

Guide to the identification of different polymers by burning on direct flame

Sample Ref	Polymer	Characteristics on Burning	Characteristic Smell	Fume Colour	Extinguish Characteristic
01	Natural Rubber	Continuous burning	Distinctive smell - organic matter hair	Black fumes	Material melts after burning and residue is tacky
02	Nitrile Rubber	Continuous burning with minor crackling	Acrylic pungent unpleasant smell	Black fumes giving black soot	Residue is tacky
03	PVC-Nitrile	Burns continuously on flame with minor crackling	Bread burning-like smell	Minor bluish colour at base	No stickiness on surface
04	Chloroprene (Neoprene)	Inconsistent burning on flame	General plastic burning smell	Copious pale yellow fumes	Self extinguishing immediately after removal from flame, no stickiness on surface, charred
05	Styrene Butadiene Rubber (SBR)	Burns continuously with minor crackling on flame	Unpleasant wax burning smell	White fumes	Not easily extinguishable. Residue non-tacky
06	Chlorosulphonated Polyethylene (Hypalon)	Continuous burning on flame	Sulphur burning type smell	Blue outline of flame	Stickiness observed after burning
07	Ethylene Propylene Diene Monomer (EPDM)	Continuous burning	Polyethylene burning smell	Black fumes	Melts and goes tacky & charred
08	Silicone	Inconsistent burning	Mild sweet smell (Peroxide)	White fumes	Self extinguishing immediately after removal from flame, goes to a white ash
09	Viton™ FKM	Very difficult to ignite - flame resistant, self extinguishing	Mild sweet smell (cinnamon)	White fumes	Self extinguishing - charred. However, if it does burn be careful of hydrogen fluoride fumes

Our tests and observations were conducted by taking sheeting samples.

Beware when burning very cheap commercial materials.

Please bear in mind that whilst this information is believed to be reliable, no representation, guarantees or warranties of any kind are made to its accuracy or suitability for any purpose.