

**TABLE 1: OUTLINE OF THE EUROCLASS TABLES FOR CPR-RATED PRODUCTS**

EUROCLASS	Reaction to Fire			
<b>A<sub>ca</sub></b>	Gross heat of combustion EN ISO 1716	It's unlikely any cables will meet Class Aca or Class B1ca		
		Smoke Production	Flaming Droplets	Acidity
<b>B1<sub>ca</sub></b>	Flame Spread & Heat Release to EN 50399 (also known as a ladder test) and EN 60332-1-2 (Single cable vertical flame test)	Mandatory test for smoke production monitored during ladder test for s1, s2 and s3 If it passes s1 it can also undergo an additional higher level of test for s1a and s1b EN 61034-2	Optional additional observation during the ladder fire test to monitor flaming droplets  d0 - best d1 - middle d2 - worst	Optional separate test to measure the acidity of gasses given off. Measured as pH and conductivity μS/mm  a1 - best a2 - middle a3 - worst
<b>B2<sub>ca</sub></b>				
<b>C<sub>ca</sub></b>				
<b>D<sub>ca</sub></b>	Heat Release EN 50399 and EN 60332-1-2 (single cable vertical flame test)	Also known as the 3m <sup>3</sup> test for smoke production	EN 50399	EN 60754-2
<b>E<sub>ca</sub></b>	EN 60332-1-2 (single cable vertical flame test)	Basic test by independent authorised laboratory (notified body)		
<b>F<sub>ca</sub></b>	EN 60332-1-2 (single cable vertical flame test)	Factory or laboratory test (not necessarily notified body) but does not meet the requirements of class Eca		

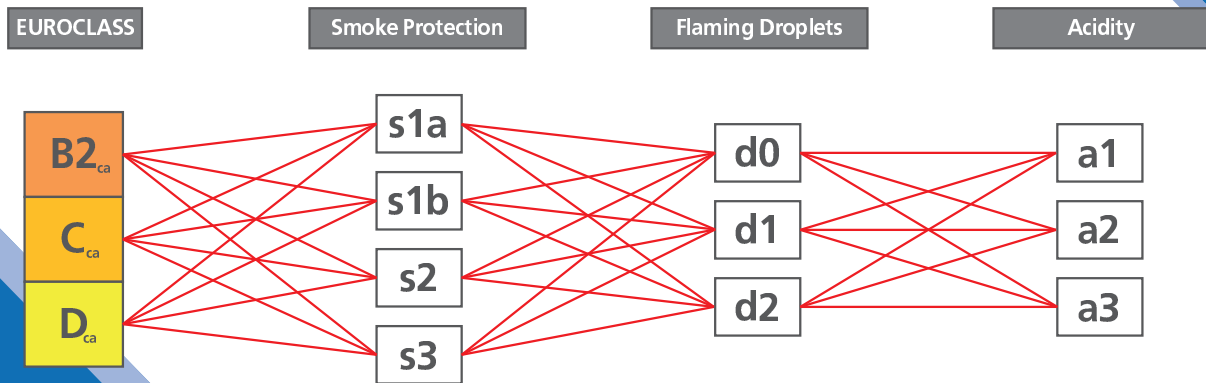
Classes A to E have to be tested by an independent authorised laboratory. (notified body). Most cables will fall into classes B2ca to Eca. For a cable to meet B1ca, B2ca or Cca, there also needs to be regular factory audits

# ADDITIONAL TESTS

Cables can be submitted for additional tests at Classes Dca, Cca, B2ca.

**Warning:** do not specify a class or take on a job until you have checked the availability and price of the cable. The product may not be available or cost several times what you may have expected.

**TABLE 2:** POTENTIAL CABLE PERFORMANCE PERMUTATIONS UNDER THE S.D.A CLASSIFICATION



**Smoke Production:** This is mandatory for Classes Dca, Cca, B2ca and measures smoke production, which is monitored during the ladder test (EN 50399). There is a further, optional smoke test to EN 61034-2.

**Flaming Droplets:** This is an optional observation to monitor flaming droplets during the ladder test to EN 50399.

**Acidity:** This is an optional separate test to EN 60754-2 which measures the acidity of gases given off.