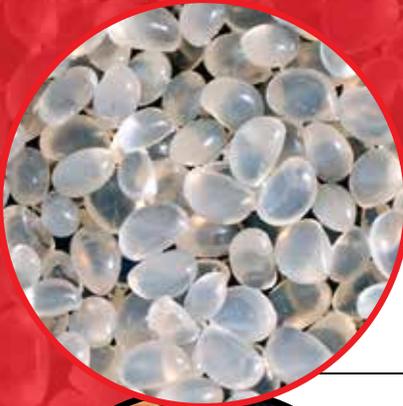


HOT MELT ADHESIVES

Tailored Chemical Products, founded in 1977, has manufactured high-quality hot melt adhesives for decades. Packaging hot melts are part of our core competency. We have the capabilities to manufacture hot melts in pellets, chubs, and drums with a number of different packaging options available. If one of our current offerings is not perfectly suited for your application, we are happy to “tailor” one to your needs.



EVA

Our Ethylene-Vinyl Acetate (EVA) line offers versatile products that can be formulated to meet a wide range of applications. We can tailor these adhesives to vary the viscosity and control the set time as well as the open time. EVAs are widely used in general packaging, case and carton sealing, filter manufacturing, and other product assembly applications.

METALLOCENE MPE & MPP

Metallocene adhesives are a relatively new innovation in adhesives. We offer a full line of Metallocene adhesives that can eliminate many common adhesive problems such as charring, plugged nozzles and filters, odor, and stringing. In addition, these formulations, through their lower density and aggressive bond nature, can greatly reduce the amount of adhesive you use per box and significantly reduce your total cost in use.

COST PER PACKAGE OPTIMIZATION PROGRAM

Tailored Chemical Products utilizes a Cost Per Package Optimization Program as a measurement tool to quantify what it costs a manufacturer in adhesive to make a package. The Cost Per Package Optimization Program allows customers to realize their total adhesive spend, while enhancing the overall package quality and optimizing line efficiency. This program encompasses 2 major steps:

Initiate line audit with current adhesive and settings to quantify adhesive costs and areas for improvement:

- Collecting current adhesive volume by weight
- Bead width and length for each box run
- Recording equipment settings and conditions
- Record and photograph fiber tear information
- Input data into hot melt cost calculator to determine current costs

Conduct an adhesive trial with Tailored hot melt technologies:

- A trial or setup date and time are agreed upon
- Tailored Chemical Product's personnel assist in purging and cleaning of the hot melt tanks.
- New Tailored Chemical Products technology is implemented into the system.
- The Tailored Chemical technology is run using all current line settings, and a line audit is conducted.
- Adhesive line is optimized to represent best setting with new technology.
- New gram weights are recorded and implemented into hot melt cost calculator to reveal true adhesive savings.

Once the optimization solution is implemented, the value is maintained throughout the relationship by:

- Regularly scheduled line audits
- Ongoing training and communication with the packaging teams
- Use of established line cards displaying correct hot melt unit settings



PACKAGING HOT MELTS

	Product Name	Key Feature	Application	Service Temp. Range	Specific Gravity	Molten Gardner Color	*Viscosity at Application Temp.	Application Range
LOW APPLICATION TEMPERATURE	Permalock® 2010	Freezer Grade	EVA based low temperature hotmelt for case and carton sealing and case erecting.	-10°F to 120°F	0.98	4-6	825 cP at 275°F	250 to 275°F
	Permalock® 2011	Economical Low Temp	EVA based low temperature hotmelt for case and carton sealing and case erecting	-10°F to 120°F	0.98	4-6	850 cP at 275°F	260 to 290°F
	Permaclear® 1323	Water White Economical Low Temp	Water White case seal hotmelt with excellent hot tack and adhesion. Great high and low temperature performance, extremely economical.	-10°F to 120°F	0.98	1-2	1000 cP at 275°F	260 to 290°F
EVA	Permalock® 1056	Economical EVA Hotmelt	General Purpose EVA hotmelt.	40°F to 130°F	0.99	3-7	1025 cP at 350°F	325 to 375°F
	Permalock® 1061	Workhorse EVA	General Purpose EVA hotmelt, improved low temperature resistance, fast set speed.	0°F to 140°F	0.98	5-9	800 cP at 350°F	325 to 370°F
	Permalock® 1066	Slowest Setting	Glue stick replacement, applications needing a long open time, POP displays, optically clear.	20°F to 130°F	0.97	2-5	2550 cP at 350°F	325 to 390°F
	Permalock® 1079	Slowest Setting - Low Vis	Glue stick replacement, applications needing a long open time and low viscosity.	0°F to 120°F	0.97	3-6	1150 cP at 350°F	325 to 375°F
	Permalock® 1067	Slow Set	Slow setting product, robust sticker, long open time, great on wax and other coatings.	0°F to 130°F	0.98	3-6	2675 cP at 350°F	325 to 390°F
	Permalock® 1086	Fast Set Economical Hotmelt	General Purpose case and carton seal.	30°F to 130°F	0.98	3-6	900 cP at 350°F	325 to 375°F
	Permalock® 1089	Extremely Fast Set Case Seal	Fastest set speed case seal hotmelt.	40°F to 150°F	0.98	3-6	900 cP at 350°F	325 to 375°F
	Permalock® 1091	Go To Freezer Grade EVA	Robust EVA for difficult to bond substrates and freezer grade applications.	-40°F to 120°F	0.98	3-6	1000 cP at 350°F	340 to 365°F
	Permalock® 1071	Wax board technology	Great adhesion with a medium open time, suitable for wax coated and impregnated board.	A	0.98	3-6	1500 cP at 350°F	350 to 375°F
	Permalock® 1073	Freezer Grade	General purpose packaging adhesive suitable for freezer grade applications.	-40°F to 120°F	0.98	5-9	1100 cP at 350°F	325 to 375°F
	Permalock® 1322	Water White Clear Proprietary Case and Carton Hotmelt	Water White case seal hotmelt with excellent hot tack and adhesion. Great high and low temperature performance, extremely economical.	0°F to 140°F	0.98	1-2	800 cP at 350°F	325 to 350°F
METALLOCENE	Permaclear® 1301	Low Application Temp Metalloce	Premium Grade Low Temp Metalloce.	-20°F to 120°F	0.93	1-2	750 cP at 275°F	250 to 280°F
	Permaclear® 1302	Economical Metalloce	Case Sealing and Erecting, Good Mileage and pot stability, value formulated metalloce polymer.	-20°F to 140°F	0.95	1-2	975 cP at 350°F	325 to 375°F
	Permaclear® 1305	Go to Metalloce	Go to Case and carton sealing Metalloce. Fast Set speed and Great Heat Resistance.	-20°F to 150°F	0.93	1-2	900 cP at 350°F	325 to 375°F
	Permaclear® 1306	Problem Solver	High Performance Metalloce, for difficult to bond surfaces, freezer capable.	-40°F to 150°F	0.96	1-2	950 cP at 350°F	325 to 375°F
	Permaclear® 1310	Wax Board Metalloce	Medium - Long Open Time Metalloce for coated substrates. Specifically developed for protein packaging market and wax cases.	-40°F to 140°F	0.96	1-2	1600 cP at 350°F	325 to 375°F
	Permaclear® 1312	Hot-Fill / Hot-Pack Problem Solver	High Performance Metalloce for extremely difficult substrates or hot-filled goods.	-40°F to 160°F	0.96	1-2	950 cP at 350°F	325 to 350°F

*Viscosity can be tailored to your application.