

Burn Test of Unknown Fibers

Material	Flame Description	Smoke Description	Burn Odor	Burn Description
Cotton (vegetable)	Burns with a yellow-orange flame. Mauve tints with main flame and orange edges.	Bluish shows after flame is out.	Resembles burning paper.	Ignites easily. Is not self extinguishing. Steady flame leaves fine grey or black ash.
Flax or Linen (vegetable)	Sparkling yellow and orange flame with orange edges.	Bluish on removal from flame.	Like burnt grass.	Ignites easily and burns with crackle, leaving delicate grey ash. Self extinguishing.
Wool (animal)	Yellow with orange center. Blue or purple edges at bottom.	Rises in bluish-grey clouds when removed from flame.	Similar to burnt hair.	Ignites easily and is self extinguishing.
Silk (animal)	Sparkling orange-yellow with orange center.	Greyish blue shows on removal from flame.	Similar to burnt hair.	Ignites easily and is self extinguishing. Burns with a slight sizzle.
Acrilon (synthetic)	Burns with pale yellow flames, mauve or blue at bottom.	Blue wispy bits of smoke after flame is out.	Acetic.	Ignites easily, is not self extinguishing. Seems to melt rather than burn, leaving a charred bead.
Acrilon (synthetic)	Yellow flame.	Black smoke.	Similar to burnt hair.	Does not ignite easily; burns out leaving tarlike residue.
Dacron (synthetic)	Burns with yellow body and orange tip.	Black smoke.	Aromatic.	Difficult to light and is self extinguishing. Melts forming a bead.
Nylon (synthetic)	Orange edges, blue body with bright orange tip. Hisses while burning.	Grey-blue puffs.	Similar to fresh celery.	Does not ignite easily, shrinks from flame and is self extinguishing. Melts, leaving a bead.
Orlon (synthetic)	Yellow body with orange tip.	Black smoke.	Aromatic.	Ignites easily and is not self extinguishing. Melts forming a bead.
Rayon (synthetic)	Occasional sparks with orange-yellow edges and orange center.	Bluish smoke after flame is out.	Resembles burnt paper.	Ignites and burns readily and is not self extinguishing. Black or grey ash.