



Water-Based Adhesive Troubleshooting Guide: Lamination

FOR ASSISTANCE, CALL: 1-800-458-3252 | OFFICE: 314-652-4583 | EMAIL: INFO@AJADHESIVES.COM

PROBLEM	POSSIBLE CAUSES	SUGGESTED SOLUTIONS
Washboarding (Single-face corrugated is wavy from valleys of medium)	1. Dry linerboard readily absorbs water from glue and expands, causing waves in valleys of the medium	1. Lessen adhesive application on flute tips a. Higher solids adhesive b. Better moisture control
Warping (entire single-face or lay-flat board experiences a curvature)	1. Inside and outside liner board differences, absorbing moisture at different rates (coated vs. uncoated, paper weights, recycled content)	1. Consult with corrugator
	2. Humidity changes	2. Humidity control
	3. Irregular or excessive glue application	3. Even out/reduce glue application
	4. Hot paperboard retaining moisture, not drying	4. Allow corrugate to cool as much as possible
Bubbling, blistering, or tunneling on lay-flat	1. Label and board not absorbing moisture at the same rate (label shrinkage)	1. Use more aggressive adhesive
	2. Not enough glue	2. Increase glue amount
Score/Cracking on lay-flat	1. Black or dark labels, tight fold after dried	1. Use softer/more flexible adhesive
Poor adhesion on lay-flat and single-face boards	1. Inconsistent application, low coat weight	1. Confirm even application & correct amount
	2. Recycled paper, films, or coatings	2. Utilize a better suited adhesive for substrate
	3. Cold paperboard, delayed drying	3. Pre-warm paperboard
Machinability (i.e. rollers, glue bands, clean up, buildup) on lay-flat and single-face	1. Glue is too thin or too thick	1. Use glue with better suited viscosity for equipment and line speed
	2. Glue dries too quickly	2. Use easier cleaning glue or add water in glue nip
	3. Too much being applied	3. Reduce application amount
	4. Equipment worn out (metering roller worn or damaged)	4. Check with maintenance
	5. Too much roll pressure, gap too close (small glue coat, wearing out metering roller)	5. Increase gap, check with maintenance to correct



Refer to the back of this guide for folding carton viscosity and best practices

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Folding Carton Viscosity Reference Guide & Best Practices

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Folding Carton Viscosity Reference Guide

Contact Extrusion	1000-1800 cPs
Low Pressure Non-Contact Systems	500-700 cPs
High Pressure Non-Contact Systems	250-400 cPs
Gartech Wheel Application	800-1100 cPs
Isowa Wheel Application	2000-2600 cPs

*Valid only as a reference for commonly used equipment.
Contact AJ Adhesives for viscosity suggestions for new machines.*

Best Practices

Store adhesive and substrates at room temperature

- Do not store outside

Stock rotation - first in, first out - shelf life

- Shelf life dependent on viscosity and formulation

Keep containers sealed prior to use to avoid contamination

Do not leave container open when not in use

Avoid the use of "dirty" containers dipped into adhesive

Avoid circulating glue back into original container

- Utilize day tank for circulation

For optimal gluing, maintain moisture content of paperboard within 6-10%



If problem still persists, please reach out to AJ Adhesives Support

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