



UL PERFORMANCE LEVEL CATEGORIES

UL Performance Level Categories (PLC)

In order to avoid an excessive level of implied precision and bias, material performance for several tests are recorded as Performance Level Categories (PLC), based on the mean test results (rather than recording the exact numerical results), as indicated in the table following the test description.

Hot Wire Ignition (HWI)

Performance is expressed as the mean number of seconds needed to either ignite standard specimens or to burn through the specimens without ignition. The specimens are wrapped with resistance wire that dissipates a specified level of electrical energy.

HWI Range-Mean Ignition Time	Assigned PLC
120 seconds and longer	0
60 through 119 seconds	1
30 through 59 seconds	2
15 through 29 seconds	3
7 through 14 seconds	4
Less than 7 seconds	5

High-Ampere Arc Ignition (HAI)

Performance is expressed as the number of arc rupture exposures (standardized as to electrode type and shape and electrical circuit) which are necessary to ignite a material when they are applied at a standard rate on the surface of the material.

<u>HAI Range-Mean Number of Arcs</u>	<u>Assigned PLC</u>
<u>Needed to Cause Ignition</u>	
120 or greater	0
60 through 119	1
30 through 59	2
15 through 29	3
Less than 15	4



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High-Voltage Arc Tracking Rate (HVTR)

Performance is expressed as the rate in mm/min. that a tracking path can be produced on the surface of the material under standardized test conditions. Note is made if ignition of the material takes place. The results of testing the nominal 3 mm thickness are considered representative of the material's performance in any thickness.

<u>HVTR Range</u>	<u>Assigned PLC</u>
0 through 10 mm/min.	0
10.1 through 25.4 mm/min.	1
25.5 through 80 mm/min.	2
80.1 through 150 mm/min.	3
Greater than 150 mm/min.	4

Arc Resistance (D-495)

In accordance with ASTM D-495, performance is expressed as the number of seconds that a material resists the formation of a surface conducting path when subjected to an intermittently occurring arc of high voltage, low current characteristics. The results of testing the nominal 3 mm thickness are considered representative of the material's performance in any thickness.

<u>D-495 Range-Mean Time Of Arc Resistance</u>	<u>Assigned PLC</u>
420 seconds or Longer	0
360 through 419 seconds	1
300 through 359 seconds	2
240 through 299 seconds	3
180 through 239 seconds	4
120 through 179 seconds	5
60 through 119 seconds	6
Less than 60 seconds	7



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Comparative Tracking Index (CTI)

Performance is expressed as the voltage which causes tracking after 50 drops of 0.1% ammonium chloride solution have fallen on the material. The results of testing the nominal 3mm thickness are considered representative of the material's performance in any thickness.

<u>CTI Range-Tracking Index</u>	<u>Assigned PLC</u>
600 Volts and Greater	0
400 through 599 Volts	1
250 through 399 Volts	2
175 through 249 Volts	3
100 through 174 Volts	4
Less than 100 Volts	5