Pressure sensitive labels (PSL) for attractive and efficient pressure sensitive applications

- **Appearance**: a diversity of solutions with clear, cavitated white, solid white and metallized films, coated or uncoated
- **Printability**: outstanding ink adhesion and printability with all UV, water-based and conventional printing processes
- **Adhesion**: excellent bonding
- **Functionality**: use in a wide range of prime label, thermal-transfer and conformable label applications
- **Sustainability**: as polyolefin, can be recyclable through existing polyolefin recycling channels

Wrap-around, reel-fed labels for high-speed printing and labeling

- **Appearance**: a diversity of solutions with clear, cavitated white and metallized films, coated or uncoated
- **Printability**: outstanding print definition with solvent and UV printing processes
- **Hot melt anchorage**: optimal performances
- **Functionality**: outstanding performances in high speed labeling applications
- **Sustainability**: label flotation separation from PET bottles

Wrap-around, cut and stack labels for pre-cut label applications

- **Appearance**: a diversity of solutions with clear coated and cavitated white coated films
- **Printability**: excellent performances in sheet fed Offset UV and conventional printing technologies
- **Hot melt anchorage**: optimal performances
- **Functionality**: outstanding antistatic performances
- **Sustainability**: label flotation separation from PET bottles

**ROSOTM** Reel-fed, heat-shrinkable labels for creative container shapes

- **Appearance**: high gloss and transparency
- **Printability**: solid performances with Solvent inks, as well as with UV Offset and Flexo printing technologies
- **Shrink**: consistent and uniform MD shrink on containers
- **Functionality**: perfect fit on 3D containers, outstanding performances in high speed labeling applications
- **Sustainability**: label flotation separation from PET bottles

Jindal Films has one of the largest portfolios of label films to meet a broad range of customers and applications needs.
LL539 Diamond Gloss & Clarity

Clear premium coated

**Benefits**

- Diamond gloss and clarity, with premium shelf appeal and brand visibility for “no label look” applications
- Food contact compliant with the latest European norm issued (EU 10/2011)
- Excellent printability with a broad range of ink systems, including UV-flexo, UV-letterpress, UV-flatbed as well as water-based and solvent-based flexo and gravure
- Good compatibility with hot- and cold-foil stamping systems

LL539 films from Jindal Films are clear, two-side coated, polypropylene label facestocks designed for demanding pressure sensitive label applications where outstanding ink adhesion and adhesive anchorage are required.

These premium films provide a “no label look” that is often used in beverage, health-and-beauty applications. The coated print surface provides exceptional ink adhesion with a broad range of ink systems, while the adhesive side coating offers excellent anchorage across a broad spectrum of adhesive chemistries.
Features

- Compliant with European regulation “EU 10/2011” regarding “Plastic materials and articles intended to come into contact with food”
- Reliable and consistent print quality, with a broad range of inks. The flexibility in terms of ink selection can allow shorter start up times, while providing an excellent quality design at a reduced overall cost
- Excellent anchorage with a broad range of PSL adhesives: water-based, solvent-based, hot melt and UV-curable hot melt systems
- Excellent in-line die cutting performance

LL539 films are well suited for a broad range of applications including: health and beauty care, beverages, household and detergents.
LH538 White & Light

Cavitated white opaque premium coated

Benefits

• Cavitated white structure, with premium shelf appeal and brand visibility due to the high opacity
• Food contact compliant with the latest European norm issued (EU 10/2011)
• Cavitated structure reduces film density, offering higher yields than pigmented films available on the market
• Excellent printability with a broad range of ink systems, including UV-flexo, UV-letterpress, UV-flatbed as well as water-based and solvent-based flexo and gravure
• Good compatibility with hot- and cold-foil stamping systems
• Excellent print quality with thermal transfer ribbon

LH538 films from Jindal Films are two-side coated, super white opaque polypropylene label facestocks. They provide high whiteness and a high level of opacity due to Jindal Films’ unique cavitation process.

Films are two side coated to achieve unmatched performance when used for pressure sensitive label applications requiring excellent graphic appeal. The coated print surface provides exceptional ink adhesion with a broad range of ink systems. The matte adhesive receptive coating offers excellent anchorage across a broad spectrum of adhesive chemistries.
Features

- Compliant with European regulation “EU 10/2011” regarding “Plastic materials and articles intended to come into contact with food”

- Reliable and consistent print quality, with a broad range of inks. The flexibility in terms of ink selection will allow shorter start-up times, while providing excellent quality design at a reduced overall cost

- Excellent anchorage with a broad range of PSL adhesives: water-based, solvent-based, hot melt and UV-curable hot melt systems

- High yield and excellent opacity, suitable for back side printing applications

- Excellent in-line die cutting performance

LH538 films are well suited for a broad range of applications including health and beauty care, beverages, household and detergents.
LH344 Extreme Barrier Performance

Hot melt barrier coating

**Benefits**

- Cavitated white structure, with premium shelf appeal and durable brand visibility due to effective hot melt barrier
- Food contact compliant with the latest European norm issued (EU 10/2011)
- Halogen-free adhesive receptive coating, allowing excellent adhesive anchorage
- Excellent printability with a broad range of ink systems, including UV-flexo, UV-letterpress, UV-flatbed as well as water-based and solvent-based flexo and gravure
- Good compatibility with hot- and cold-foil stamping systems
- Excellent print quality with thermal transfer ribbon

LH344 film from Jindal Films is a two-side coated, super white opaque polypropylene label facestock designed for demanding pressure-sensitive applications. It combines a cavitated core which offers a very high yield, with optimal hot melt adhesive curl resistance performance due to its unique barrier coating on the adhesive side. The coated print surface provides exceptional ink adhesion with a broad range of ink systems.
Features

- Compliant with European regulation “EU 10/2011” regarding “Plastic materials and articles intended to come into contact with food”
- Optimal curling and swelling resistance to hot melt adhesives
- Reliable and consistent print quality, with a broad range of different inks. The flexibility in terms of ink selection will allow shorter start-up times, while providing excellent quality design at a reduced overall cost
- Super white opaque film with a proprietary cavitated core providing high yield and excellent opacity
- Excellent in-line die cutting performance
- Excellent stiffness for automatic label dispensing

LH344 film is well suited for critical substrates such as rough surfaces requiring hot melt adhesive performances, including tyres and textiles.
ML580 Bright Shiny Metallic

Proprietary top coating improves metal adhesion and protection

Benefits

- Bright, shiny metallic film
- Enables outstanding brand promotion
- Metallized top coated print surface delivers excellent print performances
- Protected metal layer offers consistent label appearance

ML580 film from Jindal Films is a clear metallized polypropylene label facestock, featuring a proprietary top coating over the metallized surface, preventing the formation of pinholes and crazing. The film offers improved metal adhesion and protection for an attractive and consistent appearance.

Film is designed for pressure sensitive label applications which require a consistent, high-sheen metallized finish and high-speed, reliable press performance.
Features

• Excellent shiny metal appearance
• Excellent shelf life of unconverted coated metal print surface
• Proprietary metallized top coated print surface for excellent print receptivity with a broad base of ink systems, including UV flexo, letterpress, screen and offset systems, as well as water-based flexo and solvent-based gravure systems
• Adhesive surface suitable for a broad range of adhesive systems, minimizing the potential for metal transfer
• Excellent “in-to-out” blocking resistance
• Excellent stiffness for automatic label dispensing

ML580 film is well-suited for use in a wide range of applications requiring high-sheen, metallized labels including beverages, household and beauty care.
SW247 Solid White Opaque

Excellent base film for top coating

Benefits

- Food contact compliant with the latest European norm issued (EU 10/2011)
- Enables outstanding brand promotion
- Good and consistent opacity
- High gloss
- Higher yield versus solid white films currently available

SW247 films from Jindal Films are solid white opaque polypropylene label facestocks. They deliver high yield and consistent quality for pressure sensitive label applications.

These lightweight films can provide yield advantages of about 5% compared to competitive solid white films currently available. The films can easily be coated by roll stock laminators and converted with stable performance at high speed.

These striking solid white OPP films with consistent opacity produce eye-catching graphics for enhanced brand promotion. Pressure sensitive labels using SW247 films can motivate brand “pick-up” that helps to move products off retail shelves.
Features

- Compliant with European regulation “EU 10/2011” regarding “Plastic materials and articles intended to come into contact with food”
- Lightweight solid film
- Good and consistent opacity
- Excellent stiffness for automatic label dispensing

**SW247 films** are well suited for high-quality appearance and high-speed performance applications, including health & beauty care, home care, beverages and industrial applications.
LLC210 Combining Flexibility & Stiffness

Clear conformable and squeezable

Benefits

- Excellent squeezability and conformability
- Lightweight alternative versus polyethylene
- Exceptional clarity and gloss for a “no-label” look
- Food contact compliant with the latest European norm issued (EU 10/2011)

LLC210 film from Jindal Films is a clear oriented polyolefin label facestock which bridges the gap between the two traditional plastic films used for pressure sensitive labels: Polyethylene and Polypropylene. This film delivers outstanding conformability and flexibility.

The conformability and high-quality label appearance of LLC210 film allow brand owners to better differentiate their products and optimize point-of-sale impact.
**Features**

- Reducing material usage by up to 40% versus an 85 micron PE film
- Consistent web handling during conversion
- Excellent die cutting, matrix stripping, stiffness and dispensing performance
- High energy treated surface for excellent printability
- Outstanding hot- and cold-foil stamping performances

**LLC210 film** can be used in a wide range of market segments, including health & beauty care, beverages, household & detergent products and automotive.

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**Label-Lyte™ LLC210 film advantages versus selected reference films (OPP and PE) based on key performance characteristics**

<table>
<thead>
<tr>
<th>Label-Lyte™ LLC210</th>
<th>50μ OPP</th>
<th>55μ OPP</th>
<th>85μ PE</th>
<th>85μ PE</th>
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</thead>
<tbody>
<tr>
<td><strong>Conformability/Squeeze</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Converting</strong></td>
<td></td>
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<tr>
<td><strong>Printing</strong></td>
<td>LLC210</td>
<td>85μ PE</td>
<td></td>
<td></td>
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<tr>
<td><strong>Die cutting</strong></td>
<td></td>
<td>LLC210</td>
<td></td>
<td></td>
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<tr>
<td><strong>Dispensing</strong></td>
<td>85μ PE</td>
<td></td>
<td>LLC210</td>
<td></td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>85μ PE</td>
<td></td>
<td>LLC210</td>
<td></td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>85μ PE</td>
<td></td>
<td>LLC210</td>
<td></td>
</tr>
</tbody>
</table>

Contact your Jindal Films representative for more information

www.jindalfilms.com - info@jindalfilms.com
LLC247 film from Jindal Films is a white oriented polyolefin film facestock which bridges the gap between the two traditional plastic films used for pressure sensitive labels: Polyethylene and Polypropylene. This film delivers outstanding conformability and flexibility.

The conformability and high-quality label appearance of LLC247 film help brand owners to better differentiate their products and optimize point-of-sale impact.

LLC247, when used in combination with clear conformable LLC210, allows branding to stand out on retail shelves, while product details, such as ingredients and nutritional facts, are easy to read.
**Features**

- Reducing material usage by up to 40% versus an 85 micron PE film
- Consistent web handling during conversion
- Excellent die cutting, matrix stripping, stiffness and dispensing performance
- High energy treated surface for excellent printability
- Outstanding hot- and cold-foil stamping performances
- Excellent opacity, suitable for back side printing applications

**LLC247 film** can be used in a wide range of market segments, including health & beauty care, beverages, household & detergent products and automotive.

Contact your Jindal Films representative for more information

www.jindalfilms.com - info@jindalfilms.com
**LT500 Broad Thermal Transfer Compatibility**

Excellent print resolution and abrasion resistance

**Benefits**

- Excellent print resolution and abrasion resistance
- Compatible with a broad range of thermal transfer ribbons
- Excellent durability
- Excellent barcode scan capability
- Outstanding static resistance
- Matte white finish, soft-touch

LT500 film from Jindal Films is a two-side coated white opaque polypropylene label facestock.

Exhibiting a matte white finish, LT500 thermal transfer film is designed for use in demanding pressure sensitive label and tag applications.

This film delivers a wide range of print options and excellent adhesive performance, plus high yield for improved economics.
Features

- BS 5609 certified (durability standards for printed pressure sensitive labels used in marine environments)
- Fluid resistance for excellent durability
- Paper-like and soft-touch film surface allowing accurate barcode scanning
- Matte top-coating providing robust UV and conventional ink adhesion
- Compatible with a broad range of wax, wax/resin and resin thermal transfer ribbons
- Adhesive-side coating compatible with a wide range of PSL adhesive chemistries: water-based, solvent-based, hot melt and UV-curable hot melt systems
- High yield for enhanced economics

**LT500 film** provides excellent performances for use in a wide range of market sectors including automotive parts and supplies, consumer durable goods, household chemicals, industrial products, retail shelf marking, barcodes and logistics labeling.

<table>
<thead>
<tr>
<th>Category</th>
<th>Film attribute</th>
<th>Description</th>
<th>Label-Lyte™ LT500 film</th>
</tr>
</thead>
<tbody>
<tr>
<td>Converting</td>
<td>UV flexo</td>
<td>Jindal Films conducted converting evaluation, including printing and ink adhesion, offline through independent printing equipment. Assessment captures overall print quality and comparative ink adhesion.</td>
<td>Excellent</td>
</tr>
<tr>
<td></td>
<td>UV letterpress</td>
<td>TTR print evaluation completed through OEM manufacturers.</td>
<td>Excellent</td>
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<td></td>
<td>Water-based flexo</td>
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<td>Excellent</td>
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<td></td>
<td>TTR-flat ribbon</td>
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<td>Excellent</td>
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<td></td>
<td>TTR-near edge ribbon</td>
<td></td>
<td>Excellent</td>
</tr>
<tr>
<td>Durability</td>
<td>Water resistance</td>
<td></td>
<td>Excellent</td>
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<tr>
<td></td>
<td>409™ test</td>
<td>TTR image durability tests</td>
<td>Satisfactory</td>
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<tr>
<td></td>
<td>Tide™ test</td>
<td></td>
<td>Excellent</td>
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<tr>
<td></td>
<td>Motor oil test</td>
<td></td>
<td>Excellent</td>
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<tr>
<td></td>
<td>IPA test</td>
<td></td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>
MD580 Pre Optimized for Digital

Metallized for direct HP Indigo digital printing

Benefits

- High-sheen metal side, pre optimized for HP Indigo label presses
- Excellent Indigo electro inks adhesion
- HP Indigo approved — “3 stars” ranking
- Food contact compliant with the latest European norm issued (EU 10/2011)
- Improved metal adhesion and protection
- Scratch resistant on the metal side
- Excellent “in-to-out” blocking resistance

MD580 film from Jindal Films is a clear metallized polypropylene label facestock, top coated above metal, using Jindal Films unique Digilyte™ print coating. This coating allows direct printing with HP Indigo digital technology and offers a consistent high-sheen metallized finish.

MD580 received the highest “3 stars” ranking from the HP Indigo qualification process, due to the successful collaboration with the experienced HP teams.
**Features**

- HP Indigo approved — “3 stars” ranking
- Compliant with European regulation “EU 10/2011” regarding “Plastic materials and articles intended to come into contact with food”
- Excellent coated metal appearance
- Adhesive surface suitable for a broad range of adhesive systems, minimizing the potential for metal transfer
- Excellent “in-to-out” blocking resistance
- Excellent stiffness for automatic label dispensing

**MD580 film** is well-suited for use in a wide range of market sectors including beverages, beauty-care and applications requiring high-sheen, metallized labels.