Strength
that doesn't mess around.

Controlled adhesion for an easier and cleaner peel.

DOW®

Strength without stress.

A strong package seal keeps your products fresh and protected. But you don't want the seal so strong that consumers become frustrated trying to open it – not to mention the messy result after all that pulling and tugging. So, we went to work and came up with an easier way.

APPEEL™ Peelable Resins are commonly used as the sealant in lidding films for containers. They provide hermetic sealing, and some grades can also show tamper-evidence after peeling open. Certain grades can be utilized as easy-peel sealants in pouches, bag-in-box liners, and other sealing options. All APPEEL™ resins provide dependability to preserve packaged products' quality, quantity, and sanitary conditions throughout packaging, transport, and on the shelf.

APPEEL™ resins can replace in-house blending which can help with adhesion consistency and enhance customers' processing performance efficiency. Additionally, the pre-compounded, one-pellet solution easily runs in a variety of conversion processes.

The range of packaging applications for APPEEL™ Peelable Resins includes:

- Dairy
- Beverage
- Snacks
- Hot-fill and retortable pouches and lidding
- Microwavable packaging
- Blister packs
- Confectionary
- Processed meats and cheeses
- Medical packaging

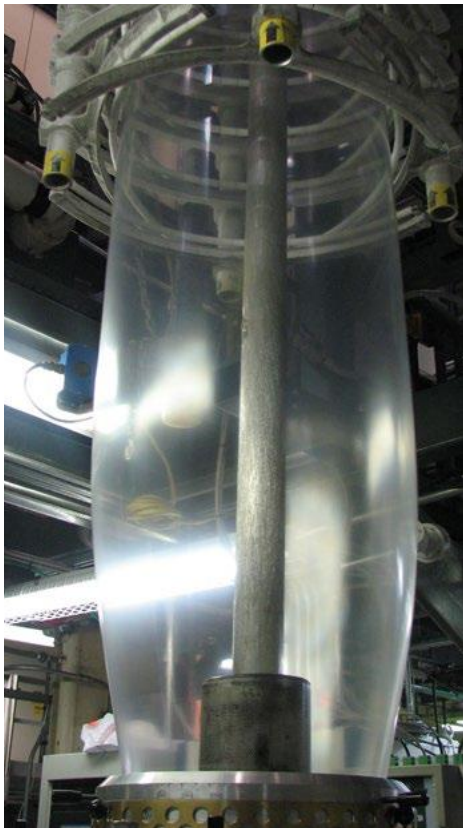
A pre-formulated, peelable resin brings controlled adhesion for packaging that's truly "easy-open."

Appeel™
peelable resins by DOW

Unpack the advantages

APPEEL™ Peelable Resins deliver consistent and proven performance across a variety of substrates in the easy-peel market:

- Comprehensive portfolio offers different chemistries for different requirements
- Grades for controllable heat-seal strengths for easy, clean peeling over time
- Works well with a wide range of packaging materials – CPET, APET, PP, PE, HIPS, and more
- Processable by extrusion coating, cast film, and/or blown film, depending on grade
- Specifically designed grades enable tamper-evidence when peeled
- Formulations available for sterilizable applications
- Solvent-free technology reduces environmental concerns



Precise performance.

APPEEL™ Peelable Resins come in three distinctive categories for targeted performance to ensure the right peel for your precise application. Tables 1-3 give you an at-a-glance reference of APPEEL™ Peelable Resin properties for higher heat resistance, lower seal temperature, and specialty grades.

EMA-based resins (for higher heat resistance)

Properties for EMA-based APPEEL™ Peelable Resins include very good product resistance, filament-free die cutting, fast sealing speed, and high thermal stability. APPEEL™ 20D828 is an excellent example of these formulations. Table 1 offers other options in this category.

APPEEL™ 20D828

APPEEL™ 20D828 Peelable Resin can be run via coextrusion blown film or cast film as well as coextrusion coating. It offers a wide range of possible sealing substrates and applications.

- Seals to: PP, PS, PET, PVC, HDPE, epoxy, Aclar® PCTFE(1)
- Unusual rheology allows this 13 MFI resin to be used in blown film, cast film, and extrusion coating processes
- Excellent peel strength with high vacuum resistance for air transport
- Very good product resistance
- Ideal for use with pre-die-cut lids and form-fill-seal lidding for food containers and pharmaceuticals
- Dependable, yet easy-peeling lidding on PP trays processed through retort sterilization

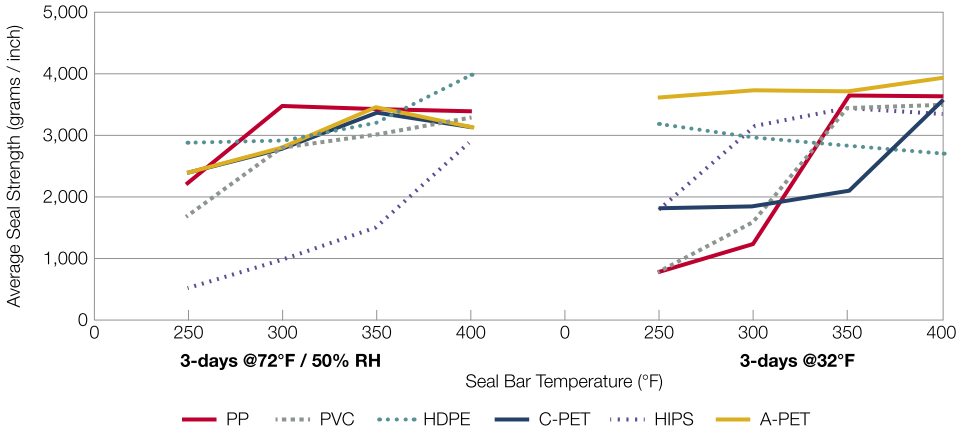
Table 1: EMA-based APPEEL™ resin formulations for higher heat resistance

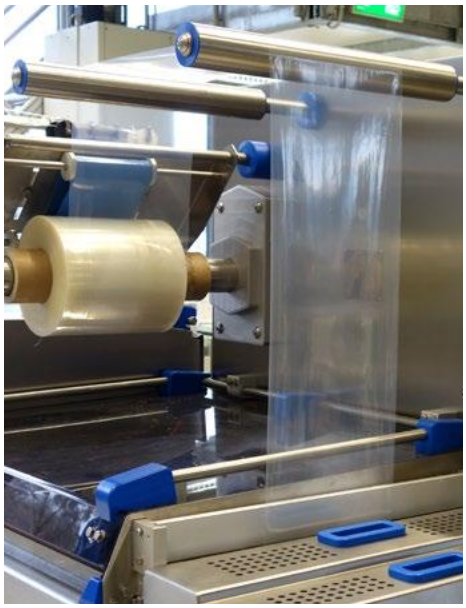
Grade	Process	Substrates							Clarity	Peel Type
		APET	CPET	PP	PS	PVC	HDPE	Itself		
20D745	BF, CF, EC	●●●	●●●	●●	●●●	●●●	●●●●	●●●●	Good	Clean
20D751	BF	●●	●●●	●●	●●	●●●	●●●	●●●●	Good	Clean
20D752	BF, CF						●●●	●●●		Cohesive
20D784	BF, CF, EC	●●	●●	●●●	●●	●●	●●●●	●●●●	Good	Clean
20D828	BF, CF. EC	●●●	●●●	●●●	●●●	●●●	●●●●	●●●●		Cohesive
20D855	BF, CF, EC	●●●	●●●	●●●	●●●	●●●	●●●●	●●●●		Clean

● Moderate ●● Strong ●●● Very Strong ●●●● Hard to Peel/No Peel (1)Typical values, not to be construed as specifications. Users should confirm results by their own tests.

HDPE: High Density Polyethylene; PP: Polypropylene; PS: Polystyrene; PVC: Polyvinylchloride; APET: Amorphous Polyester; CPET: Crystallized Polyester; ION: Ionomer; ACR: Acid Copolymer; EMA: Ethylene Methyl Acrylate; EC: Extrusion Coating; BF: Blown Film; CF: Cast Film

Figure 1: APPEEL™ 20D828, Heat seal profile over time*





*Dow tests conducted in ideal lab conditions; actual values may vary by application

(1)Aclar® PCTFE is a fluoropolymer sheet used for very high moisture barrier needs. Typical applications are packaging of pharmaceutical tablets and pills. Aclar® is a trademark of Honeywell International

EVA-based resins (for lower temperature sealing)

These resins feature properties that provide excellent peel strength with low temperature sealing. They also offer high clarity for a virtually invisible seal. APPEEL™ 11D554 provides an excellent example. Table 2 offers other options for EVA-based resins.

APPEEL™ 11D554

- Seals to PP, PS, PET, PVC
- Can be run in coextrusion blown or cast film as well as coextrusion coating
- Excellent peel strength with low temperature sealing
- Applicable for easy-peel pouches
- Good general-purpose peelable layer on surface of formable webs
- Can be used for food packaging sealant layer in Europe

Currently available only as the sealant in non-food applications in North America.

Table 2: EVA-based APPEEL™ resin formulations for lower temperature sealing and higher clarity

Grade	Process	Substrates							Clarity	Peel Type
		APET	CPET	PP	PS	PVC	HDPE	Itself		
1181	CF, EC	●●	●●●	●●●	●●	●●●	●●●●	●●●●	Good	Clean
2044	BF, CF	●●	●●	●●	●●	●●	●●●●	●●●●	Good	Clean
11D542	BF			●●	●		●●	●●		Cohesive
11D554	BF, CF, EC	●●●	●●●	●●●	●●		●●●●	●●●●	High	Clean
11D888	EC			●●	●●			●●●●		Clean

● Moderate ●● Strong ●●● Very Strong ●●●● Hard to Peel/No Peel [1]Typical values, not to be construed as specifications. Users should confirm results by their own tests.

HDPE: High Density Polyethylene; PP: Polypropylene; PS: Polystyrene; PVC: Polyvinylchloride; APET: Amorphous Polyester; CPET: Crystallized Polyester; ION: Ionomer; ACR: Acid Copolymer; EMA: Ethylene Methyl Acrylate; EC: Extrusion Coating; BF: Blown Film; CF: Cast Film

Resins for specialty applications

Properties of resins within this category include low seal initiation temperature, easy processing in blown or cast film conversion, applicability to a wide range of substrates, and excellent seal through contamination. The APPEEL™ 72D series of resins provides excellent examples of these formulations. Table 3 offers other options in this category.

APPEEL™ 72D Series

APPEEL™ 72D series resins are pre-formulated easy-peel sealants primarily used in film-to-film sealing; however, they can also be used as a lidding sealant. They work well as a general-purpose peelable layer on the surface of formable webs and can be used in both blown and cast film lamination.

- Excellent seal through contamination
- Applications include processed meat and cheese packaging and easy-peel pouches
- Applicable for materials with low seal initiation temperature
- Seals to ionomers, ACR, PE, EMA, EVA
- Can be used as lidding sealant

Table 3: APPEEL™ resins for specialty applications

Grade	Process	Substrates							Clarity	Peel Type
		PP	APET	CPET	Ion / ACR	EVA / EMA	LLDPE / HDPE	Itself		
22D843	BF	●●●						●●●	Good	Clean
35D140	BF, CF	●●					●●●	●●●	Good	Cohesive
35D210	BF	●					●●	●●	Good	Cohesive
72D727	BF				●	●	●	●	Good	Clean
72D799	BF				●	●	●	●	Good	Cohesive
72D811	CF				●	●	●	●	Good	Cohesive
93D894	BF, CF		●●●	●					High	Clean

● Moderate ●● Strong ●●● Very Strong ●●●● Hard to Peel/No Peel [1]Typical values, not to be construed as specifications. Users should confirm results by their own tests.

HDPE: High Density Polyethylene; PP: Polypropylene; PS: Polystyrene; PVC: Polyvinylchloride; APET: Amorphous Polyester; CPET: Crystallized Polyester; ION: Ionomer; ACR: Acid Copolymer; EMA: Ethylene Methyl Acrylate; EC: Extrusion Coating; BF: Blown Film; CF: Cast Film

Solutions that stick. Sustainably.

Good for your product. Good for our planet. APPEEL™ resins are made using solvent-free technology. So, in addition to the right seal strength, your products are helping do the right thing for our environment, too.

Take it easy.

Looking for a new seal strategy for your packaging? We think we can help.

With innovative options like APPEEL™ Peelable Resins and developmental opportunities available at our Pack Studios locations, together with energetic teams of adhesives and packaging professionals eager to collaborate, it has never been easier to move forward.

Learn more about adhesive solutions with APPEEL™ Peelable Resins, then let's see what sticks.

Together we make things better faster.

Four continents. Nine countries. Ten sites to date and a global virtual network of key players in the packaging value chain. In spaces tailor-made for imagining and creating new solutions, we'll collaborate with you to determine how our diverse portfolio of packaging and adhesive resins can address your specific packaging needs. Then, accelerate the packaging innovation process to get your innovations to market faster.

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