

OCTOBER 2021

BAMBERGER POLYMERS TECH TIPS

Understanding UL 94 flame Ratings

The UL94 flammability test serves as a preliminary indication of a plastic material's acceptability for use as part of a device or appliance with respect to its flammability.

The test utilizes standard test specimens to determine the flammability properties of plastic materials. These tests are conducted on the plastic material under specified conditions and are intended to provide information comparing the relative burning characteristics of different materials or assessing any change in burning characteristics prior to or during actual use. Note, this rating is not intended to reflect the hazards of a material under actual fire conditions.

5VA Surface Burn -

Burning stops within 60 seconds after five applications of five seconds each of a flame Test specimens **MAY NOT** have a burn-through. This is the highest (most flame retardant) UL94 rating.

5VB Surface Burn

Burning stops within 60 seconds after five applications of five seconds each of a flame to a test bar. Test specimens **MAY HAVE** a burn-through.

V-0 Vertical Burn

Burning stops within 10 seconds after two applications of ten seconds each of a flame to a test bar. **NO** flaming drips are allowed.

V-1 Vertical Burn

Burning stops within 60 seconds after two applications of ten seconds each of a flame to a test bar. **NO** flaming drips are allowed.

V-2 Vertical Burn

Burning stops within 60 seconds after two applications of ten seconds each of a flame to a test bar. Flaming drips **ARE** allowed.

H-B Horizontal Burn

Slow horizontal burning with a burning rate less than 3"/min or stops burning before the 5" mark. H-B rated materials are considered "self-extinguishing".

