

Henkel Leads the Way in Developing a New Green Standard

How do you prove that you're green when no standard exists?

If you're Henkel, you lead the way by developing one...

As customers implement environmental sustainability goals, many ask about the environmental impact of our adhesives. Because the envelope market in particular generates a large amount of waste paper, many of those requests come from our envelope customers. As a result, Henkel joined forces with Western Michigan University to evaluate how our adhesives affect the paper recycling process. Under the leadership of Dr. Said AbuBakr, testing was conducted last spring through the university's Paper Engineering Department.

The potential is promising. Recycling and reusing waste paper would reduce the use of virgin fiber and decrease the volume of waste sent to landfills. However, a major obstacle in generating good pulp from reclaimed paper is the formation of "stickies" (small particles of adhesive) in the repulping process. Preventing stickies or controlling their size would significantly improve the quality of recycled paper manufactured.

The adhesives selected by Henkel for this project varied in formulation, but each had the potential to pass repulping tests based on the ability to re-emulsify or break down to particles, which could be removed in various repulping steps. Adhesive formulations ranged from dextrin-based, synthetic-based, synthetic dextrin blends, and similar formulas with additives theorized to promote clean repulping.



The first project step demonstrated that every tested adhesive produced recycled paper that was equivalent to a blank paper stock. Although this is good news, we cannot state that Henkel products passed the repulability standard because such a standard doesn't yet exist. In fact, current standards in place are for pressure-sensitive adhesives in the stamp market and do not necessarily apply to adhesives used in the construction of the envelopes. The pressure-sensitive stamp standards require that adhesives be filtered out during initial repulping steps, producing residual material. In our testing, the envelope adhesives resolubilized and washed away or sedimented during repulping, leaving nothing in the initial filter and no detectable adhesive in the repulped paper.

In the next project step, a cross-functional team of Henkel, paper mill or repulping facility, and U.S. Postal Service representatives will analyze the repulping process and develop a new standard for the envelope market. When that standard is in place, Henkel will be well positioned to gain and leverage a new "green" accreditation! ●



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Henkel Puerto Rico "Green Team"



When does RED = GREEN?



Vision and Values Spur Sustainability



Henkel Puerto Rico “Green Team”

Launches Energy Reduction Program

Striding toward success, the Sustainability team – also known as the “Green Team” – at Henkel Puerto Rico’s ASL site is moving ahead with strategies to reduce energy consumption. The Green Team’s goal is to implement renewable energy technologies that reduce energy consumption while providing a payoff without extensive capital expenditures.

In addition to implementing an Energy Reduction Program to reduce energy consumption by 15% over the next five years, the team is currently overseeing the installation of a new day-lighting system called Solatube, a safe alternative for illumination. The Solatube will operate during daylight hours without the use of electricity. It provides natural light, thus minimizing the artificial light during daytime hours with the added benefit of hands-free maintenance.

“We want to promote Henkel’s values as a responsible company that safeguards the environment,” said Sandy Toucet, member of the Green Team. “If Henkel Puerto Rico can be a pioneer in Energy Management Programs, we can pave the way for widespread adoption of solar efficient technologies throughout Henkel’s worldwide business units.”

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FOR YOUR REFERENCE: SUSTAINABILITY GLOSSARY OF TERMS

Renewable Resource: A natural resource that can be replenished by natural processes at a rate comparable to its rate of consumption by humans or other users.¹

Carbon Footprint: A “measure of the impact human activities have on the environment in terms of the amount of green-house gases produced, measured in units of carbon dioxide.”¹

Cradle to Cradle: A situation where the end-of-life disposal step for a product is a recycling process in which the recycled material collected is later transformed into new products. This framework seeks to create production techniques that are essentially waste-free.¹

Sustainability: The practice of development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.²

¹ Wikipedia,

² Brundtland Report of the World Commission on Environment & Development of 1987

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Henkel

A Brand Like a Friend

When does RED = Green?

With the new FIBRECYCLE K.E.G.!

RED turns to green when Henkel customers make a **Real Environmental Difference** and **Recycle Every Drum** with the new FIBRECYCLE K.E.G.™ (Keep Earth Green packaging solution) for PUR-FECT LOK™ panel laminating and book-binding adhesives. The industry's only 100% recyclable drum enables customers to improve their environmental profile, boost productivity, and enhance worker safety.

Designed to replace steel drums, FIBRECYCLE K.E.G.™ packaging enables manufacturers to:

- Recycle 100% of used drums
- Reduce the waste stream
- Receive up to 12% more product per drum – reducing handling, maximizing storage space, and reducing drum changes
- Improve operations with easier handling
- Easily move empty drums due to reduced weight
- Save energy costs as the fiber drum insulates heated adhesives;
- Generate positive cash flow with recycled cardboard

Additionally, the FIBRECYCLE K.E.G.™ system promotes a safer environment for employees because fiber drums don't conduct heat to surfaces, reducing the risk of contact burns.



FIBRECYCLE
K.E.G.™

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Vision and Values Spur Sustainability

Through business activities and products, Henkel aims to make valuable contributions to society. We systematically focus our activities on sustainable development in our operations. Vision and Values are at the heart of our actions:



When it comes to sustainability, Henkel focuses on five areas:

Energy and Climate:



The objective: Create energy efficient products and technologies while optimizing production processes.

Water and Wastewater:



The objective: Reduce water consumption during the production and use of Henkel products.

Materials and Waste:



The objective: Reduce necessary dosage of Henkel products needed during use and application by customers and consumers.

Safety and Health:



The objective: Ensure the safety and health of employees, customers and consumers.

Social Progress:



The objective: Ensure socially balanced economic development by creating jobs with fair conditions of employment, providing training for employees and customers, cooperating in a spirit of partnership with suppliers, transferring knowledge and technologies, and supporting the social involvement of employees. ♡

Did You Know...? Environmental Logos

Recyclable Package: Represented by the mobius loop composed of white arrows forming a continuous loop on a white background means the package itself is recyclable. **Figure A**



Recycled Content in the Package: A circle with a dark background and white arrows indicates that the package contains recycled material. The percentage of recycled material can come from as much as 100% or as little as 5% post consumer waste.



Figure B



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