



## » APPLICATION BULLETIN

### AVIENT DISTRIBUTION

# POLYMER SOLUTIONS FOR FLEXIBLE PACKAGING

While it may look simple, those of us who are involved in the development of flexible packaging know it is far from easy. You need material and processing technologies that keep pace with market dynamics and ever-evolving consumer preferences.

Today's packaging needs to accommodate shifts in the way food and beverages are consumed, as well as consumers' growing interests in clean labels, healthier eating, portability, and convenience. Shifts in how consumers purchase are driving the need for packaging designs that pop online as well as on-shelf. There is also a need for materials that provide added strength and stiffness, because as

processing and packing equipment becomes faster & more efficient, it places greater physical demands on the final packaging structure.

Do you need materials for a new flexible packaging application? Are you looking for a polymer blend that improves processing, heat seal strength or other performance need? Are you interested in material supplier consolidation? If so, Avient Distribution can help.

Our portfolio of flexible packaging resins from these leading suppliers includes multiple options for almost any packaging need.

ARKEMA

AVIENT™

Celanese  
The chemistry inside innovation™

Chevron  
Phillips  
Chemical Company LP

covestro

DOW®

DUPONT™

EASTMAN

INEOS  
Olefins & Polymers USA

INEOS  
STYROLUTION

INVISTA™  
POLYPROPYLENE

lyondellbasell

Pinnacle  
Polymers

Westlake

# BUILDING MULTI-LAYER FILM STRUCTURES

AVIENT DISTRIBUTION HAS A BROAD MATERIAL PORTFOLIO FOR YOUR PACKAGING NEEDS. But recommending the right material for your application isn't all we do. Our packaging team includes technicians who can assist with processing issues, resources who can guide you through regulatory requirements and supply chain efficiency, and market experts who can keep you updated on the latest trends that affect your business. We're here to help you meet challenges today and well into the future.

## 1 SKIN LAYER

**Requirements:** Dimensional Stability, Temperature Resistance, Puncture & Abrasion Resistance, Encapsulation of Barrier Materials, Aesthetics – Gloss & Clarity  
**SOLUTION:** HDPE, LDPE, LLDPE, PA, PP

## 2 STIFFNESS LAYER

**Requirements:** Withstand Automated Packaging Lines, Meet End Use Requirements, Conform to Desired Shape During VFFS, Protect Product Integrity, Communicate Quality  
**SOLUTION:** HDPE, Ionomers, LLDPE, MDPE, PP

## 3 TIE LAYER

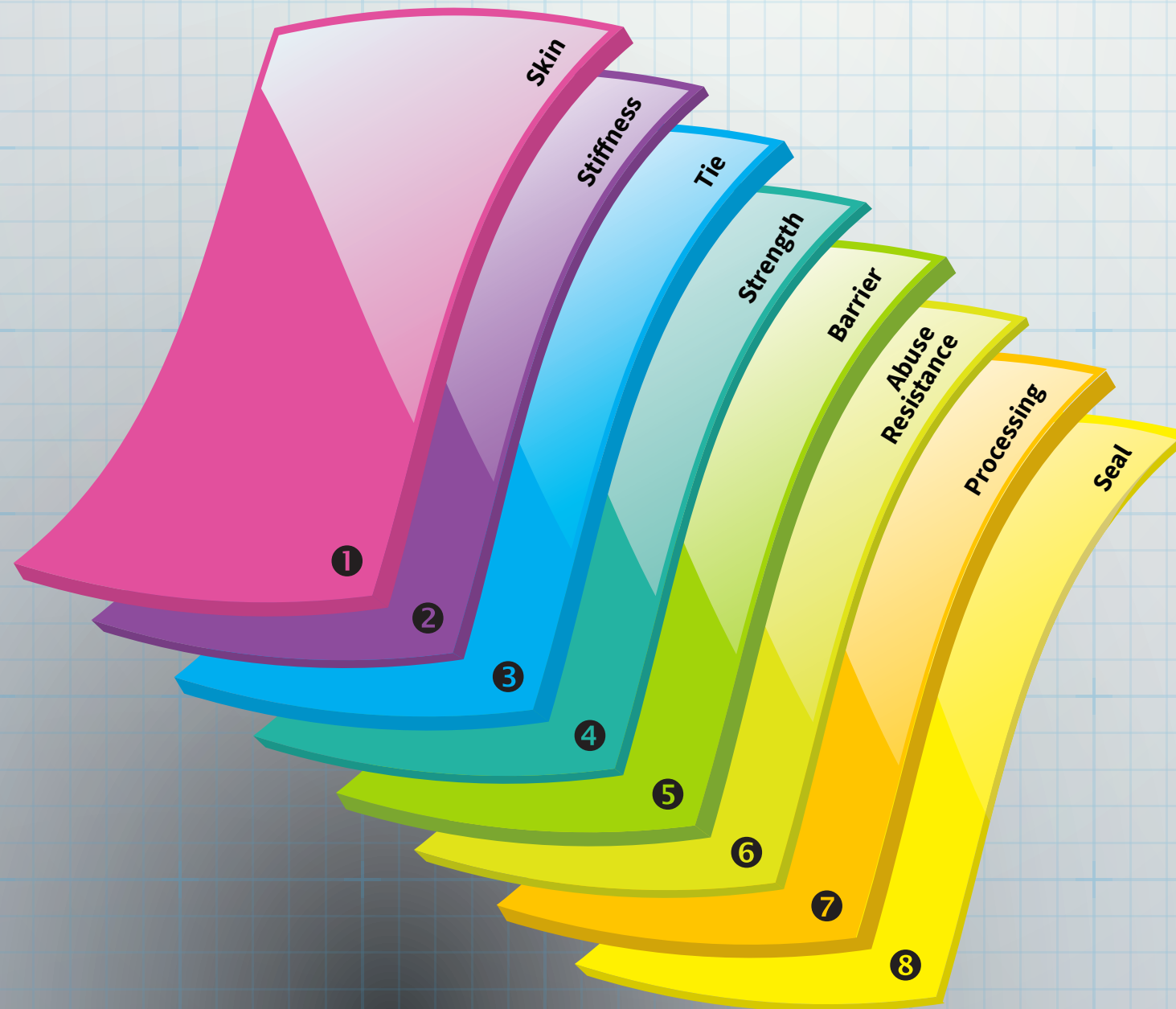
**Requirements:** Bond Incompatible Layers, Prevent Separation of Layers, Improve Mechanical Functions  
**SOLUTION:** EAA, EMAA, EVA, MAH-g

## 4 STRENGTH LAYER

**Requirements:** Product Containment & Quality, Withstand Stress Throughout Supply Chain, Processing & End Use Temperatures, Withstand Changes in Elevation During Shipping  
**SOLUTION:** HDPE, Ionomers, LDPE, LLDPE, PA

## 5 BARRIER LAYER

**Requirements:** Prevent Contamination, Maintain Product Freshness, Effectively Manage What Stays In/Stays Out and Moves through the Packaging, Prevent Foil Pin-Holing  
**SOLUTION:** EAA, HDPE, Amorphous PA, PP



## 6 ABUSE RESISTANCE LAYER

**Requirements:** Impact, Tear, Abrasion, Puncture, Distortion Resistance  
**SOLUTION:** Ionomers, LLDPE, PA, POP, PP, TPE, TPO (POE)

## 7 PROCESSING LAYER

**Requirements:** Improve Flow, Speed & Output, Decrease Extrusion Pressures, Improve Interlayer Stability, Improve Layer Symmetry  
**SOLUTION:** LDPE, Amorphous PA, PP, TPO (POE), VLDPE

## 8 SEAL LAYER

**Requirements:** Low Seal Initiation Temperature, Seal Strength, Hot Tack Strength, Broad Hot Tack Temperature Window, Seal Through Contamination, Melt Strength, Low Extractables & Scalping, Peel Strength, Abrasion Resistance, Grease & Oil Resistance  
**SOLUTION:** EAA, EMA, EVA, Ionomers, LDPE, LLDPE, POP, VLDPE, Specialty Lidding Sealants

Our team can support packaging applications produced using various processing methods:

Blown film  
Cast film  
Cast sheet

Extrusion coating  
Extrusion laminating  
Thermoforming

## MASTERBATCH ADDITIVES

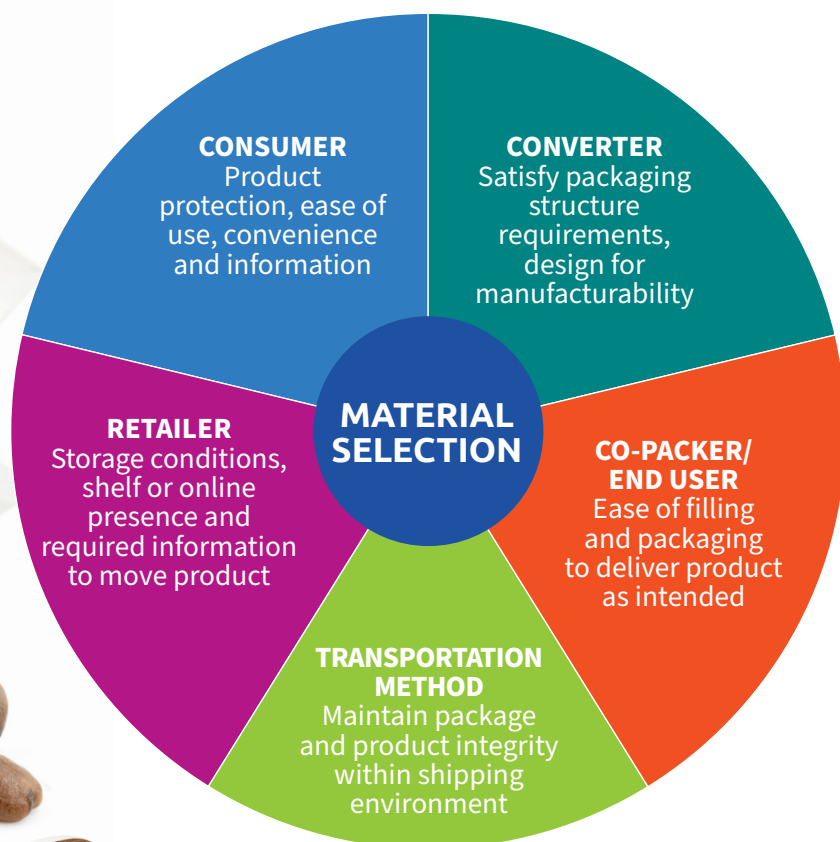
Non-migrating slip  
Antiblock  
Denest  
Regrind compatibilization  
UV protection  
PLA modification

# A COMPREHENSIVE APPROACH TO FLEXIBLE PACKAGING

We recognize each packaging application is unique, and that consumer preferences drive decisions all the way to back to the beginning of the development cycle.

When you work with Avient Distribution during your design and development stage, we'll help you identify, anticipate and address material

and structure needs along the entire packaging supply chain. Our goal is to help you produce a packaging structure that not only delivers the product as intended, but also provides each stakeholder in the supply chain with the deliverables they need and expect.



Contact us today to discuss the best materials for your current flexible packaging structures, and find out how we can help you meet your customers' future packaging needs as well.



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