

TRESPA®



TRESPA TOPLAB^{PLUS} – FOR CLEAN AND STERILE SURFACES

Today's laboratory needs to meet the highest international standards. Therefore selecting the right material for laboratory worktops and furniture is of crucial importance in an environment where tests and experiments must not be contaminated.

Hygiene, cleanliness, chemical and stain resistance are key requirements. Worktops in laboratories are especially vulnerable. The material used for them needs to be hygienic, easy to clean and maintain, durable, flexible and in line with international standards.

Increasingly, there is also an additional requirement to find environmentally friendly solutions – to minimise ecological impact and maximise effectiveness.

Trespa TopLab^{PLUS} - the ideal and flexible solution

Trespa TopLab^{PLUS} panels meet the requirements of most laboratories while at the same time bringing a range of additional benefits. These include chemical, wear and water resistance.

Trespa TopLab^{PLUS} is a self supporting flat panel with an integrated, decorative urethane-acrylic surface and a cellulose fibre reinforced phenolic resin core. A unique patented Electron Beam Curing (EBC) process ensures that each panel is non-porous and resistant to a large number of aggressive chemicals.

The surface is impermeable to reagents used in all types of laboratories and is resistant to the effects of wear and tear – making Trespa TopLab^{PLUS} ideal for use in labs used by different working groups, such as in educational institutions and industrial environments.

These properties make Trespa TopLab^{PLUS} highly suitable for use in medical and clean room conditions. It can be used in the most challenging environments for many years without losing its good looks or functions.

Trespa TopLab^{PLUS} - a sustainable and green product

Environmental considerations play a significant role in the development and manufacture of Trespa TopLab PLUS. For the production of Trespa TopLab PLUS panels, Trespa uses a method for converting softwood from certified forests into an attractive, durable, moisture resistant and low maintenance material. Trespa TopLab PLUS is an environmentally sound solution for laboratory worktop applications both today and tomorrow.





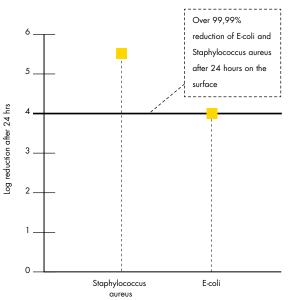


TRESPA TOPLABPLUS - A UNIQUE COMBINATION OF PROPERTIES

Antimicrobial performance

Thanks to its unique surface composition, Trespa TopLab PLUS is non porous. Its anti-microbial properties are incorporated in the product without the use of coatings or additives. This means that these properties will remain active throughout the product's lifetime. Bacteria, moulds and/or other micro-organisms are unable to grow or penetrate the surface. Bacteria stains will dry relatively fast on the surface – and bacteria will not find any source of nutrition on the material. Independent tests by the British Industrial Microbiological Services Ltd (IMSL) show a reduction in bacteria of 99.99% after 24 hours.

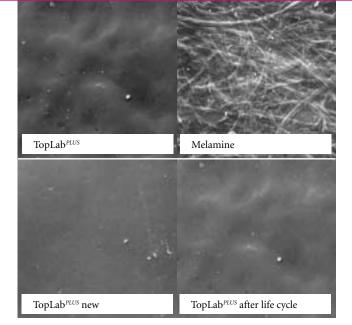
Reduction of colony forming units (cm²) on Trespa TopLab^{PLUS} surface



Tested by using the Japanese Industrial Standard JIS Z 2801: 2000.

The photographs have been taken with the aid of a Scanning Electron Microscope. They clearly demonstrate the difference between a surface produced with Trespa EBC technology (Trespa TopLab^{PUIS}) and a surface of traditional melamine.

These microscopic pictures of the urethane-acrylic surface of Trespa TopLab^{PLUS} show that there is no difference between fresh material and material with which 10 years of aggressive cleaning is simulated.





Cleanability

In an environment where hygiene is key, Trespa TopLab^{PLUS} provides the best choice. Its surface is absolutely impervious to all possible materials used in biochemical and medical laboratories: radio-isotopes, human tissue and blood samples or bacteria. Reliable biological or clinical test results are dependent on non-contamination. Trespa TopLab^{PLUS} provides a surface impermeable to bacteria, molds or micro-organisms. Resistant to dyes and organic solvents, Trespa TopLab^{PLUS} is water-resistant and remains easy to clean or disinfect.

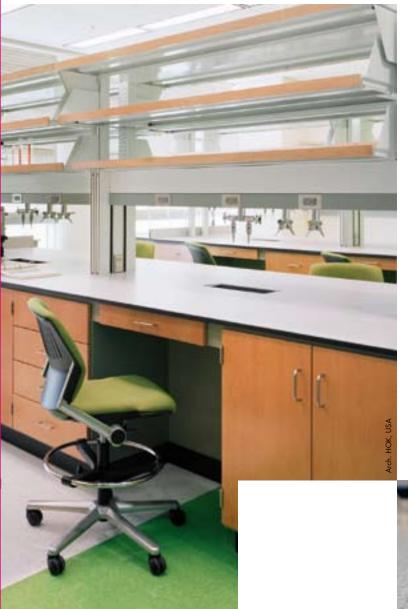
Thanks to the large size of Trespa TopLab^{PLUS} panels, the installation of large work tops with fewer joints is possible which fits the requirement for hygienic solutions. Trespa TopLab^{PLUS} is self supporting from 13 mm thickness and has a high load bearing ability. Installing large worktops is easy. Moreover, for added hygiene, panels need not be glued onto a sub-structure.

Chemical resistance

Used extensively in chemical, analytical, micro-biological and educational laboratories world-wide, Trespa TopLab^{PLUS} is resistant to a large number of aggressive chemicals. They will not mark a Trespa TopLab^{PLUS} surface - if cleaned within 24 hours. Test results show the panel's 24 hour resistance (see separate Trespa TopLab^{PLUS} test datasheet).

Durability

Trespa TopLab^{PLUS} is ideal for a multi-functional environment. Trespa TopLab^{PLUS} worktops are versatile and provide a tough and long-lasting surface that retains its good looks for many years. Used as part of a mobile and flexible environment, Trespa TopLab^{PLUS} delivers added strength to any laboratory or lecture room. The material's impact resistance makes it suitable for use in e.g. trolley tops.







TRESPA TOPLAB^{PLUS} – MEETING MARKET NEEDS

Design flexibility & fast transformation

Today's laboratory is a fast moving professional working environment. On the one hand it needs to house an array of testing and technical equipment as well as computers and their peripherals. On the other hand, there is a need for frequent changes to accommodate new tests or changes in operating requirements.

Trespa TopLab^{PLUS} facilitates the fast transformation of the laboratory. The material offers maximum design flexibility because it behaves in a similarway to hardwood. It can be machined and formed to meet the particular needs of the laboratory. Sinks, drainage holes, grooves and other accessories can be incorporated. Once installed, Trespa TopLab^{PLUS} can be easily adapted to accommodate changes in working practice. It can be recut and retrofitted with new taps, sinks or other equipment, without losing its exceptional performance characteristics and its appearance.

Pleasant working environment

A well appointed and attractive laboratory provides an efficient, effective and pleasant environment. Trespa TopLab PLUS brings additional benefits aesthetics. Panels are available in a range of colours to suit the specific needs of the facility's users.

Trespa TopLab^{PLUS} has a non-reflecting smooth surface. This makes it highly suitable as a multi-functional surface on which laboratory equipment, computers and general work, such as administration, analysis and research, can all be combined.

Trespa TopLab^{PLUS} is also available with an integrated decorative surface on both sides which widens the design possibilities and offers chemical and mechanical strength on those areas where it is needed on both sides. Shelves, compartments ... A workstation can be tailored to specific needs and still meet all the requirements of a laboratory.

Certification

Trespa TopLab^{PLUS} meets all the highest standards as laid down by leading national and international certifying authorities. The Greenguard Environmental Institute has awarded Trespa TopLab^{PLUS} the Greenguard Indoor Air Quality and the Child School Certification. Trespa TopLab^{PLUS} holds IMSL certification for hygiene and anti-microbial performance and the ISEGA certificate of conformity.







Sustainability

Trespa International actively undertakes to maximise the performance of its products, whilst minimising their effects on the environment and on human health. Trespa was one of the first producers of panel materials to receive ISO 14001 accreditation for setting up, implementing, sustaining and improving a fully integrated environmental management system.

Trespa International supports its product-range with Life Cycle Analyses (LCAs) – studies which detail the environmental impact of each of their products throughout its life from "cradle to grave" – in terms of energy use, raw materials etc.

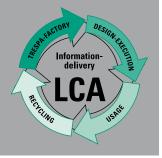
Totally safe

The production of Trespa TopLab PLUS is environmentally responsible and totally safe in use. Trespa TopLab PLUS panels are based on thermosetting resin, homogeneously reinforced with up to 70% softwood fibres from European renewable forests. Of the raw materials used, approximately 85% is rapidly renewable. At the end of the life-cycle, Trespa's products can be thermally recycled safely with energy recovery in local industrial incinerators. No heavy metals, halogens or biocides are emitted.

A logical choice

Trespa TopLab^{PLUS} has been applied as the material of choice for many high standard laboratories around the world. With a strong emphasis on performance, cleanliness, environmental impact and aesthetics, Trespa TopLab^{PLUS} is the ideal surface solution for your laboratory.









Trespa International B.V.

Trespa International B.V. specializes in high quality panel material for façade cladding and interior use. Trespa has both the expertise and the means to develop products for specific segments of the market. Trespa is continually looking for ways to protect the environment even more effectively.

Trespa guarantees quality of both products and services. We offer our customers optimal technical support as well as straightforward documentation. Proof of this approach is the award of the ISO 9001 and ISO 14001 certificates.





Whatever your requirements, Trespa offers a full support service. Please contact us for further information.

Conditions of SaleTo all our offers, quotations, sales, deliveries and supplies and/or agreements, and to all related services and activities the Trespa International B.V. General Conditions of Sale apply, filed at the Venlo Chamber of Commerce on 11 April 2007, registered under number 24270677, and appearing on the website at www.trespa.com. The text of these General Terms and Conditions will be sent to you upon request.

Responsibility

All information is based on our current state of knowledge. It is intended as information concerning our products and their application possibilities, and is therefore not intended as any form of guarantee with regard to any specific product characteristic.

The colours in this document are printed, and therefore, may vary slightly from the original Trespa panel colours with respect to gloss, colour shades and surface texture. Original samples are available on request.

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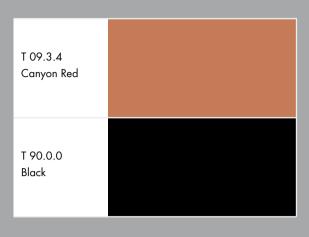
Your Trespa distributor:



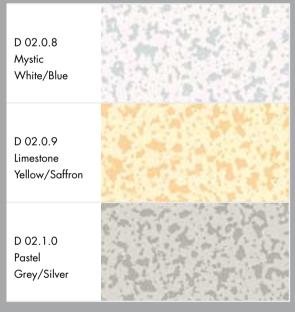
COLOUR CARD TRESPA TOPLABPLUS

Uni colours

T 18.0.1 Mystic White	
T 03.0.0 White	
T 03.1.0 Pastel Grey	
T 30.0.1 Polar Green	
T 05.0.1 Limestone Yellow	
T 03.4.0 Silver Grey	
T 21.1.1 Glacier Blue	



Speckles



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TRESPA TOPLABPLUS - CHEMICAL RESISTANCE

(24 HOURS EXPOSURE)

Test procedure

The test was conducted by applying 5 drops of each reagent on the surface, covered with a watch glass (except those marked**). Chemicals marked ** were tested with a saturated cotton ball covered by a bottle. All chemicals were tested at room temperature for a period of 24 hours, rinsed off with water and evaluated.

Test results

No effect: No detectable stain, loss of gloss or change in work surface material.

Excellent: Slight stain or loss of gloss, but no change to the function, smoothness or life of the work surface material. Good: A clearly discernible stain or loss of gloss, but no change to the function, smoothness or life of the work surface material.

Fair: Unacceptable staining or discernible deterioration or etching of the work surface material.

Failure: Severe stain or moderate deterioration, pitting cratering or etching of work surface material.

		No effect	Excellent	Good	Fair	Failure
Acids						
Acetic Acid	99%	•				
Acid Dichromate	5%	•				
Chromic Acid	60%	•				
Formic Acid	90%	•				
Hydrochloric Acid	10%	•				
Hydrochloric Acid	37%	•				
Hydrofluoric Acid	48%					
Nitric Acid	20%	•				
Nitric Acid	30%		•			
Nitric Acid	65%			-		
Nitric Acid	70%			-		
Nitric Acid 65% : Hydrochloric Acid 37%	(1:3)	-				
Perchloric Acid	60%	•				
Phosphoric Acid	85%	-				
Sulphuric Acid	25%	-				
Sulphuric Acid	33%	-				
Sulphuric Acid	77%	•				
Sulphuric Acid	85%	•				
Sulphuric Acid	98%		•			
Sulfuric Acid 77% : Nitric Acid 70%	(1:1)			•		
Sulfuric Acid 85% : Nitric Acid 70%	(1:1)			-		
Bases						
Ammonium Hydroxide	28%	•				
Sodium Hydroxide	10%	-				
Sodium Hydroxide	20%	•				
Sodium Hydroxide	40%	•				
Sodium Hydroxide Flake		•				
Salts						
Copper Sulphate	10%	•				
Ferric(III)chloride	10%					
Potassium Iodite	10%					
Potassium Permanganate	10%					
Saturated Zinc Chloride	. 0,70					
Silver Nitrate	1%					
Sodium Chloride	10%					
Sodium Hypochlorite	13%					
Halogens						
lodine (Crystals)						
lodine Solution (0.1 N)						
Tincture of Lodine						
Organic Chemicals						
Cresol						
Dimethylformamide						
Formaldehyde	37%					
Furfural	J, 70					

		No effect	Excellent	Good	Fair	Failure
Gasoline						
Hydrogen Peroxide	3%	-				
Phenol	90%	-				
Sodium Sulfide Saturated		-				
Solvents * *						
Acetic Anhydride		-				
Acetone		-				
Acetonitrile		-				
Amyl Acetate		•				
Benzene		•				
Butyl Alcohol		-				
Carbon Tetrachloride		-				
Chloroform						
Dichlor Acetic Acid		-				
Dichloromethane						
Dioxane						
Diethyl Ether						
Ethylacetate		-				
Ethylalcohol		-				
Ethylene Glycol		-				
Methylalcohol		-				24 RESIS
Methylene Chloride		-				- <4
Methylethylketone		-				RESIS
Methylisobutylketone		-				
Mono Chlorobenzene						
Napthelene		-				
n-Butyl Acetate						
Tetrahydrofurane						
n-Hexane		-				
Toluene						
Trichloroethylene						
Xylene						
Biological Stains						
Acridine Orange	1%					
Alizarin Complexone Dihydrate	1%					
Aniline Blue, water soluble	1%					
Basic Fuchsin	1%					
Carbol Fuchsin	1%					
Carmine	1%					
Congo Red	1%					
Gentian Violet (dye)	1%					
Eosin B	1%					
Giemsa Stain	1%					
Malachite Green Oxalate	1%					
Methyl Violet 2B	1%	•				
Methylene Blue	1%	-				
Safranine O	1%					
Sudan III	1%					
Wright Stain	1%	-				
Most conventional cleaning agents	170	-				

The chemicals mentioned in the above table include the 49 chemicals/concentrations listed by SEFA (Scientific Equipment and Furniture Association) as well as the main reagents from the PSI (Professional Service Industries/Pittsburgh Laboratory Division).

All information is based on our current state of knowledge. It is intended as information concerning our products and their application possibilities, and is therefore not intended as any form of guarantee with regard to any specific product characteristic. Test results differ per colour.

Although the tests have been conducted according to the standard, it is recommended that users conduct their own tests: convince yourself that Trespa TopLab^{PLUS} is the only true multifunctional worktop!

DELIVERY PROGRAMME TRESPA TOPLABPLUS

Panel sizes	3050 x 1530 mm	120 x 60 in				
	2550 x 1860 mm	100 x 73 in				
Туре	Coloured on one side, non dec	Coloured on one side, non decorative black reverse				
	Coloured on both sides	Coloured on both sides				
Surface structure	Crystal Matt on decor side(s):					
	Crystal Matt is a very fine surface structure with a matt sheen,					
	recommended for horizontal ap	recommended for horizontal applications Satin on the reverse side				
	Satin on the reverse side					
Quality	Standard / black core	Standard / black core				
Panel thicknesses	13 mm	1/2 in				
	16 mm	5/8 in				
	20 mm	3/4 in				
	25 mm	1 in				

MATERIAL PROPERTIES TRESPA TOPLABPLUS

Properties Physical Properties	Metric Value	US Value	Standard
Specific gravity	≥ 1.350 kg/m³	≥ 84.28 lbs/ft³	ISO 1183
Weight	= 1.000 kg/ iii	= 04.20 ibs/ ii	100 1100
Thickness 13 mm	18.5 kg/m²	3.8 lbs/ft ²	
Thickness 16 mm	22.5 kg/m ²	4.6 lbs/ft ²	
Thickness 20 mm	28.0 kg/m ²	5.7 lbs/ft ²	
Thickness 25 mm	35.0 kg/m ²	7.2 lbs/ft ²	
Panel tolerance	0,		
Length & Width	- 0.0/+5 mm	- 0.0/+0.2 in	EN 438
Thickness	± 0.6 for 13 mm	± 0.024 for 1/2 in	
	± 0.7 for 16 mm	± 0.028 for 5/8 in	EN 438
	± 0.8 for 20 and 25 mm	± 0.032 for 3/4 -1 in	
Optical properties			
Changes when subjected			
to dry heat			EN 438
Gloss	4 (= slight change, only visible		
Colour	4 (= slight change, only visible		
Cracking	5 (= no changes)		
Mechanical properties			
Modulus of elasticity	\geq 9.000 N/mm ²	1.305.000 psi	ISO 178
Tensile strength	≥ 70 N/mm ²	10.150 psi	ISO 527-2
Flexural strength	≥ 100 N/mm ²	14.500 psi	ISO 178
Resistance to impact by			
large diameter ball	≤ 10 mm	≤ 0.24 in	EN 438
Scratch resistance	≥ 4 Rating		EN 438
Wear resistance			
Initial point	≥ 150 Revolutions		EN 438
Wear value	≥ 350 Revolutions		
Thermal properties			
Application temperature			
peak, max. 20 min.	+ 180 °C	356 °F	
Fire classification			
Europe	Type standard	Euroclass D-s2,d0	EN 13501:1

Disclaimer: All Trespa samples and all Trespa panels are produced within the specified tolerances. Samples and production panels do not originate from the same production batch. The colour perception is by nature influenced by slight variations in pigments used as well as by the angle of observation.

Please check www.trespa.com for the latest version of the material properties and delivery programme.