

Flexible Packaging Terminology

A comprehensive glossary of terms used in the flexible packaging industry.

A

Adhesive Lamination

A process where two or more layers of material are bonded together using an adhesive to create a multi-layered structure with enhanced barrier properties and strength.

Anilox Roll

A hard cylinder coated with ceramic and engraved with precise cells used in flexographic printing to transfer a measured amount of ink to the printing plate.

Autoclave

A pressurized device used to sterilize packaging materials and products by exposing them to high-pressure saturated steam.

B

Barrier Properties

Characteristics of packaging materials that prevent the passage of gases, moisture, light, or other substances, thereby protecting the contents from external factors.

Biodegradable

Materials that can be broken down by microorganisms into natural substances like water, carbon dioxide, and biomass over time.

Blown Film Extrusion

A process of creating thin plastic films by extruding molten resin through a circular die, inflating it to form a bubble, and cooling it to form a film.

Bond Strength

The measure of adhesion between laminated layers or coatings in a packaging structure.

C

Cast Film Extrusion

A process where molten plastic is extruded through a flat die onto a chilled roll, solidifying into a thin film.

Co-Extrusion

A process of extruding two or more layers of different materials simultaneously to form a single film with combined properties.

Cold Seal

A pressure-sensitive adhesive that forms a bond without the need for heat, used for packaging heat-sensitive products.

Compatibility

The ability of packaging materials to function effectively with specific products, processing equipment, or other packaging components.

Corona Treatment

A surface modification technique that increases the surface energy of plastic films to enhance ink adhesion and printability.

CPP (Cast Polypropylene)

A type of polypropylene film known for its clarity, gloss, and sealability, commonly used in flexible packaging.

Cross-Linking

A process that strengthens polymers by creating chemical bonds between molecular chains, improving heat resistance and barrier properties.



Quality. Service. Sustainability.
Packaging for the Next Generation.

D

Delamination

The separation of laminated layers in a packaging structure, often due to inadequate bonding or exposure to environmental factors.

Die Cutting

A process of cutting shapes out of packaging materials using a steel die, commonly used for creating packaging components like labels and pouches.

Dry Lamination

A lamination process where adhesive is applied to one substrate, dried to remove solvents or water, and then bonded to a second substrate.

E

EB (Electron Beam) Curing

A process that uses high-energy electrons to cure inks, coatings, or adhesives instantly without the need for heat or solvents.

Extrusion Coating

A process where molten resin is extruded onto a substrate to form a coated layer, enhancing barrier properties and strength.

Extrusion Lamination

A process where a molten polymer is extruded between two substrates, bonding them together to create a laminated structure.

F

FDA Compliance

Packaging materials that meet the Food and Drug Administration's regulations for safe contact with food products.



Quality. Service. Sustainability.
Packaging for the Next Generation.

Flexographic Printing

A rotary printing method using flexible relief plates and fast-drying inks, suitable for printing on various substrates including plastic films.

Form-Fill-Seal (FFS)

An automated packaging process where the packaging material is formed into a pouch, filled with the product, and then sealed.

Foil

A thin sheet of aluminum used in packaging for its excellent barrier properties against light, oxygen, and moisture.

G

Gauge

The thickness of a film or material, often measured in mils or microns.

Gravure Printing

An intaglio printing process where images are engraved onto a cylinder and inked, transferring ink to the substrate when pressed.

Gusset

An expandable section in a pouch or bag that allows it to accommodate bulkier contents or stand upright.

H

Heat Seal

A method of bonding two materials using heat and pressure to melt and fuse a thermoplastic layer, creating a seal.

Hermetic Seal

An airtight seal that prevents the ingress or egress of gases, moisture, and other external influences.



Quality. Service. Sustainability.
Packaging for the Next Generation.

High-Density Polyethylene (HDPE)

A type of polyethylene known for its strength, rigidity, and resistance to moisture, commonly used in packaging.

I

Ink Adhesion

The ability of ink to bond securely to a substrate's surface without peeling or rubbing off.

In-Line Printing

Printing process integrated into the production line, where printing occurs simultaneously with other manufacturing steps.

ISO Certification

Standards set by the International Organization for Standardization, indicating compliance with quality management principles (e.g., ISO 9001).

L

Laminated Film

A composite material made by bonding two or more layers of film together to combine properties like strength, barrier protection, and appearance.

LLDPE (Linear Low-Density Polyethylene)

A type of polyethylene known for its flexibility and strength, used in films and packaging applications.

Low Migration Inks

Inks formulated to minimize the transfer of substances from the packaging into the product, essential for food safety.



Quality. Service. Sustainability.
Packaging for the Next Generation.

M

Machine Direction (MD)

The orientation of material flow during manufacturing, affecting properties like stiffness and tear strength in that direction.

Metallized Film

Plastic films coated with a thin layer of metal (usually aluminum) to enhance barrier properties and appearance.

Micron

A unit of length equal to one-millionth of a meter, commonly used to measure film thickness.

Modified Atmosphere Packaging (MAP)

Packaging that alters the atmosphere around the product, often by replacing oxygen with inert gases to extend shelf life.

N

Nylon (Polyamide)

A family of polymers known for strength and barrier properties, used in flexible packaging for products requiring puncture resistance.

O

Opaque

A material that does not allow light to pass through, used when light protection is necessary for product preservation.

Oriented Film

Film that has been stretched in one or both directions (machine or transverse) to improve strength and clarity.



Quality. Service. Sustainability.
Packaging for the Next Generation.

Overwrap

A protective or decorative wrapping applied over a product or packaging, often used for tamper evidence or branding.

P

PCR (Post-Consumer Recycled) Material

Materials that have been recovered after consumer use and recycled into new packaging products.

PE (Polyethylene)

A common thermoplastic polymer used in films and packaging due to its versatility and cost-effectiveness.

PET (Polyethylene Terephthalate)

A strong, lightweight plastic used in packaging for its clarity and barrier properties.

Polymer

A substance composed of large molecules made up of repeating units, forming the basis of plastics used in packaging.

Print Repeat

The distance measured from a point on a printing cylinder surface to the exact same point after one revolution, affecting design placement.

R

Regulatory Compliance

Adherence to laws, regulations, and guidelines relevant to packaging materials and practices, ensuring safety and legality.

Resealable Closure

A feature allowing packaging to be opened and closed multiple times while maintaining product freshness, such as zipper seals or adhesive strips.



Quality. Service. Sustainability.
Packaging for the Next Generation.

Rollstock

Packaging material supplied in roll form, intended to be converted into packages by Form-Fill-Seal machines or other equipment.

S

Shelf Life

The length of time a product remains usable, saleable, or fit for consumption under specified conditions.

Shrink Film

A plastic film that contracts upon the application of heat, conforming tightly to the shape of the product for protection and presentation.

Solvent-Based Inks

Inks that use organic solvents as the carrier for pigments, requiring drying and often emitting volatile organic compounds (VOCs).

Solventless Lamination

A lamination process using adhesives that do not contain solvents, reducing environmental impact and improving safety.

Stand-Up Pouch

A type of flexible packaging that can stand upright on its bottom gusset, enhancing shelf display and convenience.

Substrate

The base material onto which coatings, inks, or laminations are applied, such as films, foils, or papers.

Surface Energy

A property affecting how liquids like inks and adhesives spread on a substrate's surface, influencing adhesion and print quality.



Quality. Service. Sustainability.
Packaging for the Next Generation.

T

Tensile Strength

The maximum stress a material can withstand while being stretched before breaking, indicating durability.

Thermal Lamination

A process where heat and pressure are used to bond laminating film to a substrate, enhancing appearance and protection.

Tie Layer

An adhesive layer used in multi-layer films to bond incompatible materials, improving composite strength and functionality.

Transverse Direction (TD)

The direction perpendicular to the machine direction during manufacturing, affecting properties like tear resistance across the material.

U

UV Curing

A process that uses ultraviolet light to instantly harden or set inks, coatings, or adhesives, improving efficiency and reducing emissions.

UV Inhibitors

Additives incorporated into packaging materials to protect the contents from ultraviolet light degradation.

V

Vacuum Packaging

A method of packaging where air is removed from the package before sealing, extending the shelf life of perishable products.



Quality. Service. Sustainability.
Packaging for the Next Generation.

Viscosity

The measure of a fluid's resistance to flow, important in printing and coating applications for consistent application.

Volatile Organic Compounds (VOCs)

Organic chemicals that vaporize at room temperature, often emitted from solvents used in inks and adhesives, with environmental and health considerations.

W

Water-Based Inks

Inks that use water as the primary solvent, reducing VOC emissions and environmental impact compared to solvent-based inks.

Web

A continuous sheet of material moving through a processing machine during manufacturing.

Winding Tension

The controlled tension applied to the web during winding into rolls, affecting roll quality and subsequent processing.

Z

Zipper Closure

A reclosable feature integrated into flexible packaging that allows consumers to open and securely reseal the package.



Quality. Service. Sustainability.
Packaging for the Next Generation.

Additional Resources

For more information on flexible packaging materials, processes, and best practices, please visit our website or contact our team of experts.

Note: This glossary is intended to provide general information about terms commonly used in the flexible packaging industry. For specific applications or detailed explanations, please consult with a qualified professional or reach out to us directly.

About Amgraph Packaging

At **Amgraph Packaging**, we specialize in providing innovative and sustainable flexible packaging solutions tailored to your needs. Our commitment to quality, technology, and customer service sets us apart in the industry.

Contact Us:

- **Phone:** (860) 822-2000
- **Email:** sales@amgraph.com
- **Website:** www.amgraph.com