

# THE GUM *gazette*

The Latest News on Envelope Gums



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FOCUS ON SUSTAINABILITY



## SUSTAINABLE GUM *fashions*

You can be excused for not following the latest fashion trends. There's no excuse for not keeping up with sustainability trends in envelope gumming. From the foods that we eat to the products that we surround ourselves with each day, everything is being held up to a new environmental yardstick. Envelopes are not immune. How do they measure up?

Like fashionistas, the environmental world has its own vocabulary. The terms used to describe the environment-friendly qualities of a product are numerous and, all too often, confusing. Fear not. We've broken them down into six fashion savvy categories: the 4Rs and a B and a C (see table on page 2).

To evaluate the environmental qualities of any given envelope, you have to look beyond the surface. Despite the glamorous fashion magazine spreads, it's really what's inside that counts.

Most consumers are concerned about the window patches—what happens to those little bits of plastic in the recycling stream—when the greater issue is the adhesives used to hold the patches in place and to make an envelope, well, an envelope. The window patches are easily separated during the recycling process and pose little problem. The adhesives, however, can contaminate recycled pulp, reducing its quality. They also gum up recycling and repulping equipment.

The Henkel logo, consisting of the word "Henkel" in a white, sans-serif font inside a red oval, set against a green background.

Henkel

	General Definition	Adhesives Definition
<b>Recyclable</b>	A material that can be recovered from a waste stream, processed and returned to use as a raw material	The adhesive does not impede the envelope recycling process
<b>Repulpable</b>	A material that can be broken down using caustic solutions and converted into cellulose fibers for reuse	The adhesive does not impede the envelope repulping process
<b>Renewable</b>	A natural resource that is replaced or replenished by natural processes at a rate comparable to its rate of consumption	The adhesive consists of over 50% of renewable raw materials
<b>Reusable</b>	A product or package designed to be used multiple times during its lifecycle	The adhesive is capable of being used in multiple subsequent bonding processes that are identical to its initial use
<b>Biodegradable</b>	Capable of being biologically decomposed by the action of living organisms, like bacteria	The adhesive can be broken down by microorganisms
<b>Compostable</b>	An material, usually organic, that can be biologically decomposed to produce compost, a soil amendment	The adhesive is capable of composting under natural conditions at a rate comparable to other compostable materials. The resultant compost must support plant growth and be free of visible or toxic residues.

Note: these definitions were established by the adhesives council responsible for creating a technical paper on the sustainability of envelope gums for The Envelope Manufacturers Association.

Unlike fashion models, it's the complexity of envelope adhesives formulations along with the range of raw materials used in them that complicates their environmental assessment. Many of the raw materials are derived from natural sources, like corn, potatoes, tree sap and natural rubber. These are all enviro-friendly materials that comply with many of the 4RBCs. They lose their enviro-cool status when they mix with the wrong crowd—raws derived from petroleum products, like natural gas or oil.

Fashion is all about detail—a silk pocket square here, a high-tech fabric there, a wide lapel or a cuff on a pant. The permutations and combinations are endless. It's the same with envelope gums. The palette of raw materials can be combined in an unlimited number of formulations. Often, it's the addition of one or two specialty raw materials that makes the difference between a superior, haute couture seal gum and one that causes the machining equivalent of wardrobe malfunctions.

## CLASSIFICATION

		Recyclable	Repulpable	Renewable	Compostable
<b>FRONT SEAL</b>	<b>Dextrin</b>	🌱	🌱	🌱	🌱
	<b>Resin-Dextrin</b>	🌱	🌱	🌱	
	<b>Resin</b>	🌱	🌱		
	<b>Latex</b>			🌱	
	<b>Water Based PS</b>				
	<b>Hotmelt PS</b>				
<b>SEAM</b>	<b>Rotary Seam</b>	🌱	🌱	🌱	
	<b>Extrusion Seam</b>	🌱	🌱		
<b>Window Patch</b>		🌱	🌱		

Because of this variability, we've taken a simplified approach, linking chemistry and envelope application into a streamlined list that covers the majority of envelopes in production today. Consider it your style guide—the what to wear—of today's greener envelopes.

In the end, the What Not To Wear of envelope gums has yet to be filmed—Clinton and Stacy won't ridicule your choices any time soon. There's no standard, guidelines or specifications that fully determine if an envelope adhesive is sustainable. Until then, hopefully this issue of Gum Gazette will help. And, as always, call your sales rep if you have additional questions.

## ENVELOPE ADHESIVE APPLICATIONS



**FRONT SEAL**

Water based or hot melt adhesives that contain a mix of natural and petroleum derived raw materials, including resin emulsions, dextrin, starch, ethylene vinyl acetate or polyvinyl acetate, natural rubber latex or pressure sensitive copolymers.



**SIDE SEAM**

Seam adhesive chemistries vary greatly. They tend to be water based and are composed of resin emulsions, starches and dextrin.



**WINDOW PATCH**

Water based adhesives that rely on petroleum-based resin emulsions that are heavily formulated to balance machine performance with adhesion.





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