

# Griffin Dyeworks & Fiber Arts

## Burn Test (for fiber identification)

**SAFETY PRECAUTION:** Burn actual fabric; selvedge edge may not be the same fiber as the main piece of cloth and will give a false reading of content. Always hold small piece of test fiber with tweezers, not with fingers. Hold fiber over water before setting it alight. Do not sniff burnt fiber until smoke dissipates. Do not touch fiber until bead cools. All synthetic fibers should be considered to be a serious drip danger and fume hazard. When set on fire, burning synthetic fabric can sizzle or drip so fast that it curls onto skin or fingernails, causing a nasty burn. If a burn occurs, submerge burned area in ice water immediately. Burn test may not distinguish between cotton and other cellulose fibers. Some fabric may have finishes that affect burn results. Weighted silk (with added chemicals) may react more like synthetic fiber.

Fiber	Fiber Type	Reaction to Flame	Bead	After-Flame	Ash	Odor	Smoke/Fume
<b>Cotton</b>	Cellulose Fiber	May flare when lit, burns	None	Continues to glow	Fine, soft	Burning paper	Gray or white
<b>Hemp</b>	"	quickly, bright flame,	"	flame is removed but does not melt	gray ash	leaves, or wood	smoke; no fume hazard
<b>Jute</b>	"	does not shrink from flame	"	"	"	"	"
<b>Linen (Flax)</b>	"	"	"	"	"	"	"
<b>Ramie</b>	"	"	"	"	"	"	"
<b>Rayon</b>	Manufactured cellulosic fiber	Burns without flame or melting; may flare	None unless there is a fabric finish	May glow a bit longer than cotton after flame is removed	Soft, gray ash	Burning paper	Light fume hazard
<b>Silk</b>	Protein fiber	Burns slowly, curls away from flame	Dark bead easily crushed	Self-extinguishing	Dark gritty fine powder	Burned hair or charred meat	Little or no smoke. No fume hazard
<b>Alpaca</b>	"	Burns slowly, sizzles, curls away from flame; may curl back onto fingernail	Brittle, dark, easily crushed	"	Harsh ash from crushed bead	Strong odor of hair or feathers	Dark smoke; moderate fume
<b>Cahmere</b>	"	"	"	"	"	"	"
<b>Mohair</b>	"	"	"	"	"	"	"
<b>Wool</b>	"	"	"	"	"	"	"

<b>Acetate, Triacetate</b>		Burns quickly, can flare even after flame is removed	Hard, brittle, uncrushable	Melts into very hot bead; <b>DRIP DANGER</b>	No ash	Hot vinegar or burning pepper	Black smoke; <b>FUME HAZARD</b>
<b>Nylon, Polyamide</b>		Quick burning due to fabric finish; shrinks to flame	Hard, grayish uncrushable	Burns slowly and melts; self-extinguishing, <b>DRIP DANGER</b>	No ash	Celery	<b>FUME HAZARD</b>
<b>Polyester</b>		Quick burning, shrinks away from flame; may flare	Hard dark round bead	Burns slowly, not always self-extinguishing	No ash	Slightly sweet chemical odor	Black smoke; <b>FUME HAZARD</b>
<b>Acrylic, Modacrylic, Polyacrylic</b>		Flares at match-touch, shrinks from flame, burns rapidly, hot sputtering flame; <b>DRIP DANGER</b>	Hard, dark, irregular shape	Continues melting after flame is removed; self-extinguishing	No ash	Strong acrid, fishy odor	Black smoke; <b>FUME HAZARD</b>

© 2012 Griffin Dyeworks and Fiber Arts

**Information is given without guarantee on the part of Griffin Dyeworks and Fiber Arts.**