

BECOME FUME CUPBOARD for TEACHING - IKASI

Mobile fume cupboard with wheels designed for use in educational establishments. It makes it possible to teach practical classes in the cabinet and allows students to follow instructions safely and with high visibility.

Laboratory fume cupboards must be suitable for the products that are handled and the operations that are carried out in them, depending on its effectiveness of both in terms of its location and installation and its proper use and maintenance in accordance with EN 14175 parts 1 to 7.

The extraction outlet to the ceiling is made of PP. The IKASI range has a stop control and the possibility to incorporate electrical and liquid services in the interior with external controls. There are two different storage areas to store compounds and tools, one at the top and one at the bottom.

- **Worktop**

The acrylic-polyurethane surface is an easy-to-clean surface that shows high resistance to a large number of aggressive chemical products. It has inherent antibacterial properties without the addition of microbial additives. It is a smooth surface with a highly cross-linked resin cured with a white electron beam curing (EBC) jet, integrated into the highly chemically resistant core. Stratified compact constructed with layers of cellulose fibre impregnated with perfectly polymerised phenolic resins between them and throughout its entire thickness, as a result of melting resins during the cooking cycle in a press at a pressure of 90 kg/cm² at a temperature of 150°C, achieving a material which is resistant to moisture.

The panels are an ideal choice in environments where hygiene, asepsis, sustainability, ergonomics and safety are important. This material is extensively used in a wide variety of laboratory environments around the world, including chemical, physical, analytical and microbiological laboratories.

Physical and mechanical characteristics

Physical and mechanical characteristics	Measurement
Density	>= 1.35 g/cm ³ (ISO 1183)
Tensile strength	>70 N/mm ²
Flexural strength	>100 N/mm ²
Modulus of elasticity	>=9000 MPa
Scratch resistance	>=Grade 4 (min.)
Wear resistance	>= 150-200
Impact strength	<10 N
Resistance to dry heat	>=Grade 4 (min.)
Burning behaviour	M-3 (UNE 23727-1990) D (UNE EN 13501-1:2002)

Ref. 2014 technical specifications

Chemical and stain resistance test. Test (SEFA 3-2010)

Test: Method A.

For volatile chemical substances: A cotton ball is saturated with the test substance, which is covered with a bottle for a period of 24 hours. Temperature of the test 23° +/- 2°C.

Test: Method B.

For non-volatile chemical substances: Apply 5 drops (1/4 cc) of each reagent on the surface, covering them with a watch glass (25 mm) for a period of 24 hours. Temperature of the test 23° +/- 2°C.

TRESPA TOPLAB PLUS White T 03.0.0					
No.	Reagent	Conc.	TEST METHOD	Rating	Comments
1	Amyl acetate		A	0	
2	Ethyl acetate		A	0	
3	Acetic acid	98%	B	0	
4	Acetone		A	0	
5	Acid dichromate	5%	B	0	

6	Butyl alcohol		A	0	
7	Ethyl alcohol		A	0	
8	Methyl alcohol		A	0	
9	Ammonium hydroxide	28%	B	0	
10	Benzene		A	0	
11	Carbon tetrachloride		A	0	
12	Chloroform		A	0	
13	Chromic acid	60%	B	0	
14	Cresol		A	1	Slight change in brightness
15	Dichloroacetic acid		A	1	Slight change in brightness
16	Dimethylformamide		A	0	
17	Dioxane		A	0	
18	Ethyl ether		A	0	
19	Formaldehyde	37%	A	0	
20	Formic acid	90%	B	0	
21	Furfural		A	1	Slight change in colour (brown)
22	Gasoline		A	0	
23	Hydrochloric acid	37%	B	0	
24	Hydrofluoric acid	48%	B	3	Surface attack and severe colour change (white)
25	Hydrogen peroxide	3%	B	1	Slight change in brightness
26	Tincture of iodine		B	1	Slight change in colour (yellow)
27	Methylethyl ketone		A	0	
28	Methylene chloride		A	0	
29	Mono chlorobenzene		A	0	
30	Naphthalene		A	0	
31	Nitric acid	20%	B	1	Slight change in colour (yellow)
32	Nitric acid	30%	B	1	Slight change in colour (yellow)
33	Nitric acid	70%	B	2	Significant stain (yellow)
34	Phenol	90%	A	1	Slight change in brightness
35	Phosphoric acid	85%	B	0	
36	Saturated silver nitrate		B	0	
37	Sodium hydroxide	10%	B	0	
38	Sodium hydroxide	20%	B	0	
39	Sodium hydroxide	40%	B	0	
40	Sodium hydroxide flake		B	0	
41	Saturated sodium sulphite		B	0	
42	Sulphuric acid	33%	B	0	
43	Sulphuric acid	77%	B	0	
44	Sulphuric acid	96%	B	0	
45	77% sulphuric acid : 70% nitric acid	(1:1)	B	1	Slight change in colour (yellow)
46	Toluene		A	0	
47	Trichloroethylene		A	0	
48	Xylene		A	0	
49	Saturated zinc chloride		B	0	

Ref. laboratory work - manufacturer's surface test

After 24 hours of exposure, the exposed areas are washed with water, then with a detergent solution and finally with isopropyl alcohol and dried with a cloth.

0 - No effect. No detectable change in the surface of the material.

1.- Excellent. Slight detectable change in colour or brightness, but with no alteration to the function or life of the material.

2.- Good. Noticeable staining to the colour or brightness, but with no significant alteration to the function or life of the material.

3.- Fair. Obvious change in appearance due to discolouration or chemical attack, with possible deterioration in function over a prolonged period of time.

Antibacterial

Species	Log reduction		% Reduction
	0	24	
<i>Escherichia coli</i>	1.5E+04	<1	>99.99%
<i>Escherichia coli</i>	1.3E+04	<1	>99.99%

Ref. manufacturer's technical specifications - Antibacterial 2006

The above data show the change in population after contact with the surface of the samples listed for 24 hours at 35°C under a relative humidity of more than 95%.

- **Sash**

Sash window built in sections of extruded aluminium, with guides to facilitate the movement of the 4 mm thick glass panes. (2+2 mm bi-laminar safety glass).

The sash is offset by means of counterweights fixed by steel cable.

Fixed window with safety glass (2+2 mm bi-laminar glass) mounted on aluminium sections.

- **Side and front walls**

The side and front walls of the cabinet are made of curved safety glass.

- **Mobility**

It has four wheels with a high load capacity. Two of the wheels are equipped with brakes.

- **Electricity**

Power sockets

1. 3 x 230 V. 50 Hz (P+N+PE), 16 A.
2. Magneto-thermal protection of 16 A. Type C.

Lighting

Lighting power 2 x 18 W.

Extraction

Start / stop control integrated under the worktop. The extraction connection depends on the system (refer to the final extraction design).

- **Diagram**

