



ARGUS ASPHALT REPORT

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The most up-to-date Argus Asphalt Methodology is available on www.argusmedia.com

Introduction

The Argus Asphalt Report is a weekly publication on asphalt prices (bitumen for Europe and Asia) that is published on Fridays.

The price assessments are obtained by discussing prices on a weekly basis with a wide variety of sources, including refiners, resellers, traders, ship brokers and paving contractors. The report details "current" prices in each market covered, or prices at which actual transactions or sales are taking place. In markets that occasionally lack liquidity, Argus may assess the price ranges based on market discussions with buyers and sellers.

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

The report also includes information on factors that may be affecting or influencing asphalt trade and the direction of asphalt prices. These factors include crude oil prices, light-heavy crude price spreads, refinery economics, breakeven values for asphalt producers, alternative values for asphalt producers, arbitrage economics, and highway spending levels.

US and Canadian Market

Period covered:

Current week's prices.

Pricing:

In US\$/short ton in the US

In C\$/metric tonne and US\$/short ton in Canada

US and Canadian Asphalt Rack Selling Prices:

Rack selling prices are retail truck selling prices to the end-user (typically contractors). Argus' objective is to represent the key grades being used in various markets which currently includes Superpave (Performance Grades or PG) binders in the US, and Penetration (Pen) grades and PG binders in Canada.

Penetration Grades:

The grades represented in western Canada is primarily Pen 150/200. For specifications for Pen grades see ASTM standards, designation D946-82 (reapproved 1993).

Superpave Binders:

PG 64-22 and PG 58-28 (northern US states and eastern Canada). PG 64-22 and PG 67-22 are primary grades used in southern US states. For specifications see American Association of State Highway and Transportation Officials (AASHTO) specifications, designation MP1-93.

Grades used in Argus' price ranges may change if individual US states or Canadian provinces adopt new grades or change their primary grade.

Wholesale Barge and rail price ranges cover deals closed in the current week i.e. in the seven days ending on the Friday that the pub-

lication is dated. Argus' barge and rail price ranges do not include contract volumes negotiated in earlier months that may be lifting in the current assessed week.

East coast – Rack prices

Maine rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in Maine is PG 64-28.

Massachusetts/New Hampshire rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in Massachusetts and New Hampshire is PG 64-28.

Connecticut rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in Connecticut is PG 64-22. The grade reported was changed from PG 64-28 to PG 64-22 from the 12 June 2009 report onwards due to a grade switch by the Connecticut Department of Transportation.

Eastern and central New York rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in New York is PG 64-28.

Western New York/Western Pennsylvania rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in western New York/Western Pennsylvania is PG 64-22.

North New Jersey/New York City Metro rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in North New Jersey/NYC Metro area is PG 64-22.

Maryland/Northern Virginia rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in Maryland/Northern Virginia is PG 64-22.

Central & lower Virginia rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in central and lower Virginia is PG 64-22.

Coastal Carolinas rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in the coastal Carolinas is PG 64-22.

Inland Carolinas rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in the inland Carolinas is PG 64-22.

Inland Georgia rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in inland Georgia is PG 67-22.

Coastal Georgia/Northeast Florida rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in Coastal Georgia is PG 67-22 and in Northeast Florida is PG 64-22.

West coast of Florida rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. West coast of Florida applies to the Tampa market. The grade used in the west coast of Florida is PG 64-22.

Southern Florida rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in southern Florida is PG 64-22.

East Coast – Waterborne prices

New Jersey barge fob: The price range covers spot barge deals (physical volumes sold in the current assessed week) from New Jersey asphalt producers that are for prompt lifting (within the next two-four weeks). Grades included are PG 64-22. Grades used may change to include other grades as states move to various PG grades or change their primary grade. Size of barges range from 25,000 BLS to 65,000 bls. In an illiquid market, Argus may assess the price range based on on-going negotiations/discussions between refiners and buyers in the current assessed week.

North New Jersey/New York City Metro cif cargoes: Assessments include spot sales (volumes sold in the current assessed week) of imported barrels (moving within the next two-four weeks) and US inter-regional sales (moving within the next two-four weeks) landing in the north New Jersey/New York City metro area. Grades included are AC-20 and PG 64-22. Grades used may change if individual states change the primary grade used. Size of cargoes varies, with minimum size of 40,000 barrels for barges to 210,000 barrels for large ships. In an illiquid market, Argus may assess the price range based on negotiations/discussions between refiners and buyers in the current assessed week.

New England cif cargoes: Assessments include imports (moving within the next two-four weeks) and domestic barrels (moving within the next two-four weeks). All assessments are spot transactions (volumes sold in the current assessed week). Grade is PG 64-28 as this is the key grade required for state work in New England. Size of cargoes varies with minimum size of 40,000 bls for barges

to 210,000 barrels for large ships. In an illiquid market, Argus may assess the price range based on negotiations/discussions between refiners and buyers in the current assessed week.

Gulf Coast – Rack prices

Alabama (southern) rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in southern Alabama is PG 67-22.

Alabama (inland) rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in inland Alabama is PG 67-22.

Louisiana/Mississippi (southern) rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in southern Mississippi is PG 67-22, and in southern Louisiana is PG 64-22.

Louisiana/Mississippi (inland) rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in inland Louisiana/Mississippi is PG 64-22.

Arkansas/Northeast Texas rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in inland Arkansas/Northeast Texas is PG 64-22.

Texas (coastal) rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in coastal Texas is PG 64-22.

Texas (inland) rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in inland Texas is PG 64-22.

New Mexico rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in New Mexico is PG 64-22.

Gulf Coast – Waterborne prices

Eastern Gulf coast barge fob: The price range covers spot barge offerings (volumes sold in the current assessed week) from Gulf Coast refiners that are at the mouth of the Mississippi River or east of it. Assessments are for prompt lifting (within the next two weeks). Grades included are 64-22 and PG 67-22. Sizes of cargoes are 30,000 bls minimum. In an illiquid market, Argus may assess the

price range based on negotiations/discussions between refiners and buyers in the current assessed week.

Western Gulf coast barge fob: The price range covers spot barge offerings (volumes sold in the current assessed week) from Gulf

Coast refiners west of the Mississippi River fob cargoes:

Assessments are for prompt lifting (within the next two weeks). Grades included are PG 64-22 and PG 67-22. Sizes of cargoes are 30,000 bls minimum. In an illiquid market, Argus may assess the price range based on negotiations/discussions between refiners and buyers in the current assessed week.

Midwest – Rack prices

West Oklahoma/Texas Panhandle rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in New Mexico is PG 64-22.

Northeast Oklahoma/Kansas/southwest Missouri rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in NE Oklahoma/Kansas/southwest Missouri is PG 64-22.

North Illinois/eastern Iowa (Chicago) rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in North Illinois/eastern Iowa (Chicago) is PG 64-22.

South Illinois/eastern Missouri (St Louis) rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in south Illinois/eastern Missouri (St. Louis) is PG 64-22.

Western Iowa/Nebraska rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in Western Iowa/Nebraska is PG 64-22.

North Dakota/south Dakota rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in North Dakota/south Dakota is PG 64-22.

Northern Minnesota/northern Wisconsin rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in Northern Minnesota/northern Wisconsin is PG 64-22.

Southern Minnesota/southern Wisconsin rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which

tendered work is awarded. The grade used in southern Minnesota/southern Wisconsin is PG 64-22.

Northeast Indiana/north Ohio/Michigan rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in Northeast Indiana/north Ohio/Michigan is PG 64-22.

South Ohio/south Indiana/north Kentucky rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in south Ohio/south Indiana/north Kentucky is PG 64-22.

South Kentucky/Tennessee rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used in south Kentucky/Tennessee is PG 64-22.

Midwest – Waterborne prices

Midwest asphalt barge: The price range covers spot barge fob offerings (volumes sold in the current assessed week) from refiners from the St. Louis, Missouri to Chicago, Illinois markets. Detroit, Michigan barge sales may be included in the reported price range in the price table if there is sufficient liquidity in that market. The grade is PG 64-22. Sizes of cargoes are 20,000 bls minimum. In an illiquid market, Argus may assess the price range based on negotiations/discussions between refiners and buyers in the current assessed week.

Midwest roofing flux barge: The price ranges covers spot barge fob roofing flux barge transactions.

Rocky Mountain rack prices

Montana rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grades used in Montana are PG 64-22 and PG 58-28.

Wyoming rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grades used in Wyoming are PG 64-22 and PG 58-28.

Colorado rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grades used in Colorado are PG 64-22 and PG 58-28.

Utah rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grades used in Utah are PG 64-22 and PG 58-28.

Idaho/east Washington rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grades used in Idaho/east Washington are PG 64-22 and PG 58-28.

Rocky Mountain rail wholesale - price range covers rail deals from refiners from the Rocky Mountain states. Typically, the price range for the month is set in the last week of the prior month. Grades included are PG 64-22 and PG 58-28.

West coast rack prices

Western Washington/Oregon rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used is PG 64-22.

Northern California rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grades used are PG 64-16 and PG 64-10.

Central California rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grades used are PG 64-16 and PG 64-10.

Southern California rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used is PG 64-10.

Arizona rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grades used are PG 64-22 and PG 58-22 in northern Arizona, and PG 70-10 in the rest of Arizona.

Nevada rack selling prices include spot asphalt pricing (physical volumes sold in the current assessed week) at refineries or terminals and/or prices at which tendered work is awarded. The grade used is AC-30 Table II.

Canada

Eastern Canada posted prices for **asphalt**: These are posted prices announced by suppliers and refiners in the Quebec market for asphalt grades they supply (conventional and polymer). The prices are listed by company, location and grades supplied, along with differentials for premium grades. The posted prices are reported in C\$/t with effective dates.

Eastern Canada asphalt prices for **Quebec**: This is actual selling prices in the Quebec market for grade PG 58-28.

Eastern Canada asphalt prices for **Ontario**: This is actual selling

prices in the Ontario market for grade PG 58-28.

Roofing BUR liquid prices: This is built-up roofing pricing in the Ontario market.

Western Canada posted spot prices for **asphalt**: These prices are also known as "rack postings" in western Canada. They represent pricing to stationary asphalt plants at various locations. Grades represented are Pen 150/200A for Edmonton, Price George, Kamloops and Winnipeg. The grade for Vancouver is PG 64-25 (Pen 80/100A).

Western Canada asphalt prices for **British Columbia, Alberta, Saskatchewan and Manitoba**: These prices represent the "current market" and include winning quotes at highway tenders. Winning quotes are "fob the closest" supplier. Grade represented is Pen 150/200A.

Europe Bitumen Market

Period covered:

Current week's prices.

Pricing:

In €/metric tonne and US\$/metric tonne prices are in British £/metric tonne and US\$/metric tonne.. UK

Europe Rack Prices

Prices are retail selling prices for truck volumes sold in the current assessed week. Prices include spot prices, contract prices and prices awarded at tender. For specifications see European Standard EN 12591 drawn up by the European Committee for Standardisation (CEN).

Netherlands

The delivery basis of the Netherlands price is fob refinery or fob bitumen terminal in Rotterdam and the price reference grade is penetration grade Pen 70/100.

Belgium

The delivery basis of the Belgium-Antwerp price is fob refinery or fob bitumen terminal in Antwerp. The Brussels' price is a delivered price basis Brussels. The price reference grade is penetration grade Pen 50/70.

Germany

German prices are given on a regional basis – **North, Northeast, South, Southwest and West**. The delivery basis is fob refinery or fob bitumen terminal in the respective region. The price reference grades are penetration grades Pen 50/70 and Pen 70/100.

France

France prices are given on a regional basis – North, Central and South - and are delivered prices within the respective region. The price reference grades are penetration grades Pen 35/50 and Pen 50/70.

UK

The delivery basis is fob refinery or fob bitumen terminal and the price reference grades are penetration grades Pen 40/60, Pen 100/150 and Pen 160/220.

Italy

The delivery basis is fob refinery or fob bitumen terminal and the price reference grades are penetration grades Pen 50/70 and Pen 70/100.

With effect from 28 February 2000 Italy prices include a government tax of €31/metric tonne.

Spain

Spain prices are given on a regional basis – Northeast and South-west. The delivery basis is fob refinery or fob bitumen terminal in the respective region and the price reference grades are penetration grades Pen 40/50 and Pen 60/70.

Asia and Africa Bitumen Market

Period covered:

Current week's prices.

Pricing:

In local currency/metric tonne and US\$/metric tonne.

Rack Selling Prices:

Rack selling prices are retail selling prices for truck volumes. Grades represented are the key grades used in individual markets. Rack prices include spot asphalt pricing at refineries or terminals and/or fob prices at which tender work is awarded.

Asia and Africa Rack Prices

South Africa

Retail prices for prompt truck volumes sold. Grades are Pen 60/70 and Pen 80/100, with Pen 40/50 used in the north and east sections of South Africa.

South Korea

Retail selling price for prompt truck volumes based on Pen 60/70 grade offered by refineries. Price is set by refineries with no fixed period for review.

Mumbai, India

Retail selling price for truck volumes. Bulk volumes average 15t. Price published is for bulk and packed Pen 60/70 grades based on a fortnightly price review by local oil companies – Indian Oil, Bharat Petroleum and Hindustan Petroleum. The prices are announced by local refiners. Price does not include excise duty of 14pc and education CESS (3pc out of the 14pc excise) for a total of 14.42pc tax.

Singapore

Retail selling price for prompt truck volumes of 18-20t, based on Pen 60/70 grade. Prices are assessed weekly based on volumes sold by refineries.

Singapore (ex-refinery to Malaysia)

Prices are based on Pen 60/70 grade prompt truck volumes of 23-30t offered by Singapore refineries to Malaysian buyers.

Japan

The retail price for whole sale prompt barge (500t and 1,500t) volumes set by refineries quarterly. Based on Pen 60/70 grade. Tank truck volumes are around ¥15,000/t more.

Thailand

Retail selling price for prompt truck volumes of 14t or 20t based on Pen 60/70 grade offered by refineries. Price is set by refineries and reviewed on a monthly basis, typically at the end of each month for the following month's prices.

Indonesia

Retail selling price for prompt truck volumes of 12-20t based on Pen 60/70 grade offered by the state-owned refiner. Price is set monthly and typically announced at the start of each month.

Export Cargo/Drum prices, fob

Iran fob cargo and drums

Prices are based on spot deals for Pen 60/70 grade for both fob bulk and drum cargoes loading within the next 4 weeks from week of assessment. Bulk cargo sizes included in the assessment are 1,500t to 5,000t. In an illiquid market, Argus may assess the price range based on on-going negotiations/discussions between refiners and buyers in the current assessed week.

Bahrain fob cargo

Price is based on spot deals for Pen 60/70 for fob bulk cargoes loading within in the next 4 weeks from week of assessment. Bulk cargo sizes included in the assessment are 1,500-5,000t. In an illiquid market, Argus may assess the price range based on on-going negotiations/discussions between refiners and buyers in the current assessed week.

Thailand fob cargo

Price is based on spot deals for Pen 60/70 fob bulk cargoes loading an average of four weeks forward from week of assessment. Refineries set a price based on a formula relating fuel oil, gas oil and Argus Singapore fob in the second half of each month. This price applies to the following month. Bulk cargo sizes included in the assessment are 1,500-5,000t. In an illiquid market, Argus may assess the price range based on on-going negotiations/discussions between refiners and buyers in the current assessed week. Please note that the Thailand drum range has been removed due to lack of sales.

Singapore fob cargo

Prices are based on spot deals Pen 60/70 fob bulk and drum cargoes loading an average of four weeks forward from week of assessment. Bulk cargo sizes included in the assessment are 1,500-5,000t. In an illiquid market, Argus may assess the price range based on on-going negotiations/discussions between refiners and buyers in the current assessed week.

Japan fob cargo

Price is based on spot deals for Pen 60/70 fob bulk cargoes loading on average of four weeks forward from week of assessment. Bulk cargo prices included in the assessment are 1,500-5,000t. In an illiquid market, Argus may assess the price range based on on-going negotiations/discussions between refiners and buyers in the current assessed week.

South Korea fob cargo

Price is based spot deals for on Pen 60/70 fob bulk cargoes loading on average of four weeks forward from week of assessment. Bulk cargo prices included in the assessment are 1,500-5,000t. In an illiquid market, Argus may assess the price range based on on-going negotiations/discussions between refiners and buyers in the current assessed week.

Taiwan fob cargo

Price is based on spot and tendered deals for Pen 60-70 fob bulk cargoes loading on average of four weeks forward from week of assessment. Bulk cargo prices included in the assessment are 1,500-5,000t. In an illiquid market, Argus may assess the price range based on on-going negotiations/discussions between refiners and buyers in the current assessed week.

Import Cargo/drum prices, cfr

West Africa cargo, cfr

Prices are based on delivered Pen 60/70 bulk cargoes into the west African market of Nigeria. Product may be sourced from Africa, the Med or other overseas sources.

The delivered price is generally based on an average of HSFO cargoes fob Mediterranean quotes + a refiner's discount/premium for bitumen + freight to the destination. Size of the vessel varies.

China cargo, cfr

Prices are based on delivered Pen 60/70 bulk cargoes to North, East and South China loading an average of four weeks forward from week of assessment. Bulk cargo prices included in the assessment are 1,500-5,000t. In an illiquid market, Argus may assess the price range based on on-going negotiations/discussions between refiners and buyers in the current assessed week.

Vietnam drum, cfr

Prices are for based on delivered Pen 60/70 drums to North and South Vietnam loading an average of four weeks forward from week of assessment. Typical drum size is 180-200kg or 42-55 gallon drums. In an illiquid market, Argus may assess the price range based on on-going negotiations/discussions between refiners and buyers in the current assessed week.

Asphalt Economics

Asphalt's HSFO alternative: This calculation tells us what asphalt is worth if it is blended into fuel oil.

Asphalt's HSFO alternative arbitrage: This calculation tells us

whether the arbitrage is open based on asphalt's HSFO alternative calculation in that market.

Asphaltic crude breakeven: This calculation tells us what asphalt has to be sold at in order to breakeven on it asphalt unit. The calculation is done using Maya and Arab Heavy crudes.