LOW DENSITY POLYETHYLENE (LDPE)

Low density polyethylene (LDPE) is used predominantly as a packaging film, either on its own or blended with linear low density PE to improve mechanical properties. Blown LDPE film has good processability due to a strain hardening effect of the polymer melt caused by the long branched, long chain structure of the polymer. It can be used in food and medical/pharmaceutical packaging in high purity grades as well as in agricultural film and disposable nappies. LDPE is also used in sheathing for electrical and communication cables, and the extrusion coating of paper and board for the packaging of liquids and in moisture barrier applications.

The typical LDPE lamination/coating grade utilised in India is of a melting index at 7.0, which is produced under autoclave technology. It is used in coatings such as on flexible packaging and paper lamination. LDPE lamination/coating grade produced under tubular technology is used in coating of roofing films for example, but trade of this grade is not included in the price assessment.

Properties

Molecular weight	90 000
Melting index (g/10 minutes)	0.2- 3.5
Density (at 20^{o}C)	0.92-0.93
Vicat softening point (^{o}C)	93
Tensile strength (Mpa)	12.4
Tensile elongation at rupture (%)	653
Hardness (Rockwell D)	41-46

Linear low density polyethylene (LLDPE):

Linear low density polyethylene (LLDPE) is a thermoplastic which in many applications replaces its predecessor low density polyethylene (LDPE) or is used in blends with LDPE. LLDPE's short chain branching gives it higher tensile strength, puncture and anti-tear properties, making it particularly suitable for film applications. Other outlets include injection moulding products and wire and cable. Metallocene-based LLDPE resins are penetrating the film and packaging markets due their enhanced physical properties while catalyst developments should improve their processability.

Properties

Density (at 20^{o}C)	0.916-0.94
Vicat softening point (^{o}C)	101
Melting index (g/10 minutes)	0.13-2.5
Tensile strength (Mpa)	10-11
Tensile elongation at rupture (%)	811
Hardness (Rockwell D)	50-60

High density polyethylene (HDPE):

The major outlet for high density polyethylene (HDPE) is in blow moulding applications such as milk bottles, packaging containers, drums, fuel tanks for automobiles, toys and housewares. Film and sheet made from HDPE are used in a wide range of applications including wrapping, refuse sacks, carrier bags and industrial liners. Articles made by injection moulding includes crates, pallets, packaging containers and caps, paint cans, housewares and toys. Extrusion grades are typically used in pipe for water, gas and irrigation, conduit, wire coating and cable insulation.

Properties

Melting index (g/10 minutes)	0.1-20.0
Density (at 20°C)	0.94-0.965
Auto-ignition temp (° F)	550
Vicat softening point (°C)	127
Tensile strength (MPa)	26.5
Tensile elongation at rupture %	906
Hardness (Rockwell D)	60-70

ICIS pricing quotes Polyethylene **Europe**, **Asia-Pacific**, **China,** the **USA**, **Middle East/West Asia**, **Latin America** and **Africa**.

Frequency:

Published weekly on Fridays, and the Africa report on Wednesdays.

Polyethylene (EUROPE)

The FD EU quote represents gross delivered prices, later discounted, throughout Europe. It does not reflect net business in any part of Europe.

Weekly Price Assessments

LDPE GP Film Spot Prices (quoted on a net basis)

- FD NWE (EUR/MT & conversion to US CTS/LB)
- FOB NWE (USD/MT & conversion to US CTS/LB)
- CFR Turkey (USD/MT & conversion to US CTS/LB)
- EXW Russia Rb/MT

LDPE GP Film Domestic Prices (quoted on a gross basis)

- FD EU (EUR/MT & conversion to US CTS/LB)
- FD UK (GBP/MT & conversion to US CTS/LB)

LLDPE Spot Prices

- FD NWE HEXENE C6 (EUR/MT & conversion to US CTS/LB)
- FD NWE OCTENE C8 (EUR/MT & conversion to US CTS/LB)
- FD NWE BUTENE C4 (EUR/MT & conversion to US CTS/LB)

LLDPE Domestic Prices

- FD EU HEXENE C6 (EUR/MT & conversion to US CTS/LB)
- FD EU OCTENE C8 (EUR/MT & conversion to US CTS/LB)

LLDPE GP Film Domestic Prices

- FD EU (EUR/MT & conversion to US CTS/LB)
- FD UK (GBP/MT & conversion to US CTS/LB)

LLDPE But Cast Stretch Film Domestic Prices

- FD NWE EU (EUR/MT & conversion to US CTS/LB)

HDPE Injection Spot Prices

FD NWE (EUR/MT & conversion to US CTS/LB)

- FOB NWE (USD/MT & conversion to US CTS/LB)

CFR Turkey (USD/MT & conversion to US CTS/LB)

EXW Russia Rb/MT

HDPE Injection Domestic Prices

- FD EU (EUR/MT & conversion to US CTS/LB)
- FD UK (GBP/MT & conversion to US CTS/LB)

HDPE Blow Moulding Spot Prices

- FD NWE (EUR/MT & conversion to US CTS/LB)
- FOB NWE (USD/MT & conversion to US CTS/LB)
- CFR Turkey (USD/MT & conversion to US CTS/LB)
- EXW Russia Rb/MT

HDPE Blow Moulding Domestic Prices

- FD EU (EUR/MT & conversion to US CTS/LB)
- FD UK (GBP/MT & conversion to US CTS/LB)

HDPE Film Spot Prices

- FD NWE (EUR/MT & conversion to US CTS/LB)
- FOB NWE (USD/MT & conversion to US CTS/LB)
- CFR Turkey (USD/MT & conversion to US CTS/LB)

HDPE Film Domestic Prices

- FD EU (EUR/MT & conversion to US CTS/LB)
- FD UK (GBP/MT & conversion to US CTS/LB)

Polyethylene Feedstock Prices

- ETHYLENE FD NWE Monthly (EUR/MT)

Polyethylene (ASIA-PACIFIC)

Weekly Price Assessments:

LDPE Film Spot Prices (All origins)

· CFR HONG KONG (USD/MT & conversion to US CTS/LB)

· CFR CHINA (USD/MT & conversion to US CTS/LB)

· CFR TAIWAN (USD/MT & conversion to US CTS/LB)

· CFR S.E.ASIA (USD/MT & conversion to US CTS/LB)

LDPE Film Spot Prices

· CFR S.E.ASIA (subject to import duties of 5% to 20%) (USD/MT & conversion to US CTS/LB)

· CFR S.E.ASIA (not subject to import duty) (USD/MT & conversion to US CTS/LB)

LLDPE Film Spot Prices (All origins)

· CFR HONG KONG (USD/MT & conversion to US CTS/LB)

· CFR CHINA (exclude non-dutied sources) (USD/MT & conversion to US CTS/LB)

· CFR TAIWAN (USD/MT & conversion to US CTS/LB)

· CFR S.E.ASIA (USD/MT & conversion to US CTS/LB)

LLDPE Film Spot Prices

· CFR S.E.ASIA (subject to import duties of 5% to 20%) (USD/MT & conversion to US CTS/LB)

· CFR S.E.ASIA (not subject to import duty) (USD/MT & conversion to US CTS/LB)

HDPE Film Spot Prices (All origins)

· CFR HONG KONG (USD/MT & conversion to US CTS/LB)

· CFR CHINA (USD/MT & conversion to US CTS/LB)

· CFR TAIWAN (USD/MT & conversion to US CTS/LB)

· CFR S.E.ASIA (USD/MT & conversion to US CTS/LB

HDPE Film Spot Prices

· CFR S.E.ASIA (subject to import duties of 5% to 20%) (USD/MT & conversion to US CTS/LB)

· CFR S.E.ASIA (not subject to import duty) (USD/MT & conversion to US CTS/LB)

HDPE Injection Spot Prices(All origins)

· CFR HONG KONG/CHINA (USD/MT & conversion to US CTS/LB)

· CFR HONG KONG/CHINA (MELT FLOW INDEX ≤ 10 (USD/MT & conversion to US CTS/LB)

· CFR HONG KONG/CHINA (MELT FLOW INDEX > 10 (USD/MT & conversion to US CTS/LB)

· CFR TAIWAN (USD/MT & conversion to US CTS/LB)

· CFR S.E.ASIA (USD/MT & conversion to US CTS/LB

HDPE Injection Spot Prices

· CFR S.E.ASIA (subject to import duties of 5% to 20%) (USD/MT & conversion to US CTS/LB)

· CFR S.E.ASIA (not subject to import duty) (USD/MT & conversion to US CTS/LB)

HDPE Blow Moulding Spot Prices (All origins)

· CFR HONG KONG (USD/MT & conversion to US CTS/LB)

· CFR CHINA (USD/MT & conversion to US CTS/LB)

· CFR TAIWAN (USD/MT & conversion to US CTS/LB)

· CFR S.E.ASIA (USD/MT & conversion to US CTS/LB

HDPE Blow Moulding Spot Prices

· CFR S.E.ASIA (subject to import duties of 5% to 20%) (USD/MT & conversion to US CTS/LB)

· CFR S.E.ASIA (not subject to import duty) (USD/MT & conversion to US CTS/LB)

Polyethylene Feedstock Prices

· ETHYLENE CFR N.E.ASIA (USD/MT)

SUPPLEMENT:

Commodity Swaps - ICIS LLDPE Forward Curve Methodology (Asia Pacific)

Assessment window

The ICIS linear low density polyethylene (LLDPE) forward price assessment is based on information gathered through the working week up to 16:00 hours on Fridays in Singapore.

Timing: 12 months forward.

Trading terms: CFR Southeast Asia (non-dutiable basis)

Standard volume: 150 tonnes per contract per week.

All the following information is considered, not in ranking order:

Over the Counter (OTC) swap deals confirmed by at least two counter parties, and firm bids and offers. A bid or an offer is considered to be firm when it is confirmed by at least two market stakeholders. In the absence of bids, offers and/or deals for OTC contracts, it will be stated as so.

The LLDPE futures closing prices on Fridays on the Dalian Commodity Exchange.

The Brent Crude Futures settlement prices on Fridays.

Market observations.

Fundamental data.

Instrument function: Provides a basis for determining bid and offer prices for forward month contracts. It can also provide marked-to-market assessments for clearing over-the-counter and futures contracts.

Non-assessment days: When the LLDPE futures contract on the Dalian Commodity Exchange and/or the Brent crude futures contract on the Intercontinental Exchange are not traded.

Note: ICIS reserves the right to exercise editorial discretion in not including certain information in its assessment either for lack of clarity or lack of details required to confirm the information.

Product specifications:

Density (at 20^{o}C): 0.916-0.94

Vicat softening point (^{o}C): 101

Melting index (g/10 minutes): 0.13-2.5

Tensile strength (Mpa): 10-11

Tensile elongation at rupture (%): 811

Hardness (Rockwell D): 50-60

Material certification:

The forward price assessment is for prime LLDPE resin understood to be certified as such by a producer.

Polyethylene (CHINA)

Weekly Price Assessments:

Import Prices (spot) – CFR China

LDPE· FILM (USD/MT)

LLDPE· FILM (USD/MT)

HDPE· FILM (USD/MT)

HDPE BLOW MOULDING (USD/MT)·

HDPE INJECTION (USD/MT)

HDPE INJECTION (MELT FLOW INDEX ≤ 10 (USD/MT)

HDPE INJECTION (MELT FLOW INDEX > 10 (USD/MT)

Import Prices (spot) – CFR China, Tax & Duty Paid (CNY)

LDPE· FILM (CNY/MT)

LLDPE· FILM (CNY/MT)

HDPE· FILM (CNY/MT)

HDPE BLOW MOULDING (CNY/MT)·

HDPE INJECTION (CNY/MT)·

HDPE INJECTION (MELT FLOW INDEX ≤ 10 (CNY/MT)

HDPE INJECTION (MELT FLOW INDEX > 10 (CNY/MT)

Domestic Prices (spot)

LDPE· FILM EXWH (CNY /MT)

LLDPE· FILM EXWH (CNY /MT)

HDPE· FILM EXWH (CNY /MT)

HDPE BLOW MOULDING EXWH (CNY /MT)·

HDPE INJECTION EXWH (CNY/MT)·

HDPE YARN EXWH (CNY/MT)·

Regional Spot Prices

China Produced LDPE Film (spot)

NORTH· CHINA EXWH (CNY /MT)

EAST· CHINA EXWH (CNY /MT)

SOUTH· CHINA EXWH (CNY /MT)

SOUTHWEST CHINA EXWH (CNY/MT)·

NORTHEAST CHINA EXWH (CNY/MT)·

Imported LDPE Film (spot)

NORTH· CHINA EXWH (CNY /MT)

EAST· CHINA EXWH (CNY /MT)

SOUTH· CHINA EXWH (CNY /MT)

NORTHWEST CHINA EXWH (CNY/MT)·

China Produced LLDPE Film (spot)

NORTH· CHINA EXWH (CNY /MT)

EAST· CHINA EXWH (CNY /MT)

SOUTH· CHINA EXWH (CNY /MT)

· SOUTHWEST CHINA EXWH (CNY /MT)

NORTHWEST· CHINA EXWH (CNY /MT)

NORTHEAST· CHINA EXWH (CNY /MT)

Imported LLDPE Film (spot)

NORTH· CHINA EXWH (CNY /MT)

EAST· CHINA EXWH (CNY /MT)

SOUTH· CHINA EXWH (CNY /MT)

China Produced HDPE Film (spot)

NORTH· CHINA EXWH (CNY /MT)

EAST· CHINA EXWH (CNY /MT)

SOUTH· CHINA EXWH (CNY /MT)

· SOUTHWEST CHINA EXWH (CNY /MT)

Imported HDPE Film (spot)

NORTH· CHINA EXWH (CNY /MT)

EAST· CHINA EXWH (CNY /MT)

SOUTH· CHINA EXWH (CNY /MT)

China Produced HDPE Blow Moulding (spot)

NORTH· CHINA EXWH (CNY /MT)

EAST· CHINA EXWH (CNY /MT)

SOUTH· CHINA EXWH (CNY /MT)

Imported HDPE Blow Moulding (spot)

EAST· CHINA EXWH (CNY /MT)

China Produced HDPE Injection (spot)

- NORTH CHINA EXWH (CNY /MT)
- EAST CHINA EXWH (CNY /MT)
- SOUTH CHINA EXWH (CNY /MT)
- SOUTHWEST CHINA EXWH (CNY /MT)

Imported HDPE Injection (Spot)

- NORTH CHINA EXWH (CNY /MT)
- EAST CHINA EXWH (CNY /MT)

China Produced HDPE Yarn (spot)

- NORTH CHINA EXWH (CNY /MT)
- EAST CHINA EXWH (CNY /MT)
- SOUTH CHINA EXWH (CNY /MT)
- SOUTHWEST CHINA EXWH (CNY /MT)

Imported HDPE Yarn (Spot)

- NORTH CHINA EXWH (CNY /MT)
- EAST CHINA EXWH (CNY /MT)

Polyethylene (USA)

Weekly Price Assessments:

LDPE Film Liner Grade Contract Prices (DEL)

· BULK (US CTS/LB & conversion to USD/MT)

LDPE Film Hi-Clarity Homo Contract Prices (DEL)

· BULK (US CTS/LB & conversion to USD/MT)

HDPE Blow Moulding Contract Prices (DEL)

· BULK (US CTS/LB & conversion to USD/MT)

HDPE Injection Contract Prices (DEL)

· BULK (US CTS/LB & conversion to USD/MT)

HDPE HMW Film Contract Prices (DEL)

· BULK (US CTS/LB & conversion to USD/MT)

LLDPE Contract Prices (DEL)

· FILM (BUTENE) (US CTS/LB & conversion to USD/MT)

· FILM (HEXENE) (US CTS/LB & conversion to USD/MT)

· INJECTION (US CTS/LB & conversion to USD/MT)

Spot

Export Spot Prices, Bagged Material

· LDPE FILM FOB USG (US CTS/LB & conversion to USD/MT)

· LLDPE BUTENE FOB USG (US CTS/LB & conversion to USD/MT)

· HDPE BLOW MOULDING FOB USG (US CTS/LB & conversion to USD/MT)

· HDPE INJECTION FOB USG (US CTS/LB & conversion to USD/MT)

· HDPE HMW BIMODL FOB USG (US CTS/LB & conversion to USD/MT)

Polyethylene Feedstock Contract Prices

· ETHYLENE DEL (US CTS/LB)

Polyethylene (MIDDLE EAST/SOUTH ASIA)

Weekly Price Assessments

LDPE Film Spot Prices

· CFR GCC* (USD/MT & conversion to US CTS/LB)

· CFR EAST MED (USD/MT & conversion to US CTS/LB)

· CFR PAKISTAN (USD/MT & conversion to US CTS/LB)

· CFR INDIA MAIN PORT (USD/MT & conversion to US CTS/LB)

· FOB Saudi Arabia (USD/MT & conversion to US CTS/LB)

· DEL Saudi Arabia (USD/MT & conversion to US CTS/LB)

· DEL west India (INR/KG & conversion to US CTS/LB)

LDPE lamination Spot Prices

· CFR INDIA MAIN PORT (USD/MT & conversion to US CTS/LB)

LLDPE Film Spot Prices

· CFR GCC* (USD/MT & conversion to US CTS/LB)

· CFR EAST MED (USD/MT & conversion to US CTS/LB)

· CFR PAKISTAN (USD/MT & conversion to US CTS/LB)

· CFR INDIA MAIN PORT (USD/MT & conversion to US CTS/LB)

· FOB Saudi Arabia (USD/MT & conversion to US CTS/LB)

· DEL Saudi Arabia (USD/MT & conversion to US CTS/LB)

· DEL west India (INR/KG & conversion to US CTS/LB)

HDPE Film Spot Prices

· CFR GCC* (USD/MT & conversion to US CTS/LB)

· CFR EAST MED (USD/MT & conversion to US CTS/LB)

· CFR PAKISTAN (USD/MT & conversion to US CTS/LB)

· CFR INDIA MAIN PORT (USD/MT & conversion to US CTS/LB)

· FOB Saudi Arabia (USD/MT & conversion to US CTS/LB)

· DEL Saudi Arabia (USD/MT & conversion to US CTS/LB)

· DEL west India (INR/KG & conversion to US CTS/LB)

HDPE Blow Moulding Spot Prices

· CFR GCC* (USD/MT & conversion to US CTS/LB)

· CFR EAST MED (USD/MT & conversion to US CTS/LB)

· CFR PAKISTAN (USD/MT & conversion to US CTS/LB)

· CFR INDIA MAIN PORT (USD/MT & conversion to US CTS/LB)

HDPE Injection Spot Prices

· CFR INDIA MAIN PORT (USD/MT & conversion to US CTS/LB)

HDPE Monofilament Yarn Spot Prices

· CFR INDIA MAIN PORT (USD/MT & conversion to US CTS/LB)

LDPE Film List Prices

· DEL India (Rs/kg & conversion to US CTS/LB)

LLDPE Film List Prices

· DEL India (Rs/kg & conversion to US CTS/LB)

HDPE Film List Prices

· DEL India (Rs/kg & conversion to US CTS/LB)

* Cooperation Council for Arab States of the Gulf, excluding Saudi Arabia.

Polyethylene (LATIN AMERICA)

Weekly Price Assessments:

LDPE Film Linear Grade Domestic Prices

- DEL ARGENTINA (ARS/MT & conversion to USD/MT)
- FOT BRAZIL (BRL/MT & conversion to USD/MT)
- DEL CHILE (CLP/KG & conversion to USD/MT)
- FOT COLOMBIA (COP/MT & conversion to USD/MT)
- FOT MEXICO (MXN/KG & conversion to USD/MT)
- FOT VENEZUELA (VEF/MT & conversion to USD/MT)

LLDPE Butene Domestic Prices

- DEL ARGENTINA (ARS/MT & conversion to USD/MT)
- FOT BRAZIL (BRL/MT & conversion to USD/MT)
- FOT MEXICO (MXN/KG & conversion to USD/MT)
- FOT VENEZUELA (VEF/MT & conversion to USD/MT)

HDPE Blow Moulding Domestic Prices

- DEL ARGENTINA (ARS/MT & conversion to USD/MT)
- FOT BRAZIL (BRL/MT & conversion to USD/MT)
- FOT MEXICO (MXN/KG & conversion to USD/MT)
- FOT VENEZUELA (VEF/MT & conversion to USD/MT)

LDPE Film Linear Grade International Prices

- FOB ARGENTINA (US CTS/LB & conversion to USD/MT)
- FOB BRAZIL (US CTS/LB & conversion to USD/MT)
- CFR CHILE (US CTS/LB & conversion to USD/MT)
- CFR COLOMBIA (US CTS/LB & conversion to USD/MT)
- DAF MEXICO (US CTS/LB & conversion to USD/MT)
- FOB VENEZUELA (US CTS/LB & conversion to USD/MT)

LLDPE Butene International Prices

- FOB ARGENTINA (US CTS/LB & conversion to USD/MT)
- FOB BRAZIL (US CTS/LB & conversion to USD/MT)
- CFR CHILE (US CTS/LB & conversion to USD/MT)
- CFR COLOMBIA (US CTS/LB & conversion to USD/MT)
- DAF MEXICO (US CTS/LB & conversion to USD/MT)
- FOB VENEZUELA (US CTS/LB & conversion to USD/MT)

HDPE Blow Moulding International Prices

- FOB ARGENTINA (US CTS/LB & conversion to USD/MT)
- FOB BRAZIL (US CTS/LB & conversion to USD/MT)
- CFR CHILE (US CTS/LB & conversion to USD/MT)
- CFR COLOMBIA (US CTS/LB & conversion to USD/MT)
- DAF MEXICO (US CTS/LB & conversion to USD/MT)
- FOB VENEZUELA (US CTS/LB & conversion to USD/MT)

Polyethylene (AFRICA)

Weekly Price Assessments

LDPE Film Spot Prices

- CFR EGYPT (USD/MT)
- CFR NORTHERN AFRICA (USD/MT)
- CFR SOUTHERN AFRICA (USD/MT)
- FD SOUTH AFRICA (ZAR/MT)
- CFR EASTERN AFRICA (USD/MT)
- CFR WESTERN AFRICA (USD/MT)

LLDPE Film Spot Prices

- CFR EGYPT (USD/MT)
- CFR NORTHERN AFRICA (USD/MT)
- CFR SOUTHERN AFRICA (USD/MT)
- FD SOUTH AFRICA (ZAR/MT)
- CFR EASTERN AFRICA (USD/MT)
- CFR WESTERN AFRICA (USD/MT)

HDPE Film Spot Prices

- CFR EGYPT (USD/MT)
- CFR NORTHERN AFRICA (USD/MT)
- CFR SOUTHERN AFRICA (USD/MT)
- FD SOUTH AFRICA (ZAR/MT)
- CFR EASTERN AFRICA (USD/MT)
- CFR WESTERN AFRICA (USD/MT)

<u>Polyethylene (Russia and Former Soviet Union)</u>

Russia, CPT Moscow Spot Prices
USD/TONNE

- LDPE
- HDPE
- EBM
- IM
- films
- LLDPE

Ukraine, CPT Kiev Spot Prices USD/TONNE

- LDPE
- HDPE
- EBM
- IM
- films
- LLDPE

Belarus, FCA, Spot Prices USD/TONNE

- LDPE

- HDPE
- EBM
- IM
- films
- LLDPE

Uzbekistan, FCA, Spot Prices USD/TONNE

- HDPE
- EBM
- IM
- films
- pipes
- LLDPE

Kazakhstan, FCA Alma-Aty, Spot Prices USD/T0NNE

- LDPE
- HDPE
- EBM
- IM
- films

Domestic prices

Countries:

Russia, CPT Moscow RB/TONNE, USD/TONNE

Ukraine, DDP Kiev, HRN/TONNE, USD/TONNE

Belarus/Kazakhstan, FCA, BRB/TONNE, USD/TONNE

Uzbekistan, FCA Kengsoy, SOM/TONNE, USD/TONNE

- HDPE
- EBM
- IM
- Films
- Pipe, PE100
- Pipe, natural grade
- LDPE
- Films
- Shrinkable
- LLDPE
- Hexane
- European
- Butene
- Import offers
- HDPE
- LDPE
- LLDPE

General Information:

Assessment window: Price assessments are based on information supplied by market participants through the week up to close of business on Fridays at 1730 hours in London, Singapore, China and Houston. For the African report, price assessments are based on information supplied by market participants through the week up to close of business on Wednesdays at 1700 hours in London.

Specification: ICIS pricing assesses specifications as detailed in sections above.

Timing: Cargoes typically loading or delivered two-four weeks forward from the date of publication. In the China and India domestic markets, cargoes are for delivery one week forward from the date of publication.

Terms: Typically 30-60 days after bill of lading date. Assessments for China, Hong Kong, Taiwan, Southeast Asia and India are based on a LC at sight basis only, although deals with differing credit terms will be taken into consideration. Spot delivered prices in Europe and USA are typically based on 30-60 days credit. In the China report, first-tier distributors' price quotes are for payment at sight. In Africa, typically 30-90 days after bill of lading date.

Standard cargo size: In Asia and the Middle East, bulk parcels are in the range of 100-1,000 tonnes. In the US, railcars are 170,000-195,000 lb. In Europe, standard cargo size is 25 tonnes in bags or bulk. Bulk trucks are 45,000 lb and 65,000-75,000 lb in Canada. Export containers carry 40,000-50,000 lbs in bags or "super sacks". In Latin America, the standard cargo size for polyethylene is 200-300 tonnes. There are occasionally smaller or larger cargoes and truckload sales vary in size for each country between 20-34 tonnes. In the China and India domestic markets, typical transaction volume for local and imported material is 5-100 tonnes in bags. In Africa, CFR bulk parcels are in the range of 100-500 tonnes. There is no FD standard size although typical parcel size is 4-20 tonnes in bag or bulk. FD standard size for truck loads is 33 tonnes in South Africa. CFR bulk parcels into Southern Africa are 100 tonnes.

Assessment basis: ICIS pricing polyethylene price assessments are based on information gathered from the market throughout the week. The assessment of prices takes into consideration the following: transactions and deals, bids and offers, buy and sell indications and notional discussions throughout the week. In the event of the lack of confirmed trades, published price ranges represent the highest reasonable bids received and the lowest reasonable sell indications of the week.

For the **Africa** report, published price ranges include price ideas from producers, distributors and buyers. In the absence of confirmation from all sides, editorial judgement will be used in assessing price ranges.

In **Europe**, domestic price assessments are quoted on a gross basis and do not take into account any discounts or rebates which may be applied on a case by case basis negotiable between individual suppliers and customers. Spot prices are net of discount. The European report includes a formal Russian rouble denominated spot price assessment for high density polyethylene and low density polyethylene. These figures are quoted on an ex-works basis and include 18% VAT.

Contract prices in the **US** are established on a delivered (DEL) basis, but a premium can be added for long distances. The domestic price ranges typically reflect contract prices for small-volume customers (10m-30m lb/year). Contracts can be freely negotiated, or index or monomer based, or any combination of these. Freely negotiated contracts are usually negotiated monthly, but terms are flexible. During a month, prices may change once, or more than once, or not at all. Spot export prices are net assessments reflecting wholesale transactions of 200-1,000 tonnes.

The **Asia-Pacific** report carries information on spot CFR prices, usually for lots of 200 tonnes and above for China and 100 tonnes and above for Southeast Asia. Most business in Asia is done on a CFR sight basis, with some on credit terms. Chinese prices usually set the trend in Asia. Domestic prices for China and Southeast Asia are mentioned in the text. China Main Port covers Shanghai, Ningbo, Xiamen, Shenzhen, Huangpu, Guangzhou, Xingang and Qingdao ports.

In the China report, the price assessments for locally produced material in China and imported material in east China reflect transactions, bids/buying indications and offers/selling indications of local distributors, of which 70-80% are first-tier distributors and 20-30% are second-tier distributors. The price assessments for imported material in north and south China reflect transactions, bids/buying indications and offers/selling indications of local distributors, of which 10-20% are first-tier distributors and 80-90% are second-tier distributors. The ex-warehouse (EXWH) prices include VAT. A first-tier distributor is a company that buys directly from a local producer or a foreign supplier.

The All China price quotes are reflective of the ex-warehouse (EXWH) prices of imported and local materials in north, south, east China, northeast China, northwest China and southwest China, depending on grades. North China prices cover Tianjin, Beijing, Henan, Hebei and Shandong. East China prices cover Shanghai, Zhejiang and Jiangsu. South China prices cover Guangdong and Fujian. Northeast prices cover Heilongjiang, Jilin and Liaoning. Northwest prices cover Xinjiang, Gansu and Shaanxi. Southwest prices cover Chongqing and Sichuan.

The HDPE blow moulding ex-warehouse price quotes are reflective of materials used for producing containers of 50 litres or less. Offers, bids and transaction prices of HDPE blow moulding grade used in making containers of over 50 litres are mentioned in the text. The HDPE blow moulding ex-warehouse price quotes for south China may include netbacks from delivered prices to end-users.

The CFR China, tax & duty paid (RMB) price quotes are derived by adding 17% value-added tax and the corresponding import duties (see below table) onto the China CFR prices published in ICIS pricing’s weekly Asia Pacific report. The prices do not include customs clearance and port charges. The applied currency exchange rate is the official US dollar/renminbi rate published by the People’s Bank of China (www.pbc.gov.cn) on Friday afternoons.

The **Middle East/South Asia** report includes pricing information in the GCC, East Med, India and Pakistan. The GCC region includes Kuwait, Bahrain, Oman, Qatar, Saudi Arabia and the U.A.E, while the East Med region comprises Syria, Jordan and Lebanon. Pricing information focuses primarily on imported material into each of these regions. Details of domestic trading activity and prices are also included in the report's market commentary.

DEL Saudi Arabia prices are based on transactions or buy-sell discussions of domestic material in the Saudi Arabian domestic market, while FOB Saudi Arabia prices are based on local originated cargoes, heading to parts of Europe, northern Africa and Turkey. DEL India list prices are prices announced by local producers, inclusive of excise duty, but exclusive of discounts. DEL west India spot prices are deal done prices and discussion levels in the open Indian domestic market by traders to converters and/or importers.

Prices for LDPE film products, originating from Iran are represented on the lower end of the assessment range in the GCC, East Med, India and Pakistan, while cargoes from other origins' prices are represented on the upper end.

Prices for low-to-medium molecular weight HDPE blow moulding are represented on the lower end of the assessment range in the GCC, East Med, India and Pakistan, while the prices of the high molecular weight HDPE blow moulding are represented on the upper end.

The **Latin American** report includes domestic and international prices of ldPE, hdPE and lldPE in key Latin American countries. Domestic prices are quoted in local currencies, with a conversion to US dollars/tonne. Domestic prices in Brazil include a tax called PIS/COFINS that varies depending on destination. Although this tax is recoverable, buyers and sellers quote prices that include this tax (around 9.25 percent) on a regular basis.

All regional reports offer market commentary that includes details of traced transactions, news on the supply/demand balance, export/import information, contract price negotiations and general sentiment for price direction. Where applicable, there is product information, comments on up and downstream market developments and general market intelligence.

The **Africa** report carries information on spot CFR prices, for lots of 100-500 tonnes. The Egypt quote covers main ports in Egypt (Alexandria, Port Said, Damietta and ports under Red Sea Port Authority). Northern Africa covers main ports in Morocco (Casablanca and Tangier), Algeria (Algiers, Bejaia and Annaba) and Tunisia (Tunis). The Southern Africa quote covers main ports in South Africa (Durban and Cape Town), Mozambique (Beira and Maputo) and Namibia (Walvis Bay). Eastern Africa covers main ports in Kenya (Mombasa), Tanzania (Dar-es-Salaam) and Ethiopia (via Djibouti). Western Africa covers main ports in Nigeria (Apapa in Lagos) and Ghana (Tema).

The FD South Africa quote represents sales of South African and imported product in the South African Rand (ZAR) currency.

25 July 2013