

# DATASHEET

## BURNING & FLAMMABILITY TESTS

Manufacturers of electrical and electronic products and their components must prove that their goods meet relevant safety standard, including burning and flammability. The risk of uncontrolled fires must be avoided in all your products. Failure to do so could result in unexpected costs or worse, harm to customers and irreparable damage to brand reputation.

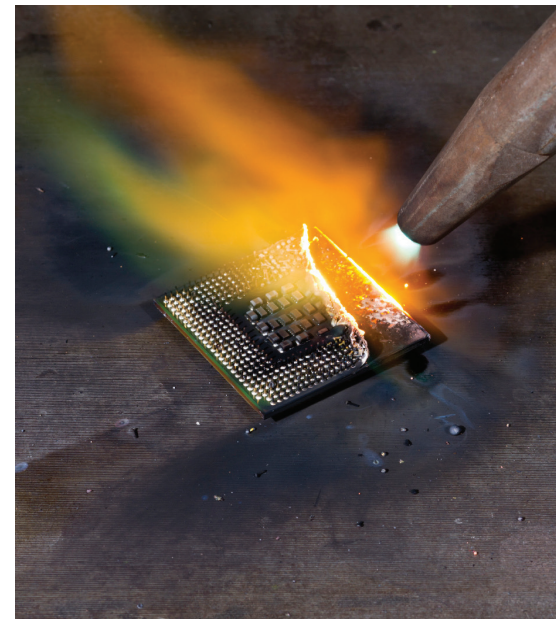
From PCBs to complete fire enclosures SGS can test a wide range of burning behaviours against the requirements of the many different safety standards (see table below for more detail).

Most commonly requested as part of the CE Mark application process, our burning laboratories conduct burn and flammability tests and deliver reports for approvals relating to:

- Flammability
- Combustibility
- Drops arising from burning

Timely test programmes and analysis of your product's properties by our experts helps you to gain a competitive advantage and achieve cost savings where possible. Beyond simply testing for compliance, we can help you to fully understand the flammable properties and burning behaviour of the materials you use and introduce preventive measures for fire protection to your designs.

Our highly trained technicians and auditors work with you to understand and support your existing compliance programme, or to create a new one tailored to your business needs.



SGS laboratories are qualified to perform burning and flammability tests against the broadest range of international standards and electrical and electronics product categories. See below:

### BURNING AND FLAMMABILITY TESTS FOR COMPONENTS, PARTS AND MATERIALS

EG.: TEXTILE, FABRICS, FLEECE, PLASTIC, RUBBER, NATURAL FIBRE COMPOSITES, FOAM

INTERNATIONAL TITLE	EUROPEAN TITLE	NATIONAL TITLE (E.G. GERMANY)	TITLE
IEC 60695-2-10	EN 60695-2-10	DIN EN 60695-2-10 VDE 0471-2-10	Fire hazard testing - part 2-10: glowing/hot-wire based test methods - glow-wire apparatus and common test procedure
IEC 60695-2-11	EN 60695-2-11	DIN EN 60695-2-11 VDE 0471-2-11	Fire hazard testing - part 2-11: glowing/hot-wire based test methods - glow-wire flammability test method for end-products
IEC 60695- 10-2	EN 60695-10-2	DIN EN 60695-10-2 VDE 0471-10-2	Fire hazard testing - part 10-2: abnormal heat - ball pressure test
IEC TS 60695-11-3			Fire hazard testing - test flames - 500 W flames - apparatus and confirmational test methods
IEC 60695-11-5	EN 60695-11-5	DIN EN 60695-11-5 VDE 0471-11-5	Fire hazard testing - part 11-5: test flames - needle-flame test method - apparatus, confirmatory test arrangement and guidance
IEC 60695-11-10	EN 60695-11-10	DIN EN 60695-11-10 VDE 0471-11-10	Fire hazard testing - part 11-10: test flames - 50 W horizontal and vertical flame test methods
IEC 60695-11-20	EN 60695-11-20	DIN EN 60695-11-20 VDE 0471-11-20	Fire hazard testing - part 11-20: test flames - 500 W flame test methods
IEC 60695-2-12			Fire hazard testing - part 2-12: glowing/hot-wire based test methods - glow-wire flammability index (GWFI) test method for materials
IEC 60695-2-13			Fire hazard testing - part 2-13: glowing/hot-wire based test methods - glow-wire ignition temperature (GWIT) test method for materials

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INTERNATIONAL TITLE	EUROPEAN TITLE	NATIONAL TITLE (E.G. GERMANY)	TITLE
UL 94			Flammability tests of plastic materials for parts in devices and applications
UL 1581			Reference standard for electrical wires, cables, and flexible cords. Restrictions: only vertical flame, FT1 and cable flame test.
UL 2556			Wire and cable test methods. Only vertical wiring FV-2, VW-1
		DIN 75200	Determination of burning behaviour of interior materials in motor vehicles
ISO 3795			Road vehicles, and tractors and machinery for agriculture and forestry - determination of burning behaviour of interior materials
FMVSS302			Flammability of interior materials (CFR 49 Part 571);
	ECE 118		Uniform technical prescriptions concerning the burning behaviour and /or the capability to repul fuel or lubricant of materials used in the construction of certain categories of motor vehicles
Telcordia GR-63-Core			NEBSTM requirements: physical protection. Restriction: only part 4.2 and 5.2.3 needle flame test.
IEC 60950-1	EN 60950-1	DIN EN 60950-1 (VDE 0805-1)	Information technology equipment - safety - part 1: general requirements. Annex: Fire protection housing (alternative to V5) Annex: Fire protection housing (alternative to V0, V1) & components Annex: Flaming oil (Tests of openings in fire protection ground)
TL 1011			VW, Audi, Seat Technical delivery condition; flammability of plastic materials
DBL 5307			Supply specification; flame retardant properties. Interior trim parts; requirements and test specifications.
TL 1010			Materials for vehicle interiors; burning behavior, material requirements
GMW 3232			Test method for determining the flammability of interior trim materials
STD 5031.19			Flammability of interior materials
GS 97038			Determination of burning behavior to automotive interior trim materials
SAE J 369			Flammability of polymeric interior materials; horizontal test method
ISO 3795			Road vehicle, and tractors and machinery for agriculture and forestry Determination of burning behavior to interior materials
PSA D45 1333			Materials inside passenger compartment; horizontal flammability
MS 300-08			Flammability resistance; interior materials
HES D 6003-09			Flammability test methods for automobile; interior materials
PTL 8501			Interior / flammability; requirement and testing
SES N 3245			Test method for flame-resistant interior materials and criteria for flame resistant property
TSM 055G			Flammability test methods for interior non-metallic materials
TRIAS 45			Test procedure for flame-resistant interior; materials of motor vehicles
GB 8410			Flammability of automotive interior materials
CMVSS 302			Flammability of interior materials
SASO 449 / GS 98			Motor vehicles flammability of interior materials and their testing methods

For further information please visit: [www.sgs.com/electrical-performance](http://www.sgs.com/electrical-performance) or contact us under [ee.global@sgs.com](mailto:ee.global@sgs.com).

WHEN YOU NEED TO BE SURE

SGS