

FIBER IDENTIFICATION BY BURNING

All fabric sold for the RETAIL market in the US must carry a fiber content tag. However, we often purchase fabric or garments that are vintage, are no longer housed on original rolls, or from a jobber that purchased the fabric on wholesale put-ups.

With the advanced chemical make up of many textiles today, exact fiber ID must use a microscope. Those working in the textile industry and museums do perform such tests. Costume designers, however, rarely need an exact laboratory break down of fiber content. In general, we want to understand the fiber content so we can modify the garment by dyeing or painting.

We often do not have to exactly identify the chemical make up of fibers. NOTE: finishing chemicals may change burn results.

| | CELLULOSE FIBERS | PROTEIN FIBERS | MANUF FIBERS | |
|--------------------|---|--|---|--|
| | Cotton Flax/ Linen Ramie Lyocell/ Tencel (eco friendly) Viscose Rayon Bamboo PLA/Ingeo (corn) | Silk Wool Specialty wools Animal hair | Acetate** Acrylic **final test for Acetate is to melt it with Acetone | Nylon Polyester |
| Approach Flame | Rapid ignite, does not fuse or melt when held next to flame | May curl slightly No melt | Fuses or melts in front of flame | Fuses or shrinks from flame |
| In Flame | Fast burn, yellow flame | Burns slowly | Fast burning, with melting –May drip | Slow burn, melting may drip |
| Removed from Flame | Continues to burn Afterglow red/yellow | Slow burn Sometimes self extinguishing | Continues to burn & melt- may drip | Often self extinguishing, may burn slowly |
| Ash Appearance | Soft, feathery grey ash Ash brushes away completely | Stiff, crisp black ash that can be crushed between fingers | Brittle black, hard bead Can be cracked off | Hard shiny bead that cannot be crushed Nylon= grey bead Poly- black bead |
| Odor | Burning paper or leaves | Burning hair or feathers | Acrid, Vinegar smell | |

Burn chart & instructions on Ditzypriprints.com

FIBER BURN CHART

