

PROBLEM	CAUSE	SOLUTION
DISCOLORATION	Bleach on Colors	Do not use bleach on colors.
	Residual Dye Transfer	Sort napery into recommended color groupings. Before placing new linen into service, it should be washed separately to remove residual dyes. Darker shades should always be washed separately for 5 washes.
	Soil Redeposition	Reclaim napery with soil redeposition by using increased temperature and supplies. Prevent redeposition by adjusting the formula for soil level. Specific recommendations are available from your Milliken Technical Services Representative.
	Chemical Reaction	Avoid chemical discoloration by thoroughly rinsing all chemicals out of the napery before drying or finishing.
	Yellowed Whites	Chlorine bleach will not damage Milliken table linen fabric, but residual bleach on white napery can cause yellowing if the chlorine is not neutralized before exposure to heat. Avoid yellowing by using an antichlor in the second rinse after bleaching with chlorine.
	Incorrect Ordering	Order napery colors by the four digit code number or the distributor color codes to avoid confusing similar colors.
	Glazing	Maintain ironer temperature 310 - 325°F with 20%-25% moisture in napery to avoid glazing.
WATERPROOFING	Fabric Softeners	Fabric softeners prevent Milliken napery from absorbing liquids. DO NOT use fabric softeners on napery.
	Mildewcides	To help minimize mildew growth on Milliken napery, use only mildewcides that have no quaternary ammonium base.
	Washing with Cotton	Wash Milliken napery with other 100% synthetic fabrics. Do not wash with cotton or poly-cotton blends.
	Soil Redeposition	See DISCOLORATION - Soil Redeposition.
	PVAc Build-Up	Reclaim, then reformulate the starch ratio: four parts natural starch to one part PVAc.
STATIC	Overdrying	Reduce extraction or conditioning, and cover wet work to maintain 20%-25% moisture retention in napery before ironing.
	Incorrect Grounding	To effectively ground equipment, sink a 6' steel rod in the ground and attach grounding straps. Also, use static bars on folders and conveyors.
	Friction Folders	Eliminate friction from goods slipping on the belts by synchronizing the speeds of adjacent belts. Check folder adjustments and/or use more starch on napery.
	Low Humidity	Low relative humidity can cause goods to stick due to static electricity. On particularly dry days, a humidifier may be needed.
STAINS	PERMANENT: Cleaners/Carbon Metal Food/Cement	For all permanent stains, try reclaiming with more supplies and higher temperatures to reduce stain visibility. Napery with noticeable stains should be ragged, overdyed by a qualified dye house or cut into smaller pieces. See CUSTOMER ABUSE section.
	REMOVABLE: Blood	Use a warm water flush, then normal washing. Do not use hot water flush on protein soils.
	Fats/Corn Oil	Use solvated surfactants to boost regular formula.
	Salad Dressing	Split flush.
	Motor Oil/Grease	Use solvated surfactants to boost regular formula.
	Lipstick/Candle Wax	Use solvated surfactants and/or higher temperatures.
	Rust	Use an oxalic acid prewash or rust-removing sours.
	Mildew	Use chlorine bleach on whites. As a last resort, use 1% available chlorine bleach at 1-2 quarts/CWT to remove mildew from colored napery. This will cause some color deterioration. A mildewcide with no quaternary ammonium base should be used to minimize mildew growth.
IRONING REJECTS	Dirty Ironer	First, do a thorough downtime cleaning. Then follow up with regular cleaning and maintenance checks. Do not overwax the ironer to avoid wax build up.
	Roll Pressure	Do the paper test on the first ironer roll. Correct uneven or incorrect pressure.
	Side-to-Side Pressure	Check bearings, individual roll pressures, and the pillow blocks.
	Drafting	Check the circumference of each roll with adding machine tape to determine if there is appropriately increasing diameter from front to back. If not, replace the ironer padding.
	Incorrect Feeding	Carefully instruct all personnel on correct feeding procedures.
	Cold Chest	Maintain a minimum chest temperature of 310° - 325° F.
	Warped Chest	A warped chest must be replaced.
	Over or Undersoured Napery	Adjust the amount of sour to maintain 5.5-6.5 pH.
	Ironer Tapes	Be sure there are two ironer tapes per lane for napkins. Tapes should be around the ironer rolls and tension bars only—not around the finger roll.
	Residual Chemicals	Rinse goods thoroughly, then sour to neutralize rinse water alkalinity. Also, thoroughly clean the ironer chests and roll pad covers to remove chemical build-up.

This guide is intended as a quick reference for many common laundry situations. For further information, contact your Milliken Technical Services Representative.

1-800-322-TEAM
www.MillikenTableLinen.com

PROBLEM	CAUSE	SOLUTION
IRONING REJECTS cont.	Goods Too Wet	Increase extraction or conditioning if napery is too wet going into the ironer. Goods should feel damp at the recommended 20%-25% moisture retention.
	Roll Motion & Covers	Correct rough roll motion and loose or rough roll covers. Also check for excess wear on covers, belts and aprons.
	Static	See STATIC - Grounding.
	Glazing	Maintain ironer temperature 310 - 325°F with 20%-25% moisture in napery to avoid glazing.
CUSTOMER PICKS & SNAGS	Rough Shelves & Table Corners	Eliminate rough spots and protruding nails on shelves. Tape table corners.
	Personnel	Educate personnel on correct handling techniques.
	Burrs & Sharp Edges	Check for burrs and sharp edges on machinery and handling equipment by using a wet knitted fabric. Do not use staples to fasten ironer tapes, and check for loose or broken wires on feed and exit apron connectors.
LAUNDRY PICKS & SNAGS	Washing with Tableware	Be sure all tableware and other foreign objects are removed before washing.
	STARCH/SIZING	
	TOO STIFF: PVAc Buildup or Excessive Starch	Reclaim with additional alkali and more heat. Then reformulate four parts natural starch to one part PVAc.
	TOO LIMP: Water Level	Use lowest available water level for optimum starch penetration. Actual level varies by washer.
	Sour	Starching results are best at pH levels between 5.5-6.5. Add sour at least two minutes before starch to allow even distribution.
	Temperature	Maintain bath temperatures between 90° - 100° F for starch.
	Supplies	Check with your Milliken Technical Services Representative for the recommended amounts and ratios of supplies for each type of starch or sizing material.
	Load Size	Starch penetration is limited when the washer is overloaded. Use the following clean dry weight capacities as a guideline for load size: Full Drop: 100%, Split Pocket: 75%, Y Pocket: 65%.
	Overdrying	Too much extraction or conditioning causes starch to be lost. maintain 20%-25% moisture retention in napery before ironing.
	Time	Allow at least eight minutes starch time for even penetration of starch.
	Inadequate Cleaning	Adjust wash formula to ensure that linens will absorb a drop of water within 3 seconds.
	Personnel	Carefully instruct all personnel on correct starching procedures to insure consistency from load to load.
WRINKLES	Thermal Shock	Thermal shock wrinkles occur when napery is exposed to sudden changes in temperature. Avoid thermal shock by tempering cold water in the winter and reduce the water temperature in 15° increments to 100° F before extracting.
	Extraction	Reduce pressure, RPM, or time during extraction.
	Insufficient Cool Down	Cool to a temperature of 100° F or less before extracting or removing from washer or dryer.
	Hot Spots on Dryer	Be sure gas flame is not impinging on the dryer basket.
	Malfunction	Inspect all machinery and maintain on a regular schedule.
	Overloading	Washer capacity should not exceed 100% of clean dry weight for Full Drop machines, 75% for Split Pocket, and 65% for Y Pocket. Tumbler loads should be 50%. Also, do not leave carts or slings overloaded for extended periods.
	Folder Stacks	Reduce the size of napery stacks on the folder or increase air flow to cool the napery before stacking.
	Storage	Fold napery correctly before storing, and allow adequate storage space to prevent wrinkling.
FOLDER REJECTS	Settings	Check manufacturer's recommendations for correct settings.
	Slippage	Inspect and maintain gears, belts and conveyors at the apron/conveyor junction. Also, try slowing down the conveyors or using more starch.
	Uneven Folds	Adjust folder alignment to manufacturer's specifications and repair or replace worn belts.
	Belt Angle	Reduce the incline if the conveyor belt angle is too sharp.
	Static	See STATIC - Grounding, and check the speeds of adjacent surfaces.
	Dirty Folder	Clean each folder belt and sensors with an air hose as needed.
	Personnel	Carefully instruct all personnel on correct feeding techniques and lane alignment.
CUSTOMER ABUSE	Excessive Heat	Explain to the customer that excessive heat such as hot grill will damage linens.
	Incorrect Storage	Set up storage for both clean and soiled napery in a convenient place. Check to be sure correct procedures are being followed.
	Soil Segregation	Advise the customer not to mix soiled napery with bleach rags or bar wipes. (light spots)
	Incorrect Usage	Napery should not be used as a grease rag or bar wipe. Offer the customer appropriate items for these applications.