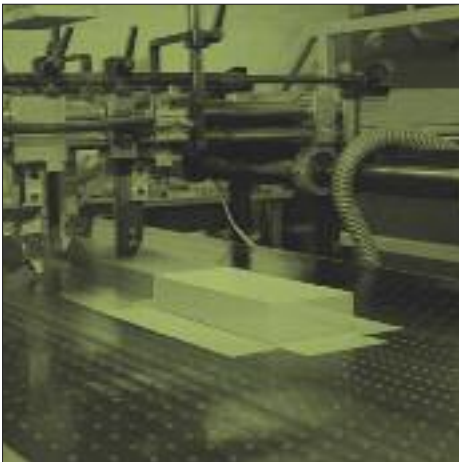


*Environmentally conscious adhesives have been a fundamental part of our business for decades.*

# Green Adhesives

**“Go Green” with a Green Veteran.** LD Davis has been making eco-friendly, non-toxic, repulpable, recyclable and biodegradable adhesives long before it was fashionable to be “green.” We use gelatin proteins (a non-consumable grade similar to those that go into food and pharmaceutical products like Jell-O and Gel-tabs), sugars (dry and syrup), epsom salt, water and glycerin. It’s likely, you’ve used these raw materials in your kitchen or bathroom at home. We also recycle millions of pounds of waste gelatin from nutritional and pharmaceutical manufacturers—all products designed to be easily dissolved and digested.



## **Gelatin Protein-Based Adhesives**

LD Davis protein-based adhesives are completely hydropulpable by nature of their composition. Our products are based on gelatin protein glue which is derived from the hydrolysis of collagen. Collagen is a protein ingredient of animal hide, tissue and bone.

Protein glue is composed of polyamides of alpha-amino acids. The solubility of protein glues in water is due in large part to the fact that five of the major constituent amino acids present in glue possess high water solubility. Protein glues are insoluble in oils, waxes, organic solvents and absolute alcohol. They may be emulsified in water-oil or oil-water systems.

The various other raw materials used to compound our glues are from the sugar, starch, polyol and salt families. All of the ingredients used to modify the adhesives are water soluble and in most cases are non-edible grades intended for industrial use. We also utilize edible-grade raw materials, e.g. corn syrup (glucose), sodium chloride (table salt), glycerin USP grade, etc. when required.

None of the raw materials are listed by OSHA, RCRA, NTP, SARA Title III or any other hazardous ingredient listing. Gelatin protein adhesives are readily biodegradable, recyclable and repulpable.





**Corporate Office:**  
 1725 The Fairway  
 Jenkintown, PA 19046-1400  
 Phone 1-800-883-6199  
 Fax 1-215-886-7001

**Georgia Plant**  
 5841 Jakaranda Drive  
 Mableton, GA 30059

**North Carolina Plant**  
 2031 E. Roosevelt Blvd  
 Monroe, NC 28112

# Protein Based “Green” Products

## SPECIFICATIONS & TECHNICAL DATA

Appearance	Translucent amber to white colored protein based glue
Available Formats	Cake or Dry
Features	Designed to offer suitable tack and open time for many graphic arts and packaging applications. Protein products based on gelatin are fully biodegradable, non-toxic and eco-friendly.
Uses	Bookbinding, Rigid Box, Laminating, Lining, Case and Carton Seal, Assembled Products
Operational Temperature	140°F – 150°F Generally reduced with water for proper application
Odor	Neutral to fragrant by addition of re-odorant
Solids (%)	40.0 – 75% (for Cake products) Considered 100% (for dehydrated products)
Viscosity (CPS)	Varies depending on application Can be produced with a range of 100 CPS to 35,000 CPS as measured by Brookfield Viscometer
Shelf Life	Approximately 1 year. Must be kept in a cool, dry environment for optimum storage life.
Package	6 Cakes per carton or 50 LB bags for dry Average carton weight: 62 LBs Palletized: 36 cartons per pallet (shrink wrapped)