inputs that are not verifiable and “one-off” or unrepeatable transactions may be disregarded from the price assessment process.

Single transactions may be a reflection of market value. However single transactions need to be measured against the broad

span of similar transactions. If for instance a buyer decides to trade an offer but is unwilling to buy more material offered at the same level if the seller reoffers it would be determined that the buyer failed the repeatability test. Equally if the seller does not reoffer, the seller fails the repeatability test. As such the transaction may not be fully reflected in the price assessment.

Similarly, Platts may not publish bids or offers that are provided through untested price levels. When transactions are concluded at levels that have not been fully tested by the market because price changes have been non incremental, Platts may determine that actual market value is between the last incremental bid and the transaction at the gapped level.

When no bid, offer or transaction data exists, Platts may consider other verifiable data reported and published through the day, including fully and partially confirmed trades, notional trading values and other market information as provided for publication. Platts may observe direct market activity as well as the effect of movements in related markets through spread differentials or blending and shipping economics, for example.

Platts takes into account representative transactions executed at arms-length in the open market occurring during the trading day, up to the close, and additionally taking into account bid and offer information submitted during this period. Platts editors may require direct verification from the principals to a reported bid, offer or deal when communicated through a third party, including a broker.

Assessment Calculations

Units of measurement

Platts publishes its assessments reflecting the currencies and units of measurement in which the products typically trade.

Commodities are generally internationally traded in US dollars, and Platts assessments are typically published in that currency as a result. Certain markets, such as regional markets, trade

using local currency. Platts assesses the value of such markets as appropriate in local currency.

Commodities typically trade in volumetric or energy units, and Platts assessments for these markets reflect common practice in each market. The units and unit range considered for each individual Platts assessment of a physical market is described in the specification guide for each commodity.

In certain cases Platts converts its assessments to other currencies or units of measurement to allow for ease of comparison or analysis in regional markets. Such conversions are done using exchange rates published regionally. Conversion factors are described in the specifications guide for each commodity alongside individual assessment codes.

Use of judgment

Judgment guidelines promote consistency and transparency and are systematically applied by Platts. Where judgment is exercised, all information available is critically analyzed and synthesized. The various possibilities are critically analyzed and fully evaluated to reach a judgment.

Platts reporters follow specific methodology when exercising judgment or discretion during their assessment process. Platts editors apply judgment when determining (1) whether information is suitable for publication, (2) when and how to normalize data and (3) where to assess final value. All such judgment is subject to review by Platts editorial management for adherence to the standards published in Platts methodologies.

Judgment may be applied when analyzing transactional data to determine if it meets Platts standards for publication; judgment may also be applied when normalizing values to reflect differences in time, location, and other trading terms when comparing transactional data to the base standard reflected in Platts assessments.

To ensure all assessments are as robust as possible, Platts editorial systems are backed by a strong corporate structure

that includes managerial and compliance oversight.

An evaluation process is conducted before publication on every benchmark assessment by a competent peer or manager. The price assessments are reviewed and the exercise of judgment is further discussed and verified during this process. Finally, assessments that are used as benchmarks are supported by assessment rationales. These rationales explain the application of judgment and are published together with the relevant price assessment, offering full transparency to the market.

To ensure the consistent exercise of discretion, Platts ensures that reporters are trained and regularly assessed in their own and each other's markets. Platts manages and maintains internal training guides for each of the different products assessed which aim to ensure Platts price assessments are produced consistently.

Every assessment of a benchmark, including the use of discretion, is reviewed and approved by a competent peer or manager prior to publication.

Reporters are trained to identify potentially anomalous data. Platts defines anomalous data as any information, including transactions, which is inconsistent with or deviates from our methodology or standard market conventions.

As a publisher owned by S&P Global, independence and impartiality are at the heart of what Platts does. Platts has no financial interest in the price of the products or commodities on which it reports. Platts aim is to reflect where the actual market level is.

Platts focuses primarily on assessing the value of a commodity trading in the spot market. A spot price for a physical commodity is the value at which a standard, repeatable transaction for merchantable material takes place, or could take place, in the open market at arms' length. Platts spot price assessments reflect this value at precisely the close of the assessment process.

Platts overall objective is to reflect the transactable value of the commodity assessed. In cases where the apparent value of the commodity includes extra optionalities, the intrinsic value of the commodity may be masked. In such cases, Platts reporters may use judgment to normalize bids, offers or transactions with such extraneous elements to the base market standard, or may exclude them altogether. Optionalities that may mask the value of the commodity include but are not limited to loading or delivery options held by the buyer or seller, size option tolerances exercisable by the buyer or seller, or quality specifications.

Outright, differential and spread prices

Platts assesses the outright value of a commodity, as well as differentials when it trades with reference to a benchmark. Platts analyzes all data collected and published by Platts throughout the day. Final assessments are above firm bids, and below firm offers, that stand at the close of the Market on Close assessment process. This is true for outright values and differentials.

Platts physical price assessments use a variety of inputs, including outright price bids/offers, floating price bids/offers, spread price bids/offers (including EFPs, EFSs etc.) and combinations of fixed and floating prices. Platts' objective is to assess the prevailing tradable outright price of the commodity at the close of the market assessment period. In the event of an observed conflict between outright values and differentials or spreads, outright values prevail in Platts final published assessments.

Platts establishes the hedgable, outright value of floating and spread price indications by applying them to the observable, prevailing value of underlying relevant derivatives instruments. In the event of conflicts observed between the outright values derived from floating and spread prices with different underlying references, Platts takes into account considerations that include the relative liquidity of each relevant derivatives market, and the typicality of a given spread or floating price, when exercising judgement around whether to prioritize one particular floating price or spread over another.

Platts may publish bids, offers and trades with atypical pricing terms, including benchmark bases and timing. Market information with atypical pricing inherently differs in value from the typical and commonly observable information in the market.

Bids and offers which are deemed as atypical relative to the market may not be fully taken into consideration for the assessment process. In the absence of an associated, liquid derivative instrument atypical pricing bases may be difficult or impossible to evaluate on an outright price equivalent.

Such bids/offers or transactions would be at best indicators of an overall market condition but they would not be seen as exact indicators of market price.

Timing

Platts produces time-sensitive assessments that reflect the value of the markets it covers precisely at the close of the price assessment process in each region. By providing clear timestamps for every region the Platts assessment process is designed to provide price assessments that properly reflect outright and spread value.

As an example, gasoline has a value, naphtha has a value and the gasoline versus naphtha spread has a value, and all three match when measured at the same time. By contrast, a system of averages can lead to distortions in the gasoline versus naphtha spread if the distribution of deals done for gasoline and naphtha differs over the averaging period. Thus if gasoline trades actively at the beginning of the assessment period and naphtha trades actively at the end of the assessment period in a rising market, the assessed spread value resulting from an averaging process will not be reflective of actual market value. This distortion can arise even if the value of spread trades in their own right has remained constant. The MOC approach drastically reduces the possibility of such distortions.

Assessments reflect typical loading and delivery schedules for each market assessed. The standard loading and delivery

periods are included in the individual specifications guide for each commodity.

Market structure, such as backwardation and contango, is also factored into the Platts assessment process. If a company offers a parcel loading 15 days forward, the offer may provide market information for the Platts assessment for parcels loading 15 days forward. Platts would still need to assess days 16 through 30 (in a 15-30 day market) and publish an assessment that reflects market value 15-30 days forward ahead of the day of assessment.

Market structure

Platts is very stringent in following timings for loading or delivery due to the variability in market value across time. This variability increases as the market structure, backwardation or contango, in the markets increases.

Platts factors in the backwardation/contango and reflects its impact on the published assessment. The assessment reflects the value of the commodity normalized to the center of the loading/delivery window. In a contango market, the excess of prompt material causes the front period to be significantly lower in value than material available at the end of the window. In a backwardated market the tightness of supply causes the prompt material to be at a higher price than material available at the end of the window.

Platts methodology eliminates any arbitrary movement in assessments caused simply by the different loading/delivery ranges traded. By normalizing prices to the mid-point of a clearly defined date range, the consistency of prices is maintained. The day-to-day changes in the price assessments therefore reflect an actual price move in the value of the commodity, rather than an artificial change because a cargo happens to be loading/delivering in the front period of the window rather than the back period, or vice versa.

The date ranges reflected by Platts reflect the prevailing trading practices in the region. By not taking very prompt days

into consideration, transactions reflecting distressed prices are excluded. The definition of this period varies according to specific markets.

Determination of backwardation or contango

In calculating market structure, the prices of tradable instruments, including derivatives such as futures and swaps, may be used.

Typical calculations include a determination made for the difference in price over a month; a granular value is then calculated from this for each day.

Outright and floating price information

The three main factors used in the commodities markets for price determination are:

- Outright price
- Differentials
- Derivatives

These three factors — outright price, premiums and derivatives – converge in a spot price. Platts may use all three in its assessments.

Outright price: The ultimate question in the mind of an end-user, producer, trader or broker is price. Outright prices are the simple statement of a price at which something can be bought or sold, with the entire value stated – for example, an offer of a cargo of iron ore at \$100/mt. Price in turn determines expense, processing margin, profit, loss, etc. The spot market trades actively on an outright price basis and a floating price basis. Platts takes both into account in its assessments. Platts will publish activity on both a fixed and floating basis.

Differentials: Many transactions are carried out in relation to a benchmark. In this case a differential, also known as a

premium/discount is generated. Differentials can arise if the quality, volumes or loading times for a given transaction differ from the benchmark. In addition, floating price transactions are done in relation to assessments that will be published in the future – for example, a bid for a cargo at \$10/mt above the Platts assessment of that same commodity, as published immediately before, during and after delivery of the cargo. Premiums usually rise when the market's backwardation steepens, and the steeper the curve, the greater the premium. In a contango situation, premiums have a tendency to turn into discounts.

Derivatives: Derivatives are a major determinant in price; they trade frequently and throughout the day. These markets are very reactive and may provide market participants with timely information on market conditions. They can react to arbitrage conditions or movements in overseas markets as well as local conditions. Derivatives may allow companies to adapt their price exposure because they enable market participants to transform floating prices to fixed or fixed to floating.

PART IV: PLATTS EDITORIAL STANDARDS

All Platts employees must adhere to the S&P Global Code of Business Ethics (COBE), which has to be signed annually. The COBE reflects S&P Global's commitment to integrity, honesty and acting in good faith in all its dealings.

In addition, Platts requires that all employees attest annually that they do not have any personal relationships or personal financial interests that may influence or be perceived to influence or interfere with their ability to perform their jobs in an objective, impartial and effective manner.

Market reporters and editors are mandated to ensure adherence to published methodologies as well as internal standards that require accurate records are kept in order to document their work.

Platts has a Compliance function that is independent of the editorial group. The Compliance team is responsible for ensuring the quality and adherence to Platts policies, standards, processes and procedures. The Compliance team conduct regular assessments of editorial operations, including checks for adherence to published methodologies.

S&P Global Platts appoints an independent, external auditor with appropriate experience and capability to review and report on its adherence to this stated methodology. The annual report is published online at <https://www.platts.com/regulatory-engagement>.

PART V: CORRECTIONS

Platts is committed to promptly correcting any material errors. When corrections are made, they are limited to corrections to data that was available when the assessment was calculated.

PART VI: REQUESTS FOR CLARIFICATIONS OF DATA AND COMPLAINTS

Platts strives to provide critical information of the highest standards, to facilitate greater transparency and efficiency in physical commodity markets.

Platts customers raise questions about our methodologies and the approach we take in our price assessments, proposed methodology changes and other editorial decisions in relation to our price assessments. These interactions are strongly valued by Platts and we encourage dialog concerning any questions a customer or market stakeholder may have.

However, Platts recognizes that occasionally customers may not be satisfied with responses received or the services provided by Platts and wish to escalate matters. Full information about how to contact Platts to request clarification around an assessment, or make a complaint, is available on our website, at: <http://www.platts.com/ContactUs/Complaints>.

PART VII: DEFINITIONS OF THE TRADING LOCATIONS FOR WHICH PLATTS PUBLISHES DAILY INDEXES OR ASSESSMENTS

The following specifications guide contains the primary specifications and methodologies for S&P Global Platts petrochemical assessments throughout the US and Latin America. The various components of this guide are designed to give S&P Global Platts subscribers as much information as possible about a wide range of methodology and specification issues.

This methodology is current at the time of publication. S&P Global Platts may issue further updates and enhancements to this methodology and will announce these to subscribers through its usual publications of record. Such updates will be included in the next version of the methodology. S&P Global Platts editorial staff and managers will usually be ready to provide guidance when assessment issues require clarification.

OLEFINS

Assessment	CURRENCY	CODE	Mavg	Wavg	CONTRACT TYPE	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	UOM	PC Page		Mavg	Wavg
												CONV	CODE		
Ethylene															
Ethylene FD USG M1	CTS (USD)	AA0SR00	AA0SR03	AA0SR05	Spot	FD	USG	Anytime during month	5 million	10 million	LB		236/301/870	438	301
Ethylene FD USG M2	CTS (USD)	AA0SS00	AA0SS03	AA0SS05	Spot	FD	USG	Anytime during month	5 million	10 million	LB		236/301/870	438	301
Ethylene Net Transaction Price	CTS (USD)	AAKWY00			Contract	FD	USG		5 million	10 million	LB		236/301	438	
Propylene															
Refinery-Grade Propylene Delivered USG	CTS (USD)	AAIKS00			Spot	FD	USG	3-30 days forward	5 million	10 million	LB		237/870	439	309
Chemical-Grade Propylene Contract Price Delivered	CTS (USD)	PHAKA00			Contract	FD	USG		5 million	10 million	LB		237/309	439	
Polymer-Grade Propylene Delivered USG M1	CTS (USD)	PHAXJ04	PHBCD03	PHAYJ04	Spot	FD	USG	Any time during month	5 million	10 million	LB		237/309/870	439	309
Polymer-Grade Propylene Delivered USG M2	CTS (USD)	PHAAA00	PHAAA03	PHAAA04	Spot	FD	USG	Any time during month	5 million	10 million	LB		237/309/870	439	309
Polymer-Grade Propylene Contract Price Delivered	CTS (USD)	PHAJT00			Contract	FD	USG		5 million	10 million	LB		237/309	439	309
Butadiene															
Butadiene CIF USG Weekly	CTS (USD)	PHAKC00	PHBCS03		Spot	CIF	USG	3-30 days forward	2,000 MT	4,000 MT	LB		313,503,858		
Butadiene CIF USG CP	CTS (USD)	PHAKM00	PHBCT03		Contract	CIF	USG				LB	22.046	313,503,858		
Monoethylene Glycol (MEG)															
Monoethylene Glycol Antifreeze FOB USG	CTS (USD)	PHAXF04	PHBDG03		Spot	FOB	USG	3-30 days forward	1,000	2,000	MT		236/305		
Monoethylene Glycol Fiber Contract FOB USG	CTS (USD)	PHAXG04	PHBDH03		Contract	FOB	USG		1,000	2,000	MT		236/305		

OLEFINS

Assessment	CURRENCY	CODE	Mavg	Wavg	CONTRACT TYPE	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	UOM	PC Page		Mavg	Wavg
												CONV	CODE		
Platts Petrochemicals Cracker Margin (PCM)															
Ethane Cracker Margin	USD	ECMDM00			Spot		US				MT	22.046	544		
Ethane Cracker Margin cts/Lb	CTS (USD)	ECMCP00			Spot		US				LB		544		
Ethane/Propane Mix Cracker Margin	USD	EPMDM00			Spot		US				MT	22.046	544		
Ethane/Propane Mix Cracker Margin cts/lb	CTS (USD)	EPMCP00			Spot		US				LB		544		
Propane Cracker Margin	USD	PCMDM00			Spot		US				MT	22.046	544		
Propane Cracker Margin cts/Lb	CTS (USD)	PCMCP00			Spot		US				LB		544		
N-Butane Cracker Margin	USD	NBMDM00			Spot		US				MT	22.046	544		
N-Butane Cracker Margin cts/Lb	CTS (USD)	NBMCP00			Spot		US				LB		544		
Light Naphtha Cracker Margin	USD	LNMDM00			Spot		US				MT	22.046	544		
Light Naphtha Cracker Margin cts/lb	CTS (USD)	LN MCP00			Spot		US				LB		544		

Olefins

Ethylene

Assessment Window: S&P Global Platts daily spot ethylene assessments reflect prevailing market price at 4 p.m. US Central time each business day. S&P Global Platts also publishes a weekly arithmetic average of the daily assessments at the close of each business week.

Timing: S&P Global Platts spot ethylene assessments reflect monthly physical trades in the current delivery month (M1) and second month (M2). These assessments are based on product trading for delivery at any time during the specified month. S&P Global Platts monthly spot ethylene assessments will roll from the current month to the next forward month three calendar days prior to the end of the month.

Basis and Locations: Spot ethylene prices are assessed on a free delivered (FD) basis into the US Gulf Coast pipeline system in Texas. In the absence of liquidity in the Texas system, deals,

bids and offers for product in the Louisiana pipeline system may be considered by the editor in the assessment process.

Contract Price: S&P Global Platts US domestic ethylene contract prices reflect negotiated prices for contractual volumes for a particular month. The net transaction price represents the posted settlement after discounts.

Spot and contract assessments are reported in cts/lb.

Standard cargo size: 3-10 million lb for spot and contract assessments.

Product Specifications: minimum purity of 99.9%.

Propylene

Assessment Window: S&P Global Platts' daily refinery-grade and polymer-grade propylene spot assessments reflect prevailing market price at 1:30 p.m. US Central time each business day. S&P Global Platts also publishes a weekly arithmetic average of

the daily assessments at the close of each business week.

Timing: Refinery-grade propylene spot assessment reflects delivery 3-30 days forward from the date of publication. Polymer-grade propylene spot assessments reflect monthly physical trades in the current delivery month (M1) and next delivery month (M2). These assessments are based on product trading for delivery at any time during the specified month. S&P Global Platts monthly polymer-grade propylene spot assessments will roll from the current month to the next forward month three calendar days prior to the end of the month.

Basis and Locations: Spot propylene prices are assessed basis FD US Gulf Coast, delivered free in pipeline to buyer. Deals for delivery to US destinations other than Texas and Louisiana may also be considered in the assessment process. S&P Global Platts may also consider deals, bids and offers for delivery by rail car in its spot propylene assessment process, and will normalize to the pipeline basis.

Contract Price: S&P Global Platts US domestic contract

price reflects negotiated prices for contractual volumes for a particular month. S&P Global Platts US domestic contract prices for chemical-grade and polymer-grade propylene represent posted prices settled before discounts. Spot and contract assessments are reported in cts/lb. Spot and contract assessments are reported in cts/lb.

Standard cargo size: 3-10 million lb for spot and contract assessments.

Product Specifications: Refinery-grade propylene: minimum purity of 65%. The price reflects the contained propylene only, not the propane stream.

Chemical-grade propylene: minimum purity of 94%.

Polymer-grade propylene: minimum purity of 99.5%.

Butadiene

Assessment Window: S&P Global Platts daily butadiene assessments reflect prevailing market price at 1:30 p.m. US Central time. S&P Global Platts publishes a weekly assessment each Friday, or the last business day of the week.

Timing: Spot assessments reflect delivery 3-30 days forward from date of publication. S&P Global Platts also posts the monthly settlement of producer contract posted reference prices.

Basis and Locations: Spot prices are assessed basis CIF US Gulf Coast. In the absence of import business, the editor may use other spot business (either domestic or export) to determine an import parity price.

Contract Price: S&P Global Platts US domestic butadiene contract price reflects negotiated prices for contractual volumes for a particular month and are assessed basis FOB US Gulf Coast. S&P Global Platts US domestic butadiene contract prices represent posted prices settled before discounts.

Spot and contract assessments are reported in cts/lb.

Standard cargo size: Imports of 2,000-4,000 mt are considered for spot assessments. In the absence of volumes meeting those criteria, smaller volumes may be considered in the assessment process, and normalized to reflect the standard cargo size.

Product Specifications: minimum purity of 99.5%.

Monoethylene Glycol (MEG)

Assessment Window: S&P Global Platts weekly MEG assessments reflect prevailing market price at 1:30 p.m. US Central time each Friday, or the last business day of the week.

Timing: Spot assessments reflect cargoes loading 3-30 days forward from the date of publication. Fiber-grade contract prices are settled monthly, with assessments based on North American and Asian announced contract prices, with discounts applied as per market feedback.

Basis and Locations: Spot and contract prices are assessed basis FOB US Gulf Coast, and are reported in cts/lb.

Standard cargo size: 1,000mt to 2,000mt for spot and contract assessments.

Product Specifications: The US spot assessment covers

antifreeze grade with a minimum purity of 95%. The fiber-grade contract price assessment covers material with a minimum purity of 99.8%.

S&P Global Platts Petrochemicals Cracker Margin

S&P Global Platts also publishes the S&P Global Platts Petrochemicals Cracker Margin (PCM) spot assessment for US in cents/lb on a daily basis. The PCM aims to provide a basic calculation of the petrochemicals margins of steam cracker operators in the US.

The assessments reflect the production margin of US ethylene when fed with the basic steam cracker feedstocks ethane, propane, ethane/propane mix (E/P mix), butane and light naphtha. All assessments will be published in cents/lb, and also converted to \$/mt using a conversion factor of 22.046.

The variables used in the calculation of the PCM include the spot assessments of S&P Global Platts ethane (PMUDB05), propane (PMAAY00), butane (PMAAI00), e/p mix FOB Mont Belvieu (PMUDA05), light naphtha USGC (AAYEU00), full range naphtha (AALPG00), gas oil No. 1 (POAEE00), ethylene FD US Gulf Coast (AAOSR00), propylene FD US Gulf Coast (AAIKS00) butadiene CIF USGC (PHAKC00), benzene FOB USGC (PHAAE00), Regular RBOB gasoline octane min. 83.7 FOB USGC (AAMFB00), USGC HSFO (PUAFZ00) and Natural Gas Houston Ship Channel (IGBAP00).

For each feedstock, the yields of various products (ethylene, propylene, butadiene, benzene, pygas, residual fuel and RBOB) are calculated and the total value of output is summed. Operating and feedstock costs are then subtracted resulting in a margin for each respective feedstock.

US AROMATICS

Assessment	CURRENCY	CODE	Mavg	Wavg	CONTRACT TYPE	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	UOM	PC Page		Mavg	Wavg
												CONV	CODE		
Benzene															
FOB US Gulf Benzene M1	CTS (USD)	PHAAE00		PHAWU04	Spot	FOB	USG	Anytime during that month	10,000 bbl		GAL	541		434	321,362,862
FOB US Gulf Benzene M2	CTS (USD)	AAKYD00	AAKYE00	AALDC00	Spot	FOB	USG	Anytime during that month	10,000 bbl		GAL	541		434	321,362,862
DDP US Gulf Benzene M1	CTS (USD)	AAWDA00	AAWDA03	AAWDA04	Spot	DDP	USG	Anytime during that month	10,000 bbl		GAL	541		434	321,362,862
DDP US Gulf Benzene M2	CTS (USD)	AAWDB00	AAWDB03	AAWDB04	Spot	DDP	USG	Anytime during that month	10,000 bbl		GAL	541		434	321,362,862
Benzene USG CP Mo01 cts/gal Weekly	CTS (USD)	PHAAD00	PHAXN03		Contract	USG	USG	Anytime during that month	10,000 bbl		GAL	321,362,862		434	321,362,862
FOB US Gulf Benzene M3	CTS (USD)	AAIUL00	AAIUM00		Spot	FOB	USG	Anytime during that month	10,000 bbl		GAL	321,362,862		434	321,362,862
FOB US Gulf Benzene Q1	CTS (USD)	AAIUN00	AAIU000		Spot	FOB	USG	Anytime during that month	10,000 bbl		GAL	321,362,862		434	321,362,862
Toluene															
FOB NITN grade toluene M1	CTS (USD)	PHAA000	PHAWX03	PHAWW04	Spot	FOB	USG	Anytime during that month	10,000 bbl		GAL	541		434	
FOB NITN grade toluene M2	CTS (USD)	AASMY00	AASMY03	AASMY04	Spot	FOB	USG	Anytime during that month	10,000 bbl		GAL	541		434	
FOB COMM grade toluene	CTS (USD)	PHAA000	PHAYD03		Spot	FOB	USG	Anytime during that month	10,000 bbl		GAL	325,864		434	
Mixed, isomer xylenes															
Mixed Xylene USG FOB M1	CTS (USD)	PHBHN00	PHBHP03	PHBH004	Spot	FOB	USG	Anytime during that month	10,000 bbl		GAL	541		434	
Mixed Xylene USG FOB M2	CTS (USD)	AASMZ00	AASMZ03	AASMZ04	Spot	FOB	USG	Anytime during that month	10,000 bbl		GAL	541		434	
Styrene monomer															
Styrene FOB USG Bal Mo	CTS (USD)	AAPDZ00	AAPDZ03	AAPDZ04	Spot	FOB	USG	3-30 days forward	3,000 MT	5,000 MT	LB	541		434	
Styrene FOB USG	CTS (USD)	AAIKW00	AAIKX00	AAIUY00	Spot	FOB	USG	3-30 days forward	3,000 MT	5,000 MT	LB	541		434	
Styrene FOB USG M1	CTS (USD)	AAIKW00	AAIKX00	AAIUY00	Spot	FOB	USG	Anytime during that month	3,000 MT	5,000 MT	LB	541		434	
Styrene FOB USG M2	CTS (USD)	AAJLW00	AAJLW03	AAJLW04	Spot	FOB	USG	Anytime during that month	3,000 MT	5,000 MT	LB	541		434	
Styrene US Domestic transaction Price Weekly	CTS (USD)	AASIH00			Contract	FOB	USG ex-tank	3-30 days forward	1,000 MT	5,000 MT	LB	339,345		434	
Paraxylene FOB USG	USD	AAUXG00	AAUXG03	AAUXG01	Spot	FOB	USG	3-30 days forward	5,000 MT		MT	208,435	541	434	336
Paraxylene USG CP	CTS (USD)	PHAB000	PHAXY03		Contract	USG	USG	3-30 days forward			LB	208,435	541	434	336
Orthoxylene															
Orthoxylene USG CP cts/lb	CTS (USD)	PHABF00	PHAXV03		Contract	FOB	US Gulf	Monthly						PC033 / PC0448	PC0434

US AROMATICS

Assessment	CURRENCY	CODE	Mavg	Wavg	CONTRACT TYPE	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	UOM	PC Page			
												CONV	CODE	Mavg	Wavg
Orthoxylene FOB USG cts/lb	CTS (USD)	PHABG00	PHAXT03		Spot	FOB	US Gulf	3-30 days forward	1,000	3,000	MT	PC033 / PC0448	PC0434		
Methanol															
Methanol FOB USG (M1)	CTS (USD)	AAIKU00	AAIKV00	AAIUX00	Spot	FOB	USG	Anytime during that month	10,000bbl		GAL	872, 541	434	347, 349, 426	
Methanol FOB USG (M2)	CTS (USD)	AAIKY00	PHMFA03	AAIKY04	Spot	FOB	USG	Anytime during that month	10,000bbl		GAL	872, 541	434	347, 349, 426	
Methanol US Domestic Net CP	CTS (USD)		AAIHB00	AAIGF00	Net contract	FOB	USG	3-30 days forward	10,000bbl		GAL	347, 349, 426			
Methanol USG list CP cts/gal	CTS (USD)		PHAYC03	PHACE00	List contract	FOB	USG	3-30 days forward	10,000bbl		GAL	347, 349, 426			
Methanol FOB USG	USD		AAGJU00	AAXNJ00	Spot	FOB	USG	3-30 days forward	10,000bbl		MT		434	347, 349, 426	
MTBE															
MTBE FOB USG	CTS (USD)	PHAKY00	PHAVYA03	PHAVV04	Spot	FOB	USG	5-15 days	25,000bbl USG		GAL	205, 213, 541	434	343. 350	
MTBE FOB USGC Barge Mav	USD		PHAVQ03		Spot	FOB	USG	5-15 days	25,000bbl USG		MT	3.55	205, 213, 541	434	343. 350
Cumene															
Cumene FOB USG	CTS (USD)	AAQJC00	AAQJC03		Spot	FOB	USG	Anytime that month	10,000 bbl		LB	208,435	434	455	

US aromatics

Benzene

Assessment Window: S&P Global Platts daily spot benzene assessments reflect prevailing market price at 4 p.m. US Central time each business day. S&P Global Platts also publishes a weekly arithmetic average of the daily assessments at the close of each business week. Contract prices reflect posted monthly settlements.

Timing: S&P Global Platts spot benzene assessments reflect monthly and quarterly forward physical delivery. S&P Global Platts publishes assessments for delivery of the current month (M1), second month (M2), M3, and forward quarterly assessments. These assessments are based on product trading for delivery at any time during the specified month.

S&P Global Platts monthly spot benzene assessments will roll from the current month to the next forward month five calendar

days prior to the end of the month.

Basis and locations: Spot and contract prices are assessed in cts/gal, basis FOB US Gulf Coast, Houston-Texas City area. S&P Global Platts also assesses spot benzene DDP US Gulf Coast for the current and forward months. In the absence of liquidity in this trading area, S&P Global Platts may consider deals in other locations on the Texas Gulf Coast (including Beaumont/Port Arthur and Corpus Christi) in the assessment process.

Standard cargo size: Minimum of 10,000 bbl for spot and contract assessments.

Product specifications: Assessments reflect benzene that conforms to ASTM D-2359/90 specifications.

Toluene

Assessment Window: S&P Global Platts daily nitration grade toluene assessments reflect prevailing market price at 1:30 p.m.

US Central time. Commercial grade toluene is assessed on a weekly basis to reflect prevailing market price at 1:30 p.m. US Central time each Friday, or the close of the business week.

Timing: S&P Global Platts publishes spot toluene assessments for physical delivery of the current month (M1), second month (M2). These assessments are based on product trading for delivery at any time during the specified month.

S&P Global Platts monthly spot toluene assessments will roll from the current month to the next forward month five calendar days prior to the end of the month.

Basis and locations: Spot and contract prices are assessed in cts/gal, basis FOB US Gulf Coast, Houston-Texas City area. Nitration-grade toluene typically is transported by barge, and trades on both an FOB and freight-included basis. Commercial-grade typically is transported by rail car. During periods of inactivity in the commercial-grade market, the assessment may be based on normalization to the nitration-grade assessment.

Standard cargo size: Minimum of 10,000 bbl for spot and contract assessments.

Product specifications: Assessments reflect nitration-grade toluene that conforms to ASTM D-841 specifications. Commercial-grade toluene assessments reflect product suitable for hydrodealkylation or gasoline blending.

Mixed, isomer xylenes

Assessment window: S&P Global Platts assesses spot mixed xylene on a daily basis and isomer xylene on a weekly basis. The daily mixed xylene assessment reflects prevailing market price at 1:30 p.m. US Central time, with the Isomer xylene assessment reflective of the prevailing mixed xylene market price at 1:30 p.m. US Central time each Friday, or the close of the business week.

Timing: S&P Global Platts spot xylene assessments reflect delivery during the current 30-day period, also known as the front-month (M1); assessments also are published for the following, or second 30-day period, also known as the forward-month (M2). All assessments are based on product trading for delivery at any time during the specified period.

S&P Global Platts monthly mixed xylene assessments will roll from the current month to the next forward month five calendar days prior to the end of the month.

Basis and locations: Spot prices are assessed in cts/gal, basis FOB US Gulf Coast, Houston-Texas City area. In the absence of liquidity in this trading area, S&P Global Platts may consider deals, bids and offers in other locations on the Texas Gulf Coast (including Beaumont/Port Arthur and Corpus Christi) as well as the Gulf Coast of Louisiana, typically trading at FOB Lower Mississippi River basis, in the assessment process.

Standard cargo size: Minimum of 10,000 bbl for spot and contract assessments.

Product specifications: Assessments reflect mixed xylene that conforms to ASTM-5211 (low bromine) on a daily basis, and isomer xylene that conforms to ASTM-5211 on a weekly basis. Any bids, offers or deals that conform to ASTM D-843 also can be considered and normalized.

Styrene Monomer

Assessment window: S&P Global Platts daily spot styrene monomer (SM) assessments reflect prevailing market price at 4 p.m. US Central time each business day. S&P Global Platts also publishes a weekly arithmetic average of the daily assessments at the close of each business week.

This US Domestic Weekly Transaction Price is an assessment of the contract price in cts/lb basis ex-works US Gulf Coast.

Timing: S&P Global Platts spot styrene assessments reflect monthly forward physical delivery. S&P Global Platts publishes assessments for delivery of the current month (M1) and the second month (M2) assessments. These assessments are based on product trading for delivery at any time during the specified month.

S&P Global Platts monthly spot styrene assessments will roll from the current month to the next forward month five calendar days prior to the end of the month.

Basis and locations: Spot and contract assessments are reported in cts/lb, basis FOB US Gulf Coast.

Standard cargo size: 3,000mt to 5,000mt for spot and contract assessments.

Product specifications: Assessments reflect styrene monomer that conforms to ASTM D-2827 specifications.

Paraxylene

Assessment window: S&P Global Platts daily paraxylene assessments reflect prevailing market price at 1:30 p.m. US Central time each business day. Weekly spot paraxylene assessments reflect prevailing market price at 1:30 p.m. US Central time each Friday, or the close of the business week. S&P Global Platts also publishes a weekly arithmetic average of the daily assessments at the close of each business week. Contract prices are monthly posted agreements. These agreements are typically settled retroactively. In the absence of a settlement, S&P Global Platts will publish the most recent settlement.

Timing: S&P Global Platts spot paraxylene assessments reflect product loading 3-30 days forward out from the date of publication.

Basis and locations: Spot assessments are in \$/mt and contract assessments are in cts/lb, basis FOB US Gulf Coast.

Standard cargo size: 5,000mt for spot and contract assessments.

Product specifications: Minimum purity of 99.7%

Orthoxylene

Assessment window: S&P Global Platts weekly spot orthoxylene assessments reflect prevailing market price at 1:30 p.m. US Central time each Friday, or the close of the business week. Contract prices are monthly posted agreements. These agreements are typically settled retroactively. In the absence of a settlement, S&P Global Platts will publish the most recent settlement.

Timing: S&P Global Platts spot orthoxylene assessments reflect product loading 3-30 days forward from the date of publication.

Basis and locations: Spot and contract assessments are

assessed in cts/lb, basis FOB US Gulf Coast.

Standard cargo size: 1,000 to 3,000 mt for spot assessments.

Product specifications: Minimum purity of 98% and a maximum 0.3% non-aromatic content by weight.

Methanol

Assessment window: S&P Global Platts daily spot methanol assessments reflect prevailing market price at 1:30 p.m. US Central time each business day. S&P Global Platts also publishes weekly arithmetic averages of the daily assessments at the close of each business week.

Timing: S&P Global Platts spot methanol assessments reflect monthly forward physical delivery. S&P Global Platts publishes assessments for delivery of the current month (M1) and the second month (M2) assessments. These assessments are based on product trading for delivery at any time during the specified month. S&P Global Platts monthly spot methanol assessments will roll from the current month to the next forward month five calendar days prior to the end of the month.

Basis and locations: Spot prices are assessed basis FOB US Gulf Coast (Houston – Texas City area). In the absence of Houston-Texas City liquidity, deals, bids and offers at other locations, including the Mississippi River, may be considered in the assessment process.

Standard cargo size: Minimum of 10,000 bbl for spot and contract assessments.

Product specifications: Product with maximum water content of 0.1% by weight.

MTBE

Assessment window: S&P Global Platts daily spot MTBE assessments reflect prevailing market price at 1:30 p.m. US Central time each business day. S&P Global Platts also publishes weekly arithmetic averages of the daily assessments at the close of each business week. The MTBE Market-on-Close assessment process is facilitated through the eWindow technology. For further details, please consult the Petrochemicals Timing and Increment Guidelines on www.platts.com.

In the absence of spot information, S&P Global Platts may consider pricing information in related markets, including, but not limited to, achievable net-forward values using Northwest Europe pricing on an FOB ARA basis and corresponding freight rates, to establish a basis for assessment.

Timing: S&P Global Platts spot MTBE assessments reflect product loading 5-15 days from the date of publication.

Basis and locations: Spot US Gulf Coast prices are assessed in cts/gal, basis FOB Houston-Texas City area. Deals, bids and offers done outside of the Houston-Texas City area may be normalized to the location basis in the assessment process.

Standard cargo size: US Gulf Coast minimum is 25,000 bbl.

Product specifications: MTBE of min 95%, Water of max 1,500 ppm, Methanol of max 5,000 ppm.

Cumene

Assessment window: S&P Global Platts daily and weekly spot cumene assessments reflect prevailing market price at 4 p.m. US Central time, with the weekly assessed each Friday, or the close of the business week.

Timing: S&P Global Platts spot cumene assessments reflect product loading in the balance of the current month, typically 5 days forward from the date of publication. S&P Global Platts monthly spot cumene assessments will roll from the current month to the next forward month five calendar days prior to the end of the month.

Basis and locations: Spot cumene prices are assessed in cts/gal, basis FOB US Gulf Coast.

Standard cargo size: Typical volume is 10,000 bbl

Product specifications: Cumene conforming to ASTM D7057.

The FOB USG cumene assessment is based on a production-cost calculation that takes the feedstock price of benzene in cents/lb multiplied by the amount of benzene fed to the unit plus the price of refinery-grade propylene, also in cents/lb, multiplied by the amount of refinery-grade propylene fed into the unit. This number is then divided by 1,000, which represents 1,000 lb of yield and, unit costs are then added to calculate the final cumene assessment.

LATIN AMERICAN AROMATICS

Assessment	CURRENCY	CODE	Mavg	Wavg	CONTRACT TYPE	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	UOM	PC Page	Mavg	Wavg
												CODE		
Benzene														
Benzene FOB Brazil	USD	PHATP00	PHATQ03		Spot	FOB	Brazil	3-30 days forward	1,500		MT	323		
Toluene														
Toluene FOB Brazil	USD	AASAP04	AASAP03		Spot	FOB	Brazil	3-30 days forward	3,000		MT	327		
Mixed Xylenes														
Mixed Xylenes FOB Brazil	USD	AASAQ04	AASAQ03		Spot	FOB	Brazil	3-30 days forward	3,000		MT	327		

Latin American aromatics

Benzene

Assessment window: Weekly assessments reflect prevailing market price at 4 p.m. US Central time each Friday, or the close of the business week.

Timing: Spot weekly assessments reflect product loading 3-30 days forward from the date of publication.

Basis and locations: Spot prices are assessed basis FOB Brazil, in \$/mt.

Standard cargo size: Minimum volume of 1,500 mt.

Product specifications: Assessments reflect benzene that conforms to ASTM D-2359/90 specifications.

Toluene

Assessment window: Weekly assessments reflect prevailing market price at 1:30 p.m. US Central time each Friday, or the close of the business week.

Timing: Spot weekly assessments reflect product loading 3-30 days forward from the date of publication.

Basis and locations: Spot prices are assessed basis FOB Brazil, in \$/mt.

Standard cargo size: Minimum volume of 3,000 mt.

Product specifications: Assessments reflect toluene that conforms to ASTM D841 (nitration grade) specifications.

Mixed Xylenes

Assessment window: Weekly assessments reflect prevailing market price at 1:30 p.m. US Central time each Friday, or the close of the business week.

Timing: Spot weekly assessments reflect product loading 3-30 days forward from the date of publication.

Basis and locations: Spot prices are assessed basis FOB Brazil, in \$/mt.

Standard cargo size: Minimum volume of 3,000 mt.

Product specifications: Assessments reflect mixed xylenes that conforms to ASTM D5211 (isomer grade) specifications.

US POLYMERS

Assessment	CURRENCY	CODE	Mavg	Wavg	CONTRACT TYPE	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	UOM	PC Page		
												CODE	Mavg	Wavg
Polyethylenes														
HDPE Blowmolding FAS Houston	USD	PHAHG00	PHBBF03		Spot	FAS	Houston	3-30 days forward	250		MT	273/623	442	
HDPE Blowmolding USGC	USD	AAWCZ00	AAWCZ03		Spot	FAS	Houston	3-30 days forward	250		MT	572	442	
HDPE Injection FAS Houston Weekly	USD	PHAHJ00	PHBBA03		Spot	FAS	Houston	3-30 days forward	250		MT	273/623	442	
HDPE HMW Film FAS Houston Weekly	USD	AAHYA00	AAHYB00		Spot	FAS	Houston	3-30 days forward	250		MT	273/623	442	
LDPE FAS Houston	USD	PHAHP00	PHBAR03	AAQNT00	Spot	FAS	Houston	3-30 days forward	250		MT	572/265/623	442	573
LLDPE Butene FAS Houston	USD	PHAGX00	PHBAV03	AAQNU00	Spot	FAS	Houston	3-30 days forward	250		MT	572/269/623	442	573
HDPE Blowmolding US Domestic Dlvd Railcar	CTS (USD)	AALBL00	AALBM00		Contract	Delivered Railcar	US Domestic		50 million		LB/YR	273/623		
HDPE Injection US Domestic Dlvd Railcar	CTS (USD)	AALBN00	AALB000		Contract	Delivered Railcar	US Domestic		50 million		LB/YR	273/623		
HDPE Film US Domestic Dlvd Railcar	CTS (USD)	AASJH00 / AALBP00	AALBQ00		Contract	Delivered Railcar	US Domestic		50 million		LB/YR	273/623		
LLDPE Butene US Domestic Dlvd Railcar	CTS (USD)	AAGZO00	AAGNM00		Contract	Delivered Railcar	US Domestic		100 million		LB/YR	269/623		
LDPE US Domestic Dlvd Railcar	CTS (USD)	AAGZN00	AAGNL00		Contract	Delivered Railcar	US Domestic		100 million		LB/YR	265/623		
HDPE Blowmolding Domestic Dlvd Railcar	USD	AASJG00	AASJG03		Contract	Delivered Railcar	US Domestic		22,675		MT/YR	623		
HDPE Injection US Domestic Dlvd Railcar	USD	AASJA00	AASJA03		Contract	Delivered Railcar	US Domestic		22,675		MT/YR	623		
HDPE HMW Film US Domestic Dlvd Railcar	USD	AASJH00	AASJH03		Contract	Delivered Railcar	US Domestic		22,675		MT/YR	623		
LLDPE Butene US Domestic Dlvd Railcar	USD	AASIZ00	AASIZ03		Contract	Delivered Railcar	US Domestic		45,350		MT/YR	623		
LDPE US Domestic Dlvd Railcar	USD	AASII00	AASII03		Contract	Delivered Railcar	US Domestic		45,350		MT/YR	623		
LLDPE metallocene FAS Houston	USD	AAXUN00	AAXUN03		Spot	FAS	Houston	3-30 days forward	100		MT	269/623	442	
LLDPE C6 FAS Houston	USD	AAXUL00	AAXUL03		Spot	FAS	Houston	3-30 days forward	100		MT	269/623	442	
Polypropylene														
PP Homopolymer injection FAS Houston	USD	PHAI00	PHBU03	AAQNV00	Spot	FAS	Houston	3-30 days forward	250		MT	572/281	442	573
PP Co-polymer FAS Houston	USD	PHAHV00	PHBCH03		Spot	FAS	Houston	3-30 days forward	250		MT	281/623	442	
PP Homopolymer injection Delivered Railcar	CTS (USD)	AAGZL00	AAGNJ00		Contract	Delivered Railcar	US Domestic		20 million		LB/YR	281/623		
PP Fiber Delivered Railcar	CTS (USD)	AAGZM00	AALBS00		Contract	Delivered Railcar	US Domestic		20 million		LB/YR	281/623		
PP Homopolymer injection Delivered Railcar	USD	AASJK00	AASJK03		Contract	Delivered Railcar	US Domestic		9,000		MT/YR	623		
PP Fiber Delivered Railcar	USD	AASJL00	AASJL03		Contract	Delivered Railcar	US Domestic		9,000		Mt/YR	623		
Polystyrene														
GPPS US Domestic dlvd railcar Weekly	CTS (USD)	AAGZP00	AAGNN00		Contract	Delivered Railcar	US Domestic	3-30 days forward	25 million	50 million	LB/YR	277, 420	442	
HIPS US Domestic dlvd railcar Weekly	CTS (USD)	AAGZQ00	AAGNO00		Contract	Delivered Railcar	US Domestic	3-30 days forward	25 million	50 million	LB/YR	277, 420	442	
GPPS US Domestic dlvd railcar Weekly	USD	AASJI00	AASJI03		Contract	Delivered Railcar	US Domestic	3-30 days forward	11,338	22,675	MT/YR	277, 420	442	
HIPS US Domestic dlvd railcar Weekly	USD	AASJJ00	AASJJ03		Contract	Delivered Railcar	US Domestic	3-30 days forward	11,338	22,675	MT/YR	277, 420	442	
GPPS FAS Houston Weekly	USD	PHAIH00	PHBBK03		Spot	FAS	Houston	3-30 days forward	250 mt		MT	277, 420		
HIPS FAS Houston Weekly	USD	PHAIN00	PHBBP03		Spot	FAS	Houston	3-30 days forward	250 mt		MT	277, 420		

US POLYMERS

Assessment	CURRENCY	CODE	Mavg	Wavg	CONTRACT TYPE	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	UOM	PC Page		
												CODE	Mavg	Wavg
ABS														
ABS Inj US Domestic Dlv'd railcar Weekly	CTS (USD)	AARTU00	AARTU03		Contract	Delivered Railcar	Railcar	3-30 days forward	30 million	50 million	LB/YR	285	442	
ABS Inj US Domestic Dlv'd railcar Weekly	USD	AASJM00	AASJM03		Contract	Delivered Railcar	Railcar	3-30 days forward	13,605	22,675	MT/YR	285	442	
Polyvinyl Chloride														
PVC Susp FAS Houston	USD	PHAIT00	PHBAM03		Spot	FAS	Houston	3-30 days forward	250		MT	623/261	442	
PVC Susp US Domestic Dlv'd Railcar Weekly	USD	AASIX00	AASIX03		Contract	Delivered Railcar	US Domestic		68,058		MT/YR	623		
PVC Susp US Domestic dlv'd Railcar cts/lb Weekly	CTS (USD)	AAGZR00	AAGNP00		Contract	Delivered Railcar	US Domestic		150 million		LB/YR	623		
Polyethylene Terephthalate (PET)														
PET Bottle Grade DDP USWC	USD	AASMM00	AASMM03		Spot	DDP	US West Coast	3-30 days forward	100		MT	630		
PET Bottle Grade US Rail CP	USD	AASMN00			Contract	Delivered railcar	US Domestic		20 million		LB/YR	630		

US polymers

Polyethylene

Assessment window: S&P Global Platts assesses LDPE, LLDPE butene and HDPE blowmolding export prices daily and LDPE, LLDPE and HDPE domestic prices weekly. S&P Global Platts assess HDPE export and domestic prices weekly. S&P Global Platts assesses LLDPE metallocene and LLDPE C6 export prices weekly. Daily assessments reflect prevailing market price at 1:30 p.m. US Central time each business day. Weekly assessments reflect the market price at 1:30 p.m. US Central time each Wednesday. S&P Global Platts also publishes a weekly arithmetic average of the daily LDPE, LLDPE and HDPE assessments at the close of each business week.

Timing: US export assessments reflect material loading 3-30 days forward from the date of publication. Domestic assessments posted on a weekly basis are contract pricing for large US buyers. Weekly domestic assessments reflect settlements and negotiations between producers and buyers

through the course of the delivery month, and market value may evolve through the course of the corresponding negotiations during the month.

Basis and location: US export prices are assessed for material bagged, basis free-along-ship (FAS) Houston area. The bulk of US spot export business is traded on a producer-to-trader basis. S&P Global Platts reserves the right to include other spot export business, which may be done between producers, consumers and traders. Domestic contract prices are for material delivered by a rail car.

Standard cargo size: US export assessments reflect volumes of 250 mt or greater for HDPE, LDPE and LLDPE butene. Metallocene and LLDPE C6 export assessments reflect volumes of 100 mt or greater. LDPE and LLDPE domestic assessments reflect contract volumes of 100 million lb/yr or more. HDPE assessments reflect contract volumes of 50 million lb/yr or more.

Product specifications: LDPE assessment basis reflects product with a melt flow index of 1.8-2.5. LLDPE assessment reflects

butene-1 grade with a melt flow rate of around 1.0. Standard LLDPE C6 refelct 1-Hexene comonomer based on the

Ziegler Natta catalyst, with density between 917-922 kg/m³ for both cast and blown film, and a melt flow index of around 0.85. Metallocene assessments reflect 1-Hexene comonomer with a density of 918-940 kg/m³ for both cast and blown film, and a melt flow index of between 0.3-4.5. High Density Polyethylene (HDPE): US assessments reflect both injection and blowmolding grades. Injection grade assessments reflect material with a melt flow rate of 2.0-25, with the majority of business focused on crate-grade material with a melt flow index between 5-11. Blowmolding grade assessments reflect product with a melt flow rate 0.25 and higher. Film grade assessments reflect product with a melt flow rate of 0.07-0.18.

Polypropylene

Assessment window: S&P Global Platts assesses PP homopolymer injection-grade spot export prices daily. Domestic PP homopolymer injection grade contracts, PP copolymer export

and domestic homo polymer fiber contract prices are assessed weekly. Daily assessments reflect prevailing market price at 1:30 p.m. US Central time each business day. Weekly assessments reflect prevailing market price at 1:30 p.m. US Central time each Wednesday. S&P Global Platts also publishes a weekly arithmetic average of the daily PP homopolymer injection grade assessments at the close of each business week.

Timing: US export assessments reflect material loading 3-30 days forward from the date of publication. Domestic assessments posted on a weekly basis are contract pricing for large US buyers. Weekly domestic assessments reflect settlements and negotiations between producers and buyers through the course of the delivery month, and market value may evolve through the course of the corresponding negotiations during the month.

Basis and locations: US export prices are assessed for material bagged, basis free-along-ship (FAS) Houston area. The bulk of US spot export business is traded on a producer-to-trader basis. S&P Global Platts reserves the right to include other spot export business, which may be done between producers, consumers and traders. Domestic contract prices are for material delivered by a rail car.

Standard cargo size: US export assessments reflect volumes of 250 mt or greater. Domestic rail car assessments reflect contract volumes of 20 million lbs/yr or more.

Product specifications: Raffia and injection-grade material are considered in the PP homopolymer daily export assessment, with a melt flow index of 2.5-10. PP copolymer assessments include the range of block grade on the low end and random grade on the high end.

Polystyrene

Assessment window: S&P Global Platts weekly spot polystyrene (PS) assessments reflect prevailing market price at 1:30 p.m. US Central time each Wednesday.

Timing: US export assessments reflect material loading 3-30 days forward from the date of publication. Domestic assessments are posted on a weekly basis. These assessments reflect monthly contract pricing for large US buyers. Weekly domestic assessments reflect settlements and negotiations between producers and buyers through the course of the delivery month, and market value may evolve through the course of the corresponding negotiations during the month.

Basis and locations: Spot exports are assessed basis FAS Houston, in \$/mt. The bulk of US spot export business is traded on a producer-to-trader basis. S&P Global Platts reserves the right to include other spot export business, which may be done between producers, consumers and traders. Domestic contract prices are for material delivered by a rail car, assessed in cts/lb.

Standard cargo size: US export assessments reflect volumes of 250 mt or greater. Domestic rail car assessments reflect volumes of 25 million to 50 million lb/yr.

Product specifications: S&P Global Platts assesses both general-purpose (GPPS) and high-impact (HIPS) polystyrene in the US Gulf Coast. The GPPS assessment reflects product with a melt flow index of 8-12. The HIPS assessment reflects product with a melt flow index of 3-8.

ABS

Assessment Window: S&P Global Platts weekly spot ABS assessments reflect prevailing market price at 1:30 p.m. US Central time each Wednesday.

Timing: US domestic assessments reflect product loading 3-30 days forward from the date of publication. These assessments are estimates of monthly contract pricing for large US buyers. Weekly domestic assessments reflect settlements and negotiations between producers and buyers through the course of the delivery month, and market value may evolve through the course of the corresponding negotiations during the month.

Basis and Locations: US domestic contract prices reflect material in rail cars, delivered to the buyer.

Standard cargo size: Domestic rail car assessments reflect contract volumes between 30-million to 50-million lb/yr.

Product Specifications: ABS assessments reflect average injection-grade material with a melt flow index between 10-40.

Polyvinyl Chloride

Assessment window: S&P Global Platts weekly polyvinyl chloride (PVC) assessments reflect the market price at 1:30 p.m. US Central time each Wednesday.

Timing: US export assessments reflect material loading 3-30 days forward from the date of publication. Domestic assessments posted on a weekly basis are contract pricing for large US buyers. Weekly domestic assessments reflect settlements and negotiations between producers and buyers through the course of the delivery month, and market value may evolve through the course of the corresponding negotiations during the month.

Basis and locations: Spot exports are assessed basis FAS Houston, in \$/mt. The bulk of US spot export business is traded on a producer-to-trader basis. Domestic contract prices are for material delivered by a rail car, assessed in cts/lb.

Standard cargo size: US export assessments reflect volumes of 250 mt or greater. Domestic rail car assessments reflect contract volumes of 150-million lb/year.

Product specifications: Assessments reflect pipe-grade product with a K-value of 65.

Polyethylene Terephthalate

Assessment window: S&P Global Platts weekly spot polyethylene terephthalate (PET) assessments reflect prevailing market price at 1:30 p.m. US Central time each Wednesday.

Timing: US import assessments reflect delivery 3-30 days forward from date of publication. Domestic assessments posted on a weekly basis are contract pricing for large US buyers. Weekly domestic assessments reflect settlements and negotiations between producers and buyers through the course of the delivery month, and market value may evolve through the course of the corresponding negotiations during the month.

Basis and Location: Spot import material is assessed on a DDP (delivered, duty paid) US West Coast basis. Domestic contract prices are for material delivered by a rail car, assessed in \$/mt.

Standard cargo size: DDP USWC assessments reflect a minimum volume of 100 mt. US domestic rail car assessments are for contract volumes of 20 million lbs/yr or more.

Product specifications: Assessments reflect bottle grade PET with an internal viscosity of 0.76-0.84.

Standard cargo size: Minimum 20 mt lots for domestic business, 300 mt lots for export business.

LATIN AMERICAN POLYMERS

Assessment	CURRENCY CODE	Mavg	Wavg	CONTRACT TYPE	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	UOM	PC Code	Mavg	Wavg
Polyethylenes													
HDPE HMW film FOT Brazil	USD	PHATX00	PHATY03	Spot	FOT	Brazil	3-30 days forward	100		MT	246/275	463	
HDPE HMW film CFR Brazil	USD	AAVRF04	AAVRF03	Spot	CFR	Brazil	20-40 days forward	250		MT	246/275		
HDPE HMW film CFR West Coast South America	USD	AASVM00	AASVM03	Spot	CFR	WCSA	20-40 days forward	100	300	MT	246/275	463	
HDPE injection FOT Brazil	USD	PHATZ00	PHAU03	Spot	FOT	Brazil	3-30 days forward	100		MT	246/275	463	
HDPE injection CFR Brazil	USD	AAVRD04	AAVRD03	Spot	CFR	Brazil	20-40 days forward	250		MT	246/275		
HDPE injection CFR West Coast South America	USD	AASVK00	AASVK03	Spot	CFR	WCSA	20-40 days forward	100	300	MT	246/275	463	
HDPE blowmolding FOT Brazil	USD	PHAVZ00	PHATW03	Spot	FOT	Brazil	3-30 days forward	100		MT	246/275	463	
HDPE blowmolding CFR Brazil	USD	AAVRE04	AAVRE03	Spot	CFR	Brazil	20-40 days forward	250		MT	246/275		
HDPE blowmolding CFR West Coast South America	USD	AASVL00	AASVL03	Spot	CFR	WCSA	20-40 days forward	100	300	MT	246/275	463	
LDPE FOT Brazil	USD	PHAUD00	PHAU03	Spot	FOT	Brazil	3-30 days forward	100		MT	246/267	463	
LDPE CFR Brazil	USD	AAVRB04	AAVRB03	Spot	CFR	Brazil	20-40 days forward	250		MT	246/267		
LDPE CFR West Coast South America	USD	AASVI00	AASVI03	Spot	CFR	WCSA	20-40 days forward	100	300	MT	246/267	463	
LLDPE butene FOT Brazil	USD	PHATT00	PHATU03	Spot	FOT	Brazil	3-30 days forward	100		MT	246/271	463	
LLDPE butene CFR Brazil	USD	AAVRC04	AAVRC03	Spot	CFR	Brazil	20-40 days forward	250		MT	246/271		
LLDPE butene CFR West Coast South America	USD	AASVJ00	AASVJ03	Spot	CFR	WCSA	20-40 days forward	100	300	MT	246/271	463	
HDPE blowmolding Delivered Mexico City	USD	AABMD04	AABMD03	Spot	Delivered Railcar	Mexico City	3-30 days forward	100	300	MT	246/275	463	
HDPE blowmolding Delivered Mexico City	Peso	AABMP04	AABMP03	Spot	Delivered Railcar	Mexico City	3-30 days forward	100	300	MT	246/275	463	
HDPE injection Delivered Mexico City	USD	AAIJM04	AAIJM03	Spot	Delivered Railcar	Mexico City	3-30 days forward	100	300	MT	246/275	463	
HDPE injection Delivered Mexico City	Peso	AAIJD04	AAIJD03	Spot	Delivered Railcar	Mexico City	3-30 days forward	100	300	MT	246/275	463	
HDPE HMW film Delivered Mexico City	USD	AABAM04	AABAM03	Spot	Delivered Railcar	Mexico City	3-30 days forward	100	300	MT	246/275	463	
HDPE HMW film Delivered Mexico City	Peso	AABAN04	AABAN03	Spot	Delivered Railcar	Mexico City	3-30 days forward	100	300	MT	246/275	463	
LDPE Delivered Mexico City	USD	ALDPD04	ALDPD03	Spot	Delivered Railcar	Mexico City	3-30 days forward	100	300	MT	246/275	463	
LDPE Delivered Mexico City	Peso	ALDED04	ALDED03	Spot	Delivered Railcar	Mexico City	3-30 days forward	100	300	MT	246/275	463	
LLDPE butene Delivered Mexico City	USD	ALDPE04	ALDPE03	Spot	Delivered Railcar	Mexico City	3-30 days forward	100	300	MT	246/275	463	
LLDPE butene Delivered Mexico City	Peso	ALDPF04	ALDPF03	Spot	Delivered Railcar	Mexico City	3-30 days forward	100	300	MT	246/275	463	
HDPE blowmolding Delivered Sao Paulo	Real	AABMH04	AABMH03	Spot	Delivered Truck	Sao Paulo	3-30 days forward	100	500	MT	246/275	463	
HDPE blowmolding Delivered Sao Paulo	USD	AABMG04	AABMG03	Spot	Delivered Truck	Sao Paulo	3-30 days forward	100	500	MT	246/275	463	
HDPE injection Delivered Sao Paulo	Real	AABMJ04	AABMJ03	Spot	Delivered Truck	Sao Paulo	3-30 days forward	100	500	MT	246/275	463	
HDPE injection Delivered Sao Paulo	USD	AABMI04	AABMI03	Spot	Delivered Truck	Sao Paulo	3-30 days forward	100	500	MT	246/275	463	
HDPE HMW film Delivered Sao Paulo	Real	AABMF04	AABMF03	Spot	Delivered Truck	Sao Paulo	3-30 days forward	100	500	MT	246/275	463	
HDPE HMW film Delivered Sao Paulo	USD	AABME04	AABME03	Spot	Delivered Truck	Sao Paulo	3-30 days forward	100	500	MT	246/275	463	
LDPE Delivered Sao Paulo	Real	AABML04	AABML03	Spot	Delivered Truck	Sao Paulo	3-30 days forward	100	500	MT	246/267	463	
LDPE Delivered Sao Paulo	USD	AABMK04	AABMK03	Spot	Delivered Truck	Sao Paulo	3-30 days forward	100	500	MT	246/267	463	
LLDPE butene Delivered Sao Paulo	Real	AABMN04	AABMN03	Spot	Delivered Truck	Sao Paulo	3-30 days forward	100	500	MT	246/271	463	
LLDPE butene Delivered Sao Paulo	USD	AABMM04	AABMM03	Spot	Delivered Truck	Sao Paulo	3-30 days forward	100	500	MT	246/271	463	
HDPE blowmolding Delivered Buenos Aires	USD	AABAE04	AABAE03	Spot	Delivered Railcar/Truck	Buenos Aires	3-30 days forward	100	300	MT	246/275	463	
HDPE blowmolding Delivered Buenos Aires	Peso	AABAF04	AABAF03	Spot	Delivered Railcar/Truck	Buenos Aires	3-30 days forward	100	300	MT	246/275	463	
HDPE injection Delivered Buenos Aires	USD	AABAU04	AABAU03	Spot	Delivered Railcar/Truck	Buenos Aires	3-30 days forward	100	300	MT	246/275	463	
HDPE injection Delivered Buenos Aires	Peso	AABAP04	AABAP03	Spot	Delivered Railcar/Truck	Buenos Aires	3-30 days forward	100	300	MT	246/275	463	
HDPE HMW film Delivered Buenos Aires	USD	AABAS04	AABAS03	Spot	Delivered Railcar/Truck	Buenos Aires	3-30 days forward	100	300	MT	246/275	463	
HDPE HMW film Delivered Buenos Aires	Peso	AABAJ04	AABAJ03	Spot	Delivered Railcar/Truck	Buenos Aires	3-30 days forward	100	300	MT	246/275	463	
LDPE Delivered Buenos Aires	USD	AABAV04	AABAV03	Spot	Delivered Railcar/Truck	Buenos Aires	3-30 days forward	100	300	MT	246/275	463	
LDPE Delivered Buenos Aires	Peso	AABAW04	AABAW03	Spot	Delivered Railcar/Truck	Buenos Aires	3-30 days forward	100	300	MT	246/275	463	
LLDPE butene Delivered Buenos Aires	USD	AABAC04	AABAC03	Spot	Delivered Railcar/Truck	Buenos Aires	3-30 days forward	100	300	MT	246/275	463	
LLDPE butene Delivered Buenos Aires	Peso	AABAY04	AABAY03	Spot	Delivered Railcar/Truck	Buenos Aires	3-30 days forward	100	300	MT	246/275	463	
HDPE blowmolding Delivered Bogota	USD	AABAG04	AABAG03	Spot	Delivered Truck	Bogota	3-30 days forward	100	300	MT	246/275	463	

LATIN AMERICAN POLYMERS

Assessment	CURRENCY	CODE	Mavg	Wavg	CONTRACT TYPE	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	UOM	PC Page	Mavg	Wavg
												CODE		
HDPE blowmolding Delivered Bogota	Peso	AABAH04	AABAH03		Spot	Delivered Truck	Bogota	3-30 days forward	100	300	MT	246/275	463	
HDPE injection Delivered Bogota	USD	AABAQ04	AABAQ03		Spot	Delivered Truck	Bogota	3-30 days forward	100	300	MT	246/275	463	
HDPE injection Delivered Bogota	Peso	AABAR04	AABAR03		Spot	Delivered Truck	Bogota	3-30 days forward	100	300	MT	246/275	463	
HDPE HMW film Delivered Bogota	USD	AABAK04	AABAK03		Spot	Delivered Truck	Bogota	3-30 days forward	100	300	MT	246/275	463	
HDPE HMW film Delivered Bogota	Peso	AABAL04	AABAL03		Spot	Delivered Truck	Bogota	3-30 days forward	100	300	MT	246/275	463	
LDPE Delivered Bogota	USD	AABAY04	AABAY03		Spot	Delivered Truck	Bogota	3-30 days forward	100	300	MT	246/275	463	
LDPE Delivered Bogota	Peso	AABAX04	AABAX03		Spot	Delivered Truck	Bogota	3-30 days forward	100	300	MT	246/275	463	
LLDPE butene Delivered Bogota	USD	AABAA04	AABAA03		Spot	Delivered Truck	Bogota	3-30 days forward	100	300	MT	246/275	463	
LLDPE butene Delivered Bogota	Peso	AABAB04	AABAB03		Spot	Delivered Truck	Bogota	3-30 days forward	100	300	MT	246/275	463	
Polypropylene														
PP Homopolymer FOT Brazil	USD	PHATN00	PHAT003		Spot	FOT	Brazil	3-30 days forward	100		MT	246/283	463	
PP Homopolymer CFR Brazil	USD	AAVRA04	AAVRA03		Spot	CFR	Brazil	20-40 days forward	250		MT	246/283		
PP Homopolymer CFR West Coast South America	USD	AASV000	AASV003		Spot	CFR	WCSA	20-40 days forward	100	300	MT	246/283	463	
PP Co-polymer FOT Brazil	USD	PHATL00	PHATM03		Spot	FOT	Brazil	3-30 days forward	100		MT	246/283	463	
PP Co-polymer CFR Brazil	USD	AAVRG04	AAVRG03		Spot	CFR	Brazil	20-40 days forward	250		MT	246/283		
PP Co-polymer CFR West Coast South America	USD	AASVN00	AASVN03		Spot	CFR	WCSA	20-40 days forward	100	300	MT	246/283	463	
Polyvinyl Chloride														
PVC suspension CFR Brazil	USD	AAVPZ04	AAVPZ03		Spot	CFR	Brazil	20-40 days forward	250		MT	246/818		
PVC suspension CFR West Coast South America	USD	AASVH00	AASVH03		Spot	CFR	WCSA	20-40 days forward	100	300	MT	246/818	463	

Latin American polymers

Polyethylene

Assessment window: S&P Global Platts weekly spot assessments for low-density polyethylene (LDPE), linear low-density PE, injection grade high-density PE, blowmolding HDPE and high-molecular weight film grade HDPE reflect prevailing market price at 1:30 p.m. US Central time each Wednesday.

Basis and locations: Spot prices are assessed basis free-on-truck (FOT) Brazil (to Mercosur members Argentina, Uruguay or Paraguay). West Coast Latin American prices are assessed basis CFR West Coast South America [includes main ports in Chile (Valparaiso, San Antonio, others) Colombia (Buenaventura) and Ecuador (Guayaquil) and Peru (Callao)] with credit of 90-150 days. Brazilian import prices are assessed on a CFR Brazil Main Port basis, excluding duty, with credit of 90 days. Mexico

assessments reflect a delivered Mexico City price and are for material delivered by a rail car. All assessments are \$/mt. Mexico assessments are also in Mexican pesos/mt. Domestic Brazil assessments reflect a delivered Sao Paulo (South and Southeastern Brazil) price and are for material delivered by truck with letter of credit of 28-35 days. Domestic Brazil assessments are also in Brazilian reals/mt. Argentina assessments reflect a delivery in the greater Buenos Aires area by rail car or truck with a letter of credit of 60-90 days. All assessments are \$/mt. Argentina assessments are also in Argentinian pesos/mt. Colombia assessments reflect delivery in the greater Bogota area by truck with a letter of credit of 60-90 days. Colombia assessments are \$/mt. Colombia assessments are also in Colombian pesos/mt.

Timing: FOT Brazil assessments reflect material loading 3-30 days forward from the date of publication. CFR West Coast South America and CFR Brazil assessments reflect

material for delivery 20-40 days forward from the date of publication. Domestic Mexico, Brazil, Argentina and Colombia assessments are for material delivered by a rail car 3-30 days out.

Standard cargo size: Minimum of 100 mt for FOT Brazil assessments, and 100-300 mt for CFR West Coast South America assessments. CFR Brazil assessments reflect a minimum cargo size of 250 mt. Delivered Mexico City, Delivered Buenos Aires and Delivered Bogota assessments reflect a cargo of 100-300 mt. Delivered Sao Paulo assessments reflect pricing for a 100-500-mt/month buyer.

Product specifications: Low-Density Polyethylene: Assessments reflect product within the melt flow range of 0.1-3.5. For domestic Mexico, Brazil, Colombia and Bogota LDPE assessments reflect a melt flow index of 1.8-2.5

Linear Low-Density Polyethylene: Assessments for all regions reflect product that is butene-1 grade with a melt flow rate of around 1.0.

High-Density Polyethylene: Assessments for CFR Brazil and CFR West Coast South America reflect product that is injection grade, blowmolding grade or high molecular weight film grade. Injection-grade assessments cover material with a melt flow rate of 2.0-25. Blowmolding and film-grade assessments cover product within the melt flow range of 2.0-16.0. For Mexico, assessments are for HDPE blowmolding grade with a melt flow rate 0.25 and higher; and HDPE injection grade with a melt flow rate of 2.0-25, with the majority of business focused on crate grade material with a melt flow index between 5-11; HDPE film with a melt flow rate of 0.06 and higher. For domestic Brazil, Argentina and Colombia assessments are for HDPE blowmolding and HDPE film grades with a melt flow rate 0.25 and higher, and HDPE injection grade with a melt flow rate of 2.0-25.

Polypropylene

Assessment window: S&P Global Platts weekly spot assessments for homopolymer and copolymer grade polypropylenes reflect prevailing market price at 1:30 p.m. US Central time each Wednesday.

Basis and locations: Spot prices are assessed basis free-on-truck (FOT) Brazil (to Mercosur members Argentina, Uruguay or Paraguay). West Coast Latin American prices are assessed basis CFR West Coast South America [includes main ports in Chile (Valparaiso, San Antonio, others) Colombia (Buenaventura) and Ecuador (Guayaquil and Peru (Callao))] with credit of 90-150 days. Brazilian import prices are assessed on a CFR Brazil Main Port basis, excluding duty, with credit of 90 days. All assessments are \$/mt.

Timing: FOT Brazil assessments reflect material loading 3-30 days from the date of publication. CFR West Coast South America and CFR Brazil assessments reflect material for delivery 20-40 days forward from the date of publication.

Standard cargo size: Minimum of 100 mt. for FOT Brazil assessments, and 100-300 mt for CFR West Coast South America assessments. CFR Brazil assessments reflect a minimum cargo size of 250 mt.

Product specifications: Homopolymer PP assessments reflect product within the melt flow range of 0.8-35.0. Copolymer PP assessments reflect product with a melt flow range of 1.5-25.0.

Polyvinyl Chloride

Assessment window: S&P Global Platts weekly spot polyvinyl chloride (PVC) assessments reflect the market price at 1:30 p.m. US Central time each Wednesday.

Basis and locations: West Coast Latin American prices are assessed basis CFR West Coast South America [includes main ports in Chile (Valparaiso, San Antonio, others) Colombia (Buenaventura) and Ecuador (Guayaquil), in addition to Peru's Callao], with credit of 90-150 days. Brazilian import prices are assessed on a CFR Brazil Main Port basis, excluding duty, with credit of 90 days. All assessments are \$/mt.

Timing: CFR West Coast South America and CFR Brazil assessments reflect material for delivery 20-40 days forward from the date of publication.

Standard cargo size: CFR West Coast South America assessments reflect cargoes of 100-300 mt. CFR Brazil assessments reflect a minimum cargo size of 250 mt.

Product specifications: Assessments reflect pipe grade product with a K-value of 65.

US INTERMEDIATES

Assessment	CURRENCY	CODE	Mavg	Wavg	CONTRACT TYPE	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	UOM	PC Page	
												CONV	CODE
Normal butanol													
Normal butanol Weekly	USD	PHAQS00	PHAQT03		Spot	FOB	USG	3-30 days forward	500		MT	161,244	459
Normal Butanol US Domestic Weekly	CTS (USD)	PHAQU00	PHAQV03		Contract	Delivered	East Rockies	3-30 days forward	44,000	45,000	LB	161,244	459
Diisomyl phthalate, Dioctyl terphthalate													
DINP cts/lb Dlvd Weekly	CTS (USD)	PHAD004	PHADI03		Spot	Delivered	East Rockies	Monthly	44,000	45,000	LB	161,244	459
DOTP US cts/lb Dlvd Weekly	CTS (USD)	PHADI04	PHAD003		Spot	Delivered	East Rockies	Monthly	44,000	45,000	LB	161,244	459
2-ethyl hexanol													
2-EH Weekly	USD	PHAQW00	PHAQX03		Spot	FOB	USG	3-30 days forward	500		MT	161,244	459
2-EH US Domestic Weekly	CTS (USD)	PHAQY00	PHAQZ03		Contract	Delivered	East Rockier	3-30 days forward	44,000	45,000	LB	161,244	459
Phthalic anhydride													
PA FL FD US Domestic cts/lb	CTS (USD)	PHARE00	PHARF03		Contract	Delivered	DER	Monthly CP	500	1,000	MT	170	459
PA FL FD US Domestic cts/lb	CTS (USD)	PHARC00	PHARD03		Contract	Delivered	DER	Monthly CP	500	1,000	MT	170	459
Acetic acid, VAM													
Acetic acid cts/lb weekly	CTS (USD)	AAIHD00	AAIHE00		contract	ex-plant FOB	USG	quarterly	40 million		LB/YR	172,171,244	459
Acetic acid export weekly	USD	PHARG00	PHARH03		spot	FOB	USG	3-30 days forward	1,000		MT	172,171,244	459
VAM cts/lb weekly	CTS (USD)	AAIHF00	AAIHG00		contract	ex-plant FOB	USG	quarterly	100 million		LB/YR	172,171,244	459
VAM export weekly	USD	PHARK00	PHARL03		spot	FOB	USG	3-30 days forward	1,000		MT	172,171,244	459
Acrylonitrile													
ACN Export Weekly	USD	PHAR000	PHARP03		Spot	FOB	USG	3-30 days forward	2,000	3,000	MT	175,1175,244	459
ACN FD US Domestic Weekly	CTS (USD)	PHARQ00	PHARR03		Contract	ex-plant FOB	USG	3-30 days forward			LB	175,1175,244	459
Ethylene Dichloride/Vinyl Chloride Monomer													
EDC Weekly	USD	PHARS00	PHART03		Spot	FOB	USG	3-30 days forward	2,000	3,000	MT	182/244	459
VCM FOB USG Weekly	USD	PHARW00	PHARX03		Spot	FOB	USG	3-30 days forward	1,000	3,000	MT	182/244	459
VCM US Domestic Delivered cts/lb Weekly	CTS (USD)	PHARY00	PHARZ03		spot	Delivered via railcar US Domestic		3-30 days forward	1,000	3,000	MT	182/244	459
Purified terephthalic acid													
PTA CFR North America Delivered CP Monthly	USD	AAUNY04			Contract	CFR	North America	Monthly	200,000	220,000	LB	532	
PTA CFR North America Delivered CP cts/lb Monthly	CTS (USD)	AAUNY00			Contract	CFR	North America	Monthly	200,000	220,000	LB	532	

US intermediates

Normal Butanol

Assessment window: S&P Global Platts weekly spot normal butanol assessments reflect prevailing market price at 1:30 p.m. US Central time each Thursday.

Timing: US export assessments reflect material loading 3-30 days forward from the date of publication. Domestic assessments reflect prices made available to the domestic distribution market, typically on a monthly basis.

Basis and locations: Spot export prices are assessed basis FOB US Gulf Coast. Domestic monthly term prices are assessed basis delivered East of the Rockies (DER) to medium-sized customers by tank car or truck.

Standard cargo size: Minimum of 500 mt for export assessments; 44,000-45,000 lbs for domestic assessments.

Product specifications: Minimum purity of 99%, and maximum water content of 0.05%.

Diisomyl phthalate and dioctyl terephthalate

Assessment window: S&P Global Platts weekly spot diisomyl (DINP) and dioctyl terephthalate (DOTP) assessments reflect prevailing market price at 1:30 p.m. US Central time each Thursday.

Timing: Domestic assessments reflect prices made available to the domestic distribution market, typically on a monthly basis.

Basis and locations: Domestic monthly term prices are assessed basis delivered East of the Rockies (DER) to medium-sized customers by tank car or truck.

Standard cargo size: Cargo size of 44,000-45,000 lbs for

domestic assessments. Larger cargo sizes may be assessed, but will be normalized to standard volumes.

Product specifications: DINP density between 0.97-0.98 g/cm³, with a minimum purity level at 99.6% and a maximum water content of 0.05%. DOTP density between 0.98-0.99 g/cm³, with a minimum purity of 99%. Maximum water content of 0.1%.

2-Ethyl Hexanol

Assessment window: S&P Global Platts weekly spot 2-ethyl hexanol assessments reflect prevailing market price at 1:30 p.m. US Central time each Thursday.

Timing: US export assessments reflect material loading 3-30 days forward from date of publication. Domestic assessments reflect prices made available to the domestic distribution market, typically on a monthly basis.

Basis and locations: Spot export prices are assessed basis FOB US Gulf Coast. Domestic monthly term prices are assessed basis delivered East of the Rockies (DER) to medium-sized customers by tank car or truck.

Standard cargo size: Minimum of 500 mt for export assessments; 44,000-45,000 lbs for domestic assessments.

Product specifications: Minimum purity of 99%. Maximum water content of 0.05%.

Phthalic Anhydride

Assessment window: S&P Global Platts weekly phthalic anhydride (PA) assessments reflect prevailing market price at 1:30 p.m. US Central time each Thursday.

Timing: Domestic assessments reflect monthly contract prices. Contracts settled with OX, with a one-month lag.

Basis and locations: Domestic monthly term prices are assessed basis delivered East of the Rockies (DER) to medium-sized customers.

Standard cargo size: 500-1,000mt.

Product specifications: S&P Global Platts assessments reflect both molten and flake product with minimum purity of 99.5%. Residual maleic anhydride content is a maximum 0.15%.

Acetic Acid, Vinyl Acetate Monomer

Assessment window: S&P Global Platts weekly spot acetic acid (AA) and vinyl acetate monomer (VAM) assessments reflect the market price at 1:30 p.m. US Central time each Thursday.

Timing: US export assessments reflect material loading 3-30 days forward from date of publication. Domestic assessments reflect quarterly pricing settlements, but also can reflect inter-quarter domestic pricing adjustments based on market feedback or changes in fundamentals.

Basis and locations: Export prices are assessed basis FOB US Gulf Coast. Domestic prices are assessed basis ex-plant FOB US Gulf Coast.

Standard cargo size: Export AA assessments reflect cargoes with a minimum volume of 1,000 mt. Domestic AA assessments reflect contract volumes of 40-million lb/ year. Export VAM assessments reflect cargoes with a minimum volume of 1,000 mt. Domestic VAM assessments reflect contract volumes of 100-million lb/yr.

Product specifications: AA: 99.8% purity, maximum water content of 100 ppm. VAM: 99.9% purity

Acrylonitrile

Assessment window: S&P Global Platts weekly spot acrylonitrile

assessments reflect prevailing market price at 1:30 p.m. US Central time each Tuesday.

Timing: US export assessments reflect material loading 3-30 days forward from date of publication. Domestic assessments reflect monthly contract prices. Prices can settle retroactively.

Basis and locations: Export prices are assessed basis FOB US Gulf Coast. Domestic prices are assessed basis ex-plant FOB US Gulf Coast.

Standard cargo size: 2,000-3,000mt for export assessments.

Product specifications: Minimum purity of 99%, maximum acetonitrile content of 500 ppm. Maximum water content of 0.5%.

Ethylene Dichloride/Vinyl Chloride Monomer

Assessment window: S&P Global Platts weekly spot ethylene dichloride (EDC) and vinyl chloride monomer (VCM) assessments reflect prevailing market price at 1:30 p.m. US Central time each Tuesday.

Timing: Assessments reflect material loading 3-30 days forward from the date of publication.

Basis and locations: Spot EDC and VCM export prices are assessed basis FOB US Gulf Coast. VCM is also assessed on a domestic monthly term basis, delivered.

Standard cargo size: EDC assessments reflect 2,000-3,000 mt lots; VCM assessments reflect 1,000-3,000 mt lots.

Product specifications: EDC: 99.8% purity, maximum water

content of 100 ppm. VCM: 99.9% purity.

Purified Terephthalic Acid

Assessment window: S&P Global Platts weekly purified terephthalic acid (PTA) assessments reflect prevailing market price at 1:30 p.m. US Central time each Friday.

Timing: Assessments reflect monthly contract prices. Prices can settle retroactively.

Basis and Location: Weekly prices are assessed basis delivered rail car CFR North America, in cts/lb.

Standard cargo size: 200,000-220,000 lbs.

Specifications: Fiber-grade PTA with a minimum purity of 99.6%.

US HYDROCARBON SOLVENTS

Assessment	CURRENCY	CODE	Mavg	Wavg	CONTRACT TYPE	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	UOM	PC Page		Mavg	Wavg
												CONV	CODE		
Solvent toluene and xylenes															
Solvent Toluene FOB USG	CTS (USD)	AAHRU00	AAHRV00		Spot	FOB	USG	3-30 days forward	47,000		LB		372, 373, 241		446
Solvent Toluene FOB Chicago	CTS (USD)	AAHRW00	AAHRX00		Spot	FOB	Chicago	3-30 days forward	47,000		LB		372, 373, 241		446
Solvent Xylene FOB USG	CTS (USD)	AAHRY00	AAHRZ00		Spot	FOB	USG	3-30 days forward	47,000		LB		372, 373, 241		446
Solvent Xylene FOB Chicago	CTS (USD)	AAHSA00	AAHSB00		Spot	FOB	Chicago	3-30 days forward	47,000		LB		372, 373, 241		446
Hexane															
Hexane G-P FOB USG cts/lb Weekly	CTS (USD)	AANTM00	AANTM03		spot	FOB	USG	3-30 days forward	55 MT truck, 90 railcar		LB		372, 373, 241		446
Hexane G-P DER Ex-tank cts/gal Weekly	CTS (USD)	AANTN03	AANTN00		contract	FD	DER	3-30 days forward	55 MT truck, 90 railcar		GAL		372, 373, 241		446
Hexane G-P DER Ex-tank cts/lb Weekly	CTS (USD)	AANTO00	AANTO03		contract	FD	DER	3-30 days forward	55 MT truck, 90 railcar		LB		372, 373, 241		446

US hydrocarbon solvents

Solvent Toluene and Xylenes

Assessment window: S&P Global Platts weekly spot solvent toluene and xylene assessments reflect prevailing market price at 1:30 p.m. US Central time each Tuesday.

Timing: Assessments reflect material loading 3-30 days forward from date of publication.

Basis and locations: Solvent-grade toluene and xylenes are assessed basis FOB US Gulf Coast and Chicago, rack to distributors.

Standard cargo size: Assessments are based on deals to distributors in truck or rail quantities of 47,000 lbs or more.

Product specifications: S&P Global Platts assessments reflect solvent-grade mixed xylenes that conforms to ASTM D-843 and nitration-grade toluene that conforms to ASTM D-841, minimum purity of 99.7%.

Hexane

Assessment window: S&P Global Platts weekly spot hexane assessments reflect prevailing market price at 1:30 p.m. US Central time each Tuesday.

Timing: Assessments reflect loading 3-30 days forward from date of publication.

Basis and locations: Spot prices are assessed basis FOB US Gulf Coast, in cts/lb and cts/gal, and basis delivered East of the Rockies (DER) ex-tank, in cts/lb.

Standard cargo size: Minimum of 55 ton, or minimum of 90 ton railroad tank cars.

Product specifications: Minimum 60% n-hexane, fewer than 10 ppm benzene.

US CHLOR ALKALI

Assessment	CURRENCY	CODE	Mavg	Wavg	CONTRACT TYPE	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	UOM	CONV	PC Page	Mavg	Wavg
													CODE		
Caustic Soda															
Caustic Soda Domestic CP \$/st	USD	AANTJ00			Contract	FOB US Plant	Domestic River Barge		800	100	Dry ST		243		380
Caustic Soda Spot	USD	AANTH00	AANTH03		Spot	ex-Plant	Domestic Railcar	3-30 days forward	34	55	Dry ST		243		380
Caustic Soda Weekly	USD	AANTI00	AANTI03		Spot	FOB USG	USG Sea Barge	3-30 days forward	650	1,300	Dry MT		243		380
Chlorine															
Chlorine Dom CP	USD	AANTL00			Contract	ex-Plant	Domestic Railcar		85	95	Dry ST		243		380
Chlorine Spot Dom	USD	AANTK00	AANTK03		Spot	ex-Plant	Domestic Railcar	3-30 days forward	85	95	Dry ST		243		380

US chlor alkali

Caustic Soda

Assessment window: S&P Global Platts weekly spot caustic soda assessments reflect prevailing market price at 1:30 p.m. US Central time each Tuesday.

Timing: Spot export assessments reflect material loading 3-30 days forward from date of publication. Contract assessments are posted prices, which can be settled retroactively.

Basis and locations: Domestic Contract: Prices assessed basis ex-plant US, \$/short ton. Spot domestic: Prices assessed basis ex-plant US, \$/st. Spot export: Prices assessed basis FOB US Gulf Coast, in \$/mt.

Standard cargo size: Domestic contract: One river barge (800-1,000 dry tons per barge). Spot Domestic: One rail car (34-55 dry tons). Spot export: One seagoing barge (650-1,300 dry tons).

Product specifications: 50% solution commercial grade (liquid): sodium hydroxide content: 49%-51%; sodium oxide content: 38%-40%; and salt: 1% (10,000 ppm).

Chlorine

Assessment window: S&P Global Platts weekly spot chlorine assessments reflect prevailing market price at 1:30 p.m. US Central time each Tuesday.

Timing: Spot assessments reflect material loading 3-30 days

forward from date of publication. Contract assessments are posted prices, which can be settled retroactively.

Basis and locations: Domestic Contract: Prices assessed basis ex-plant US, in \$/st.

Spot Domestic: Prices assessed basis ex-plant US, in \$/st.

Standard cargo size: Domestic and spot mostly in tank cars: 85-95 dry tons/car.

Product specifications: Commercial-grade chlorine, with minimum 97% purity, maximum water content of 50 ppm.

US OXYGENATED SOLVENTS

Assessment	CURRENCY	CODE	Mavg	Wavg	CONTRACT TYPE	CONTRACT BASIS	LOCATION	DELIVERY PERIOD	MIN SIZE	MAX SIZE	UOM	CONV	PC Page	
													CODE	Mavg Wavg
Isopropyl Alcohol														
IPA FOB USG weekly	USD	PHADD00	PHAYG03	spot	FOB	USG	3-30 days forward	400	600	MT			379,400,242	447
IPA DER US Domestic weekly	USD	PHADG00	PHAYH03	contract	FD	DER	3-30 days forward	44,000 LB truck/185,000 rail	45,000 LB truck/185,000 rail	MT			379,400,242	447
Phenol														
Phenol FOB Weekly (Export)	USD	PHAGE00	PHAYK03	Spot	FOB	USG	3-30 days forward	500	1,000	MT			379,400,242	447
Phenol DER Ex-Tank Weekly (Domestic)	USD	PHAGH00	PHAYL03	Spot	Ex-Tank	DER	3-30 days forward	44,000 LB	45,000 LB	MT			379,400,242	447
Acetone														
Acetone T1 FOB USG Weekly	CTS (USD)	PHADJ00	PHAYN03	Spot	FOB	USG	3-30 days forward	500	1,000	MT			379,400,242	447
Acetone Contract (T2 DER US)	CTS (USD)	AAHYC00	AAHYD00	Contract		USG	3-30 days forward	44,000 LB	45,000 LB	MT			379,400,242	447
Ethyl acetate														
Ethyl acetate FOB USG Weekly	USD	PHAEC00	PHAYZ03	spot	FOB	USG	3-30 days forward	250	500	MT			379,400,242	447
Ethyl acetate DER US Domestic weekly	USD	PHAEF00	PHAZC03	contract	FD	DER	3-30 days forward	44,000 LB	45,000 LB	MT			379,400,242	447
N-butyl acetate														
Butyl Acetate FOB USG Weekly	USD	PHAEI00	PHAZF03	spot	FOB	USG	3-30 days forward	250	500	MT			379,400,242	447
Butyl acetate DER US Domestic Weekly	USD	PHAEI00	PHAZG03	contract	FD	DER	3-30 days forward	44,000 LB	45,000 LB	MT			379,400,242	447
Industrial grade Ethanol														
Industrial Ethanol 190 FOB DSP cts/gal weekly	CTS (USD)	AANTP00	AANTP03	contract	FOB	DSP	3-30 days forward	6,500		GAL			379,400,242	447
Industrial Ethanol 200 FOB DSP cts/gal weekly	CTS (USD)	AANTR00	AANTR03	contract	FOB	DSP	3-30 days forward	6,500		GAL			379,400,242	447

US oxygenated solvents

Isopropyl Alcohol

Assessment window: S&P Global Platts weekly spot isopropyl alcohol assessments reflect prevailing market price at 1:30 p.m. US Central time each Tuesday.

Timing: US export assessments reflect material loading 3-30 days forward from the date of publication. Domestic assessments reflect

prices made available to the domestic distribution market, typically on a monthly basis.

Basis and locations: Export prices are assessed basis FOB US Gulf Coast, in \$/mt. US Domestic prices are assessed on a basis delivered (by truck or rail) East of the Rockies (DER), in \$/mt. Domestic prices reflect producer-to-distributor prices, before discounts.

Standard cargo size: Export assessments reflect spot

cargoes of 400-600 mt. Domestic assessments reflect deals to distributors in quantities of 44,000 lb to 45,000 lb (in truck) and 185,000 lbs (in rail car).

Product specifications: Maximum 100 ppm aromatics content, maximum sulphur content of 1 ppm and minimum product purity of 50%. Minimum alcohol content is 99.5%; maximum water content is 0.3%.

Phenol

Assessment window: S&P Global Platts weekly phenol assessments reflect prevailing market price at 1:30 p.m. US Central time each Tuesday.

Timing: US export assessments reflect material loading 3-30 days forward from the date of publication. Domestic assessments are on an ex-tank basis and reflect monthly contract transaction prices.

Basis and locations: Export prices are assessed basis FOB US Gulf Coast basis, in \$/mt. Domestic contract prices are assessed basis delivered East of the Rockies (DER) ex-tank, in \$/mt. Truck and rail deliveries are also considered as they relate to ex-tank prices.

Standard cargo size: Export assessments reflect 500 mt-1000 mt. US domestic assessments reflect deals to distributors in truck quantities of 44,000-45,000 lbs.

Product specifications: Minimum purity of 99.9%; maximum water content of 0.08%.

Acetone

Assessment window: S&P Global Platts weekly acetone assessments reflect prevailing market price at 1:30 p.m. US Central time each Tuesday.

Timing: US export assessments reflect material loading 3-30 days forward from the date of publication. Domestic assessments are on a truck/rail basis and reflect monthly contract transaction prices.

Basis and locations: Spot export prices are assessed basis FOB US Gulf Coast, in \$/mt. T1 is for solvent use, US domestic prices are assessed basis delivered East of the Rockies (DER), in \$/mt, and reflect material sold in truckloads in the distribution market.

T2 is for methyl methacrylate use.

Standard cargo size: Export assessments reflect 500 mt-1000 mt. US domestic truck assessments reflect 44,000-45,000 lbs.

Product specifications: Minimum acetone content of 99%; maximum water content of 0.35%.

Ethyl Acetate

Assessment window: S&P Global Platts weekly ethyl acetate assessments reflect prevailing market price at 1:30 p.m. US Central time each Tuesday.

Timing: US export assessments reflect material loading 3-30 days forward from the date of publication. Domestic assessments are on a truck/rail basis and reflect monthly contract transaction prices.

Basis and locations: Export prices are assessed basis FOB US Gulf Coast, in \$/mt. Domestic prices are assessed basis delivered (by truck/rail) East of the Rockies (DER), in \$/mt. Domestic prices reflect producer-to-distributor prices, before discounts.

Standard cargo size: Export assessments reflect 250-500mt. US domestic assessments reflect 44,000-45,000 lbs.

Product specifications: Minimum purity of 99.5%, with an evaporation rate of 1.0, a maximum alcohol content of 0.5%, and a maximum water content of 0.05%.

N-Butyl Acetate

Assessment window: S&P Global Platts weekly n-butyl acetate assessments reflect prevailing market price at 1:30 p.m. US Central time each Tuesday.

Timing: US export assessments reflect material loading

3-30 days forward from the date of publication. Domestic assessments are on a truck/rail basis and reflect monthly contract transaction prices.

Basis and locations: Export prices are assessed basis FOB US Gulf Coast, in \$/mt. Domestic prices are assessed basis delivered (by truck/rail) East of the Rockies (DER), in \$/mt. Domestic prices reflect producer-to-distributor prices, before discounts.

Standard cargo size: Export assessments reflect 250-500 mt. US domestic assessments reflect 44,000-45,000 lbs.

Product specifications: Minimum purity of 99.5%, an evaporation rate of 1.0, a maximum alcohol content of 0.5%, and a maximum water content of 0.05%.

Industrial Grade Ethanol

Assessment window: S&P Global Platts spot weekly ethanol assessments reflect prevailing market price at 1:30 p.m. US Central time each Tuesday.

Timing: Domestic assessments reflect material loading 3-30 days forward from the date of publication. Domestic assessments are on a truck/rail basis and reflect contract transaction prices.

Basis and locations: Denatured, 190 Proof ethanol and denatured 200 Proof ethanol prices are assessed basis FOB DSP (distilled spirits plant) producer-to distributor, in cts/gal.

Standard cargo size: FOB and delivered assessments reflect truckloads of 6,500 gallons per shipment.

Product specifications: Denatured 190 proof ethanol: 95% pure ethanol, mixed with another solvent (such as MIBK or acetone). Denatured 200 proof ethanol: 100% pure ethanol, mixed with another solvent.

Liquid and gas chemical freight

Platts assesses freight rates for liquid chemicals and gas chemicals in the Americas. Please refer to the Freight methodology and specifications guide for details of these assessments: https://www.spglobal.com/platts/plattscontent/assets/_files/en/our-methodology/methodology-specifications/freight-methodology.pdf.

S&P Global Platts global petrochemical indices

indices: S&P Global Platts publishes on a daily basis the following petrochemical indices, which are based on the assessments indicated in parentheses. The indices appear in S&P Global Platts Petrochemical Alert (PCA) page 900.

- Global Ethylene (CFR NE Asia, FD NWE, FD USG)
- Global Propylene (FOB Korea, FD NWE, FD USG)
- Global Benzene (FOB Korea, CIF ARA, FOB USG)
- Global Toluene (FOB Korea, FOB Rotterdam, FOB USG)
- Global Paraxylene (FOB Korea, FOB Rotterdam, and FOB US Gulf)
- Global Low density polyethylene (CFR N Asia, FD NWE, FAS Houston)
- Global Polypropylene homopolymer (CFR N Asia, FD NWE, FAS Houston)
- Global Petrochemical Index (PGPI) (1)

Weighted averages for each index above by region are as follows:

- Global Ethylene (CFR NE Asia, FD NWE, FD USG), 0.48 Asia,

0.24 for US and 0.28 for Europe.

- Global Propylene (FOB Korea, FD NWE, FD USG), 0.63 Asia, 0.19 for US and 0.17 for Europe.
- Global Benzene (FOB Korea, CIF ARA, FOB USG), 0.67 Asia, 0.13 for US and 0.19 for Europe.
- Global Toluene (FOB Korea, FOB Rotterdam, FOB USG), 0.49 Asia, 0.30 for US and 0.21 for Europe.
- Global Paraxylene (FOB Korea, FOB Rotterdam, and FOB US Gulf), 0.85 Asia, 0.09 for US and 0.06 for Europe.
- Global Low density polyethylene (CFR N Asia, FD NWE, FAS Houston), 0.37 Asia, 0.19 for US and 0.44 for Europe.
- Global Polypropylene homopolymer (CFR N Asia, FD NWE, FAS Houston), 0.64 Asia, 0.14 for US and 0.22 for Europe.

The distribution reflects the relative sizes of the regional markets based on production capacity, as of 2015.

(1) The S&P Global Platts Global Petrochemical Index (PGPI) is calculated based on the individual global product indices with the following weight distribution: 0.32 ethylene, 0.24 propylene, 0.11 benzene, 0.05 toluene, 0.10 paraxylene, 0.05 LDPE, and 0.14 PP.

Units: USD/mt.

REVISION HISTORY

December 2018: Platts updated this guide to reflect the transfer of chemical freight methodology from this guide to the global Freight methodology and specifications guide.

April 2018: [Annual Review] Added revised parts I-VI. General typographical changes, deletions of repeated text. Removed language related to normalization already included in parts I-VI.

April 2018: S&P Global Platts moved assessments of US EDC and VCM markets to Tuesday.

November 2017: Add new assessments for domestic Argentina, Colombia HDPE, LDPE and LLDPE prices and domestic Mexico HDPE film prices. Updated volumes sizes for domestic Brazil and Mexico polyethylene assessments.

April 2017: [Annual Review] Added specifications for LLDPE C6 and metallocene export assessments. Updated cracker margins methodology to reflect name change of Fuel Oil No. 6 3% USGC Waterborne to USGC HSFO. Updated MTBE methodology to address eWindow and clarify assessment process. MEG fiber-grade monthly settlement added to reflect current practice. Clarified that MX methodology to state that ASTM 843 bids, offers and deals are normalized to ASTM 5211 spec.

November 2016: S&P Global Platts updated this guide to reflect new assessments for domestic Brazil HDPE, LDPE and LLDPE prices.

September 2016: [Annual Review] S&P Global Platts updated this guide to reflect the change to CFR West Coast South

America for some Latin American polymer assessments. Add new assessments for domestic Mexico HDPE, LDPE and LLDPE prices. Changes all company references to S&P Global Platts. General edits for style and grammar throughout guide.

August 2016: S&P Global Platts updated this guide to reflect changes to the Market on Close time to 4 p.m. US Central Time for benzene, styrene, cumene and ethylene markets and to 1:30 p.m. US Central time for all other markets. S&P Global Platts updated this guide to reflect the change in minimum spot cargo size for styrene monomer to 3,000mt.

March 2016: S&P Global Platts revised the individual regional weighting to each product based on their regional capacity, for the Global Petrochemical Indices.

March 2016: S&P Global Platts updated this guide to reflect the discontinuation of the posted ethylene contract price assessment and weekly spot chemical-grade propylene assessment; a clarification to the MX methodology and updates codes and timing for MX and styrene monomer.

October 2015: S&P Global Platts updated this guide to reflect new assessments for DOTP and DINP, a clarification to the OX methodology, clarifications to the US HDPE blowmolding export page codes and removing a reference in the MX methodology to a previously discontinued contract price.

September 2015: S&P Global Platts updated this guide to reflect the discontinuation of dioctyl phthalate, methyl ethyl ketone and methyl isobutyl ketone. The guide was also updated with additional information on the paraxylene assessment. The guide was also updated to improve uniformity in language and correct typographical errors.

August 2015: S&P Global Platts updated this guide to reflect new assessments for LLDPE C6 and metallocene. The guide was also updated to improve uniformity in language and correct typographical errors. The conversion factor for the cracker margins was corrected to reflect the factor to two decimal places.

July 2015: S&P Global Platts updated this guide to reflect timing basis changes for US methanol FOB USG and polymer-grade propylene FD USG.

April 2015: S&P Global Platts updated this guide to reflect a specifications change for the FOB USG MTBE assessment and to reflect the correct code for IPA DER US domestic weekly assessments.

October 2014: S&P Global Platts updated this guide to reflect a clarification in the methodology for the FOB USG cumene assessment.

September 2014: S&P Global Platts updated this guide to reflect a timing change for S&P Global Platts spot ethylene assessments.

August 2014: S&P Global Platts revamped all Petrochemical Methodology And Specifications Guides, including its Americas Petrochemical guide, in August 2014. This revamp was completed to enhance the clarity and usefulness of all guides, and to introduce greater consistency of layout and structure across all published methodology guides. Methodologies for market coverage were not changed through this revamp, unless specifically noted in the methodology guide itself.