

Explanation of UL 94 Rating for KYDEX® 100 and KYDEX® T

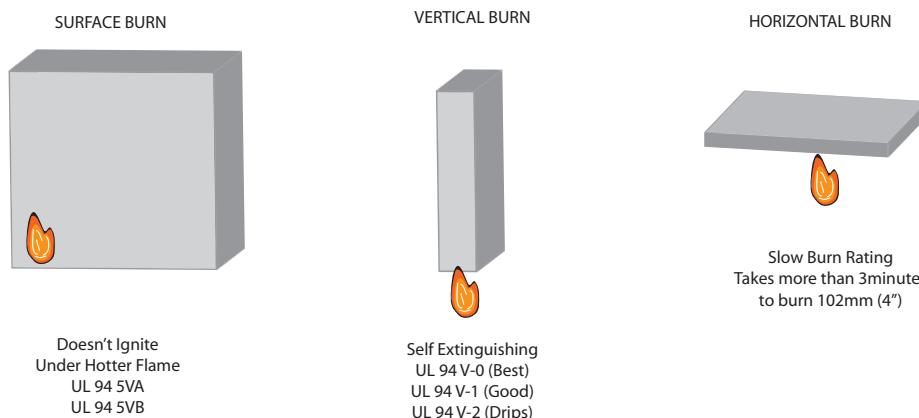
TB - 111-A

UL 94 Rating

UL Subject 94 is a small scale flammability test. This test is meant to measure and describe the flammability of plastic materials in response to heat and flame.

There are two separate tests and ratings for UL 94: V and 5V. These small-scale tests measure the propensity of a material to extinguish or spread flames once it becomes ignited. The following is not meant as a procedure for running the tests nor as a way of determining the acceptability of a material for a particular application.

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UL 94 Flammability Ratings Summary

UL 94 describes the 5V test method in which the test flame is applied for up to five applications for five seconds each time. After testing the 5V, a test rating for the test is given as a 5VA or 5VB classification. The following is a simple explanation of each rating of the UL 94 Test 5V:

| | |
|-----------------------------|---|
| 5VA Surface Burn | Burning stops within 60 seconds after five applications of five seconds each of a flame (larger than that used in Vertical Burn testing) to a test bar. Test specimens MAY NOT have a burn-through (no hole). 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 (larger than that used in Vertical Burn testing) to a test bar. Test specimens MAY HAVE a burn-through (a hole). |

KYDEX® 100 has a 94 5VA rating for $\geq 2.00\text{mm}$ (0.078") and 94 5VB for $< 2.00\text{mm}$ (0.078") thicknesses.

KYDEX® T has a 94 5VA rating for $\geq 3.00\text{mm}$ (0.118") and 94 5VB for $< 3.00\text{mm}$ (0.118") thicknesses.

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UL 94 Test V

The three vertical ratings, V2, V1 and V0 indicate that the material was tested in a vertical position and self-extinguished within a specified time after the ignition source was removed. The vertical ratings also indicate whether the test specimen dripped flaming particles that ignited a cotton indicator located below the sample. The following is a simple explanation of each rating of the UL 94 Test V:

| | |
|--------------------------------|--|
| 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. This is the highest rating for the vertical burn test. |
| 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 on a 3mm (0.120") thick specimen with a burning rate is less than 76.20mm (3")/min or stops burning before the 127mm (5") mark. H-B rated materials are considered "self-extinguishing". This is the lowest (least flame retardant) UL94 rating. |

KYDEX® 100 has a 94 V-0 rating for all thicknesses 0.70mm (0.028").

KYDEX® T has a 94 V-0 rating for all thicknesses 0.70mm (0.028").

KYDEX® sheet UL 94 Listing at www.UL.com

To access KYDEX, LLC Company information:

1. Go to: www.ul.com
2. Click on certifications from the list on the left hand side of the screen.
3. Under "Begin A Basic Search" locate the UL file number space.
4. Type in E115252.
5. Click the "search" button or hit enter.
6. A "search results" screen should appear.
7. Click on one of the "link to file" choices to access the information you are seeking.
8. A complete UL 94 listing of KYDEX® sheet grades that were tested should appear, including their colours and the tests which were administered.

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