

## FLAMMABILITY CHAMBER

### Combustibility & Burning Behaviour

Tests for determining combustibility or burning behaviour of specimens and products are being performed as part of regulatory approval procedures, research, product development and quality assurance.

Please find below some typical tests for evaluating the risk of flammability and ignitability

#### Automotive Sector

- DIN 75200 / FMVSS 302 (ECE-Reg. No. 118 Annex 6) Determination of burning behaviour of interior materials in motor vehicles -> »Horizontal Burning Rate«
- UTAC Drip Test NFP92-506 (ECE Reg. No. 118 Annex 7) Determination of melting behaviour of materials
- DIN EN ISO 6941 (ECE Reg. No. 118 Annex 8) Measurement of flame spread properties of vertically oriented textile fabric »Vertical Burning Rate«

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#### Building Materials & Products (-> DIN EN 13501)

- DIN EN ISO 11925-2 Single flame source test, ignitability when directly exposed to flame
- DIN 4102 B2 Single flame source test, classification of burning behaviour
- EN ISO 9239-1 / DIN 4102 P. 14 Reaction to fire tests for floorings, determination of the burning behaviour using a radiant heat source

#### Electrical Products & Appliances

- DIN EN ISO 60695-11-10, IEC 60695-11-10 procedure for comparing the relative burning behaviour of vertically or horizontally oriented specimens
- UL 94 Tests for Flammability of Plastic Materials for Parts in Devices and Appliances
- Glow wire test to assess the fire hazard according to DIN EN 60695-2-11 /-12 /-13 with DIN EN 60695-2-10 or VDE 0471-2-10 compliant test device

#### Electric Cables and Wires

- Evaluation of fire safety of electric cables
  - DIN EN 60332-1-2, IEC 60332-1-2
  - UL 1581
- Further devices for other fire or flammability tests on request.

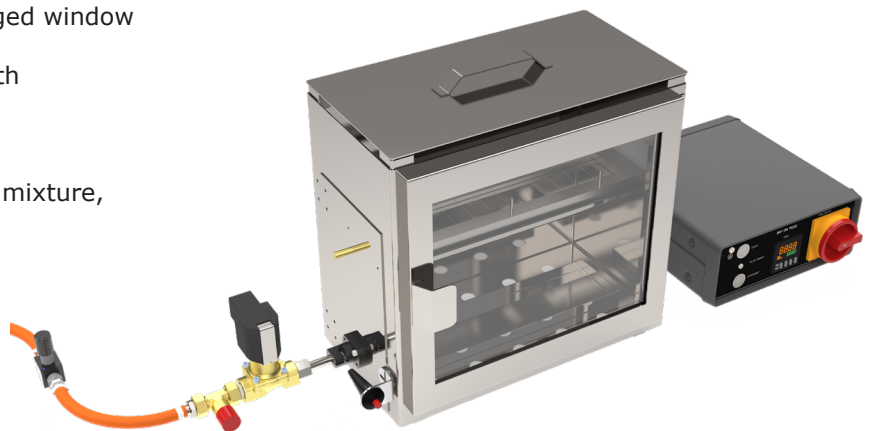
## Flammability Test Chamber according to DIN 75200, FMVSS 302, etc.

Test to determine the horizontal burning rate

Fire test chamber BKF has been designed for evaluating the burning behaviour of interior materials in motor vehicles when exposed to a small igniting flame. The device is applicable for individual or combined tests of all materials and components of inside furnishing. Purpose of the fire tester is determination of horizontal burning velocity acc. DIN 75200 and other equivalent / harmonized international standards.

### Features / Equipment:

- Flammability chamber (V4A) with hinged window
- Specimen holder A
- Specimen fixture B (cross-stringed with supporting wires)
- Fine adjustment valve and gas hose
- Collecting tray
- Burner (natural gas, methane/ethane mixture, propane)
- Flame safeguard



### Optional:

- Sample holder TL 1010 (VW)
- Exchangeable cover for test device according to DIN 75200 with thermocouple with display (e.g. Nissan, Toyota)
- Control unit with timer for switching solenoid valve after preset interval (see adjacent illustration)

### Test Standards & Regulations

- DIN 75200, PTL 8501, DBL 5307.10, FMVSS 302, NF ISO 3795, TL 1010 (with optional fixture), GB 8410 (with optional fixture), ECE-Reg. No. 118 Annex 6

### Technical data:

	BKF
<b>Dimensions</b>	
Width [mm], incl. protruding components	500
Height [mm]	385
Depth [mm]	245
Weight [kg]	22

## Flammability Tester according to UL94 / IEC 60695-11-x

Combination unit for manual and semi-automatic adjustment

The flammability tester is suitable for performing standard-compliant burning tests according to the following standards: UL 94, ASTM D635, D3801, D4804, D5048, D4986, IEC 60695-11-3, IEC 60695-11-4, IEC 60695-11-10 (replaces ISO 1210), IEC 60695-11-20 (replaces ISO 10351), IEC 707 (partially); ISO 9772, ISO 9773

### Features / Equipment:

- Robust combustion chamber with chamber walls made of blackened steel plates
- Ignition source for test flame
- Burner with shifting device and angle adjustment
- Two access holes in the front panel below the viewing window for manual tracking and adjustment of the burner
- Positioning system for specimen and burner for horizontal and vertical tests
- Sample holder for six Bunsen burner tests
- Flow meter and pressure regulator for gas integrated
- Stopwatch with resolution 0.1 s, start by automatic burner position recognition
- ASTM compliant flame calibrator with integrated temperature measuring module and exchangeable calibration sensors
- Gauges for sample cutting and flame adjustment
- Extraction fan, automatic interruption of gas supply when activated
- Interior lighting
- Test device on base frame / floor stand

### Optional:

- Flame monitoring (safe guard)
- Set of measuring devices and gauges for tests according to DIN EN 60695-11-10
- Tightly closing shut-off damper for exhaust air spigots with motorised actuator

### Alternatively:

- BK-UL 94 ECO (with manual adjustment / operation)



BK UL94



BK UL-94 ECO

### Technical data:

	BK-UL94	BK-UL94 ECO
<b>Dimensions</b>		
Dimensions, WxDxH [mm]	1170 x 770 x 1920	770 x 940 x 1170
Weight [kg], approx.	250	60
Connection for exhaust air [mm]	Ø 200	Ø 200
Connection for gas [mm]	Ø 4 hose (back side)	Ø 9 hose (back side)
Power supply [V/Hz]	230 (1N) / 50 (+/- 10%)	230 (1N) / 50 (+/- 10%)
Power [W], approx.	500	500

## Flammability Tester according to DIN EN ISO 11925-2 and DIN 4102 B2

Combination unit consisting of burner chamber, basic unit, specimen holder and gas burner

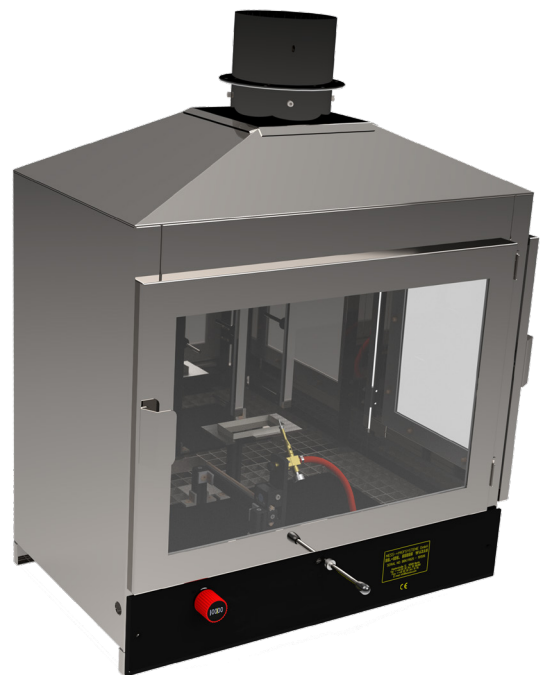
The flammability tester is suitable to perform standard-compliant combustion tests according to the following standards: DIN EN ISO 11925-2, DIN 4102-1 B2 und DIN 53438.

### Features / Equipment:

- Combustion cabinet with fan to generate a defined air flow according to DIN 4102 or DIN EN ISO 11925-2:2020-07
- Exhaust air spigot Ø150 mm, centred on the roof of the cabinet
- Special glass window, front and narrow side

### Instrument equipped with:

- Basic device
- Tripod
- Shifting device with tilting device 45
- Catch tray closed for EN 11925
- Wire mesh DIN 4102
- Bracket for lateral flaming
- Flame gauge 20 mm
- Adjustment tips for edge and surface flaming
- Fine adjustment valve with hose
- Specimen fixture BBK with template according to DIN 4102 B2
- Specimen fixture according to EN 11925-2 incl. sample template
- Specimen grips (vertical edge test) according to EN 11925-2
- Specimen fixture basket EN 11925-2 (for loose materials)
- Gas burner, according to DIN 4102 B2 as well as EN 11925-2



### Technical data:

	BKK2
<b>Dimensions</b>	
Dimensions outside, WxDxH [mm]	700 x 400 x 910
Dimensions inside, WxDxH [mm]	696 x 396 x 670
Weight [kg], approx.	40
Connection for exhaust air [mm]	Ø 150
Connection for gas [mm]	Ø 6 (hose)