FORMICA® COLLECTION LABORATORIES

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Design for performance

Whatever the application, **Formica® high pressure laminate** products (HPL) provide supreme performance for scientific, educational, industrial and commercial laboratory environments.

Solve your unique project challenges with the ideal product, based on the level of chemical resistance required and overall performance demands. A carefully selected range of décors provides continuity of design throughout entire projects.

A choice of products engineered to meet specific end-use requirements, without compromising on decorative quality.

The perfect high-performance products for demanding environments

Chemtop®2 and **Formica® Compact** are totally complementary materials and, since the decor range is common to both materials, products can be 'mixed and matched' to enable interior solutions that are both cost-efficient and perfectly suited to specific project needs.

Chemtop®2

CHEMICAL RESISTANT LAMINATES *by* FORMICA GROUP

Exceptional performance for critical applications demanding high levels of chemical and stain resistance.
Chemtop2 technology features an advanced chemical-resistant surface engineered for demanding areas where relatively harsh acids, alkalis, corrosive salts or other destructive, staining substances are used as in laboratory work surfaces, fume cupboards and splashbacks.

Formica® Compact

STRUCTURAL INTERIOR LAMINATES *by* FORMICA GROUP

The perfect choice for areas where durability, hygiene and cleanliness are important, with moderate resistance to everyday chemicals.
Formica Compact laminate provides an inherently high level of chemical resistance and superb physical performance where risks from harsher chemicals are reduced such as shelving, screening, computer workstations and ante-room furniture.

Two products. Real solutions.

Two ideal solutions for the most challenging spaces and applications where surfaces are exposed to chemicals, stresses, impact and general wear and tear.

Chemtop®2 and **Formica® Compact** feature impressive resistance and physical properties ensuring reliable performance year after year.

- Impressively strong and damage-resistant
- Durable and easy to maintain
- Hygienic and easily cleaned
- Inert-surface does not support microbial growth
- Formica® Laminate has been independently tested to ENV1186 and passed as suitable for uses involving contact with foodstuffs

ENVIRONMENTS

Chemical laboratories / Medical laboratories / Scientific laboratories
Photographic laboratories / Clean rooms / Nursing stations
Salons and Spas / Commercial and manufacturing operations

APPLICATIONS

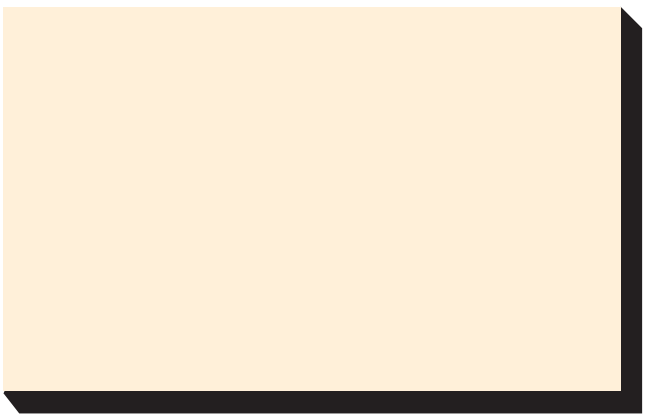
Work surfaces / Benches and tables / Fume cupboards / Lockers
Cabinets / Counters / Shelving / Screens / Splashbacks
Desking / Wall panelling

Two products. One range.

A practical range of designs for most applications and working environments.

F2255 Polar White
NCS S 0500-N

DTM (CH1 grade)
MAT (CGS grade)

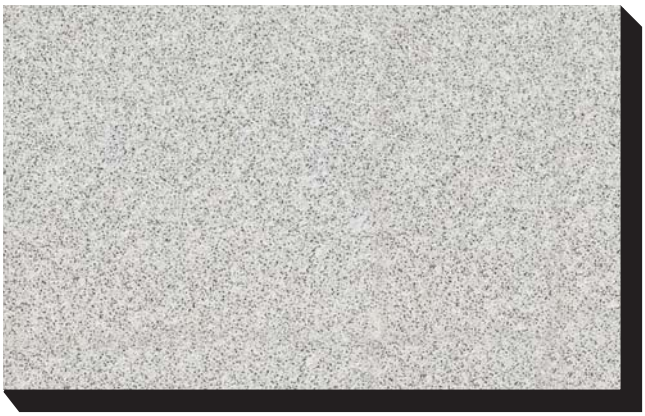


F7932 Antique White
NCS S 0804-Y30R

DTM (CH1 grade)
MAT (CGS grade)

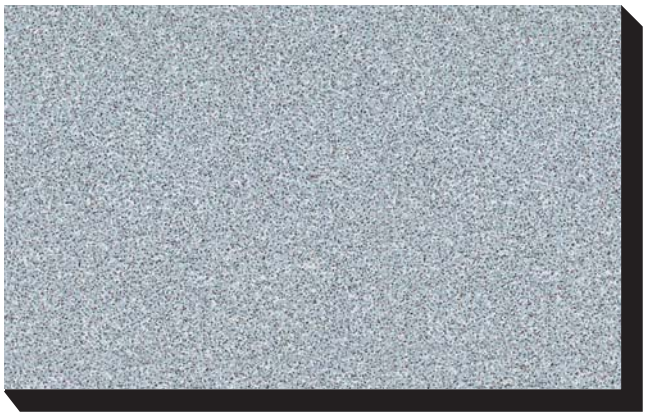
F7927 Folkestone
NCS S 2500-N

DTM (CH1 grade)
MAT (CGS grade)



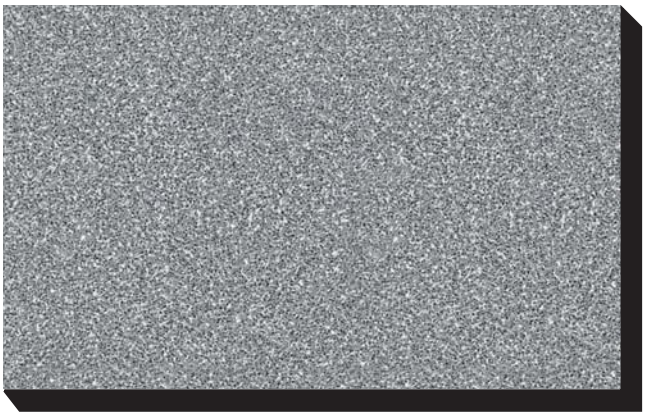
F7507 Folkestone Grafix

DTM (CH1 grade)
MAT (CGS grade)



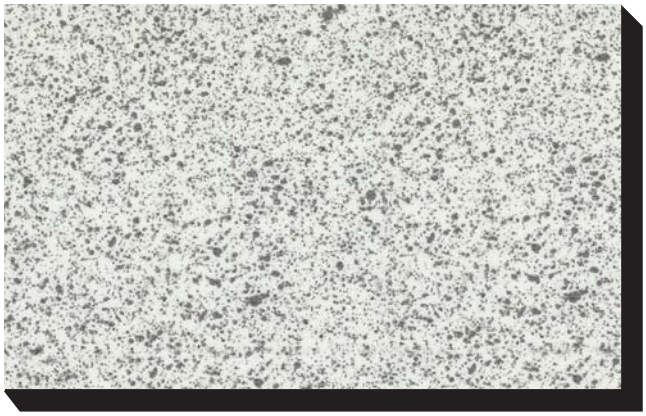
F7522 Blue Silk Grafix

DTM (CH1 grade)
MAT (CGS grade)



F7508 Mouse Grafix

DTM (CH1 grade)
MAT (CGS grade)



F1936 Lava Dust

DTM (CH1 grade)
MAT (CGS grade)

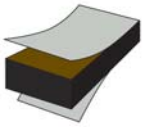
F1787 Grey Dust

DTM (CH1 grade)
MAT (CGS grade)

Printed samples are shown at approximately 1:1 scale


F7927
Folkestone

	Code	Name	Chemtop®2 Grade	Chemtop®2 Sheet size (mm) 3050x1300x16	Chemtop®2 Sheet size (mm) 3660x1525x16	Formica® Compact Grade	Formica® Compact Sheet size (mm) 3050x1300x16	Formica® Compact Sheet size (mm) 3660x1525x16
	F1787	Grey Dust	CH1	DTM	DTM	CGS	MAT	MAT
	F1936	Lava Dust	CH1	DTM	DTM	CGS	MAT	MAT
	F2255	Polar White	CH1	DTM	DTM	CGS	MAT	MAT
	F7507	Folkestone Grafix	CH1	DTM	DTM	CGS	MAT	MAT
	F7508	Mouse Grafix	CH1	DTM	DTM	CGS	MAT	MAT
	F7522	Blue Silk Grafix	CH1	DTM	DTM	CGS	MAT	MAT
	F7927	Folkestone	CH1	DTM	DTM	CGS	MAT	MAT
	F7932	Antique White	CH1	DTM	DTM	CGS	MAT	MAT

	Grade description	Grade designation	Grade code
	Chemtop®2 CHEMICAL RESISTANT LAMINATES by FORMICA GROUP Compact, General Purpose, Standard ***Advanced resistance to harsh chemicals** (16mm nominal thickness). Black core (one good side).	CH1	CU
	Formica® Compact STRUCTURAL INTERIOR LAMINATES by FORMICA GROUP Compact, General Purpose, Standard High Pressure Decorative Laminate. Provides resistance to over 40 chemicals (16mm nominal thickness).	CGS	21

	Finish description	Finish designation	Finish code
Chemtop®2 CHEMICAL RESISTANT LAMINATES by FORMICA GROUP	Matte	DTM	DT
Formica® Compact STRUCTURAL INTERIOR LAMINATES by FORMICA GROUP	Matte 58	MAT	58

Chemtop®2 and **Formica® Compact** laminate are also available, on a make-to-order basis, in thin (0.7mm) postforming grade HPL (CTM finish, CHT grade). This enables the creation of work surfaces and other bonded components with integral upstands and down stands, eliminating joints and seams at critical positions in the finished installations.


F1787
Grey Dust

Chemical and stain resistance

Chemtop®2 provides exceptional performance against harsh chemicals and stains, surpassing the stain resistance requirements of EN 438:2005. It has been additionally tested against a variety of harsh chemicals and reagents with the test procedure of 5 drops of each reagent being applied on the surface and covered with a watch-glass. The chemicals were tested over 24 hours with no effects. Reagents marked with an asterisk (*) may have caused slight changes in gloss or colour depending on the duration of exposure.

Acids

Hydrochloric acid 10%	Hydrochloric acid 37%	Sulphuric acid 33%	Sulphuric acid 98%*
Nitric acid 30%	Nitric acid 65%*	Phosphoric acid 85%	Acetic acid 99%
Chromic acid 60%			

Bases

Ammonium Hydroxide 28%

Biological Stains

Arcidine orange 1%	Basic fuchsin 1%*	Carbol fuchsin 1%*	Malachite green oxalate 1%
Methylene blue 1%	Methyl violet 2B 1%*	Wright stain 1%	Gentian violet (dye) 1%*
Most conventional cleaning agents			

Organic Chemicals

Formaldehyde 37%	Furfural 10%

Salt

Silver Nitrate 1%	Potassium permanganate 10%*	Ferric (III) chloride 10%	Copper sulphate 10%
Sodium hypochlorite 13%	Sodium chloride 10%		

Solvents

Acetone	Ethylalcohol	Ethylene glycol	Methylethylketone
Dichloromethane	Ethylacetate	Acetic anhydride	n-Butyl acetate
n-Hexane	Methylalcohol	Methylisobutylketone	Tetrahydrofurane
Toluene	Trichloroethylene	Xylene	

Chemical and stain resistance

Formica® decorative laminates have been widely and satisfactorily used for many years in laboratories in medicine and industry. They easily meet the requirements of EN 438:2005, which specifies resistance to staining by over 40 substances which are likely to be encountered in everyday use. These include tea, coffee, milk, citric acid, acetone, alcohol, fruit juices, detergents, bleaches and colouring agents, but do not include chemicals more likely to be found in laboratories.

No effect after 16 hours contact time

Acetic acid	Acetone	Ammonia	Alcohol
Amyl acetate	Benzene	Butyl acetate	Carbon tetrachloride
Caustic soda (<10%)	Citric acid	Detergents	Olive oil
Paraffin	Phenol	Petrol	Soap
Sugar solution	Toluene	Xylene	

No effect if the material is removed completely after 10-15 minutes

Caustic soda (>10%)	Ferric chloride	Formic acid	Hair dye
Hypochlorite bleach	Hydrochloric acid (<10%)	Hydrogen peroxide (<30%)	Iodine
Nitric acid (<10%)	Oxalic acid	Phosphoric acid (<10%)	Potassium permanganate
Silver nitrate	Sulphuric acid (<10%)		

Permanent staining or surface attack probable, necessitating immediate removal

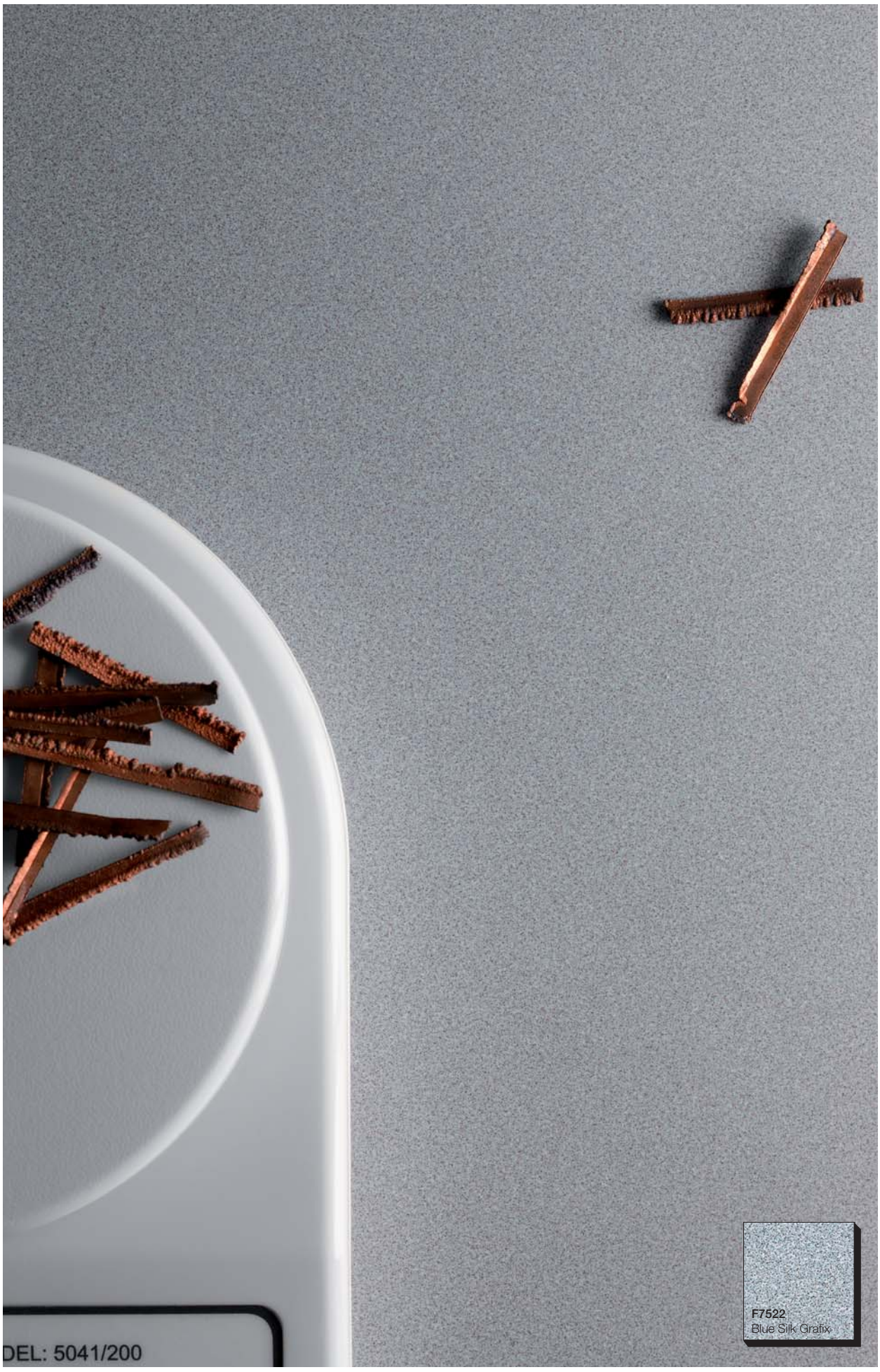
Hydrochloric acid	Nitric acid	Phosphoric acid	Sulphuric acid (>10%)


F2255
Polar White

Physical performance

Property	Test Method	Property / Attribute	Unit (max or min)	Values
Resistance to surface wear	EN 438-2-10	Wear resistance	Revolutions (min) *Initial point* *Wear value*	 150 350
Resistance to impact by large diameter ball	EN 438-2-21	Drop height (a)	mm (min) >4 ≤6 mm thickness mm (min) >6 mm thickness	1400 1800
Resistance to scratching	EN 438-2-25	Force	Rating (min) (see Annex A) *Smooth finishes* *Textured finishes*	 2 3
Resistance to dry heat (180 °C)	EN 438-2-16	Appearance	Rating (min) *Gloss finish* *Other finishes*	 3 4
Resistance to wet heat (100 °C)	EN 12721:1997	Appearance	Rating (min) *Gloss finish* *Other finishes*	 3 4
Resistance to immersion in boiling water	EN 438-2-12	Mass increase Thickness increase Appearance	% (max) >4 ≤6 mm thickness >6 ≤20 mm thickness % (max) >4 ≤6 mm thickness >6 ≤20 mm thickness Rating (min) *Gloss finish* *Other*	5 2 6 2 3 4
Dimensional stability at elevated temperature	EN 438-2-17	Cumulative Dimensional Change	% (max) Thickness >4 ≤6 mm L (b) T (c) Thickness >6 ≤20 mm L T	 0.40 0.80 0.30 0.60
Resistance to staining	EN 438-2-26	Appearance	Rating (min) *Groups 1 & 2* *Group 3*	 5 4
Light fastness (xenon arc)	EN 438-2-27	Contrast	Grey scale rating	4 to 5
Resistance to water vapour	EN 438-2-14	Appearance	Rating (min) *Gloss finish* *Other*	 3 4
Resistance to crazing	EN 438-2-24	Appearance	Grade (min)	4
Flexural modulus	EN ISO 178:2003 (d)	Stress	Mpa (min)	9000
Flexural strength	EN ISO 178:2003 (d)	Stress	Mpa (min)	80
Tensile strength	EN ISO 527-2:1996 (e)	Stress	Mpa (min)	60
Density	EN ISO 1183-1:2004	Density	g/cm3 (min)	1.35
Thickeness	EN 438-2-5	Dimensional tolerance	mm >12 ≤16 mm thickness >16 ≤ 20 mm thickness	 ± 0.60 ± 0.70
Flatness (g)	EN 438-2-9	Dimensional tolerance	mm/m ≥10 mm thickness	 ± 3
Length and Width (h)	EN 438-2-6	Dimensional tolerance	mm	+10 / -0
Straightness of Edges	EN 438-2-7	Dimensional tolerance	mm/m	1.5
Squareness	EN 438-2-8	Dimensional tolerance	mm/m	1.5

(a) When tested at the specified drop height, the diameter of indentation shall not exceed 10mm.
(b) L = in the longitudinal (or machine) direction of the fibrous sheet material (normally the direction of the longest dimension of the laminate).
(c) T = in the cross-longitudinal (cross-machine) direction of the fibrous sheet material (at right angles to direction L).
(d) Machine crosshead speed 2 mm/min.
(e) Specimen type 1A. Machine crosshead speed 5 mm/min.
(f) Tested in accordance with procedure A using specimen III.
(g) Provided that the laminates are stored in the manner and conditions recommended by the manufacturer they shall comply with the flatness requirements specificed in this table when measured in accordance with EN 438-2-9. The flatness values specified in this table apply to laminates with two decorative faces. Limits for laminates with one face sanded shall be agreed between supplier and customer.
(h) Tolerances for cut-to-size panels shall be agreed between supplier and purchaser.



F7522
Blue Silk Grafix

Chemtop®2 and **Formica® Compact** can be cut, shaped and routed to produce contemporary and practical interiors and the distinctive black core can be shaped and polished to create a striking design feature. As it needs no bonding to substrates, 16mm **Chemtop2** and **Formica Compact** laminate are simple and quick to fabricate and install.

Chemtop2 and **Formica Compact** laminate can also be made available, on a make to order basis, in most decors from the Colors, Patterns and Woods ranges in the Formica Collection, (minimum order quantities and lead times apply). Certain technical restrictions might apply to **Chemtop2** decor availability.

Note: Because of the special **Chemtop2** manufacturing process, exact matches between **Chemtop2** products and **Formica Compact** laminate and/or standard laminates are not possible. We recommend the comparison of actual samples before specification, fabrication or installation. Butt joint matches are not recommended.

Care and maintenance

Chemtop2 and **Formica Compact** laminate surfaces may be cleaned with a damp cloth and mild detergent.
For stubborn stains, use non-scratch liquids or creams in conjunction with a nylon bristle brush.
Stubborn stains may also be removed by use of organic solvent or hypochlorite bleach, followed by wiping with a soft, damp cloth.
Ink marks can be removed with methylated spirits or acetone on a clean cloth.
Organic solvents such as white spirit and cellulose thinners can also be used to remove paint splashes and graffiti.
After using a cleaner, rinse the surface with clean water and dry with a soft cloth.
Do not use acid-based ceramic cleaners and limescale removers, as they may cause permanent staining. Wash any spillage or splashes of these cleaners from the surface immediately.

Use of abrasive cleaners, powders, scouring pads, steel wool, sandpaper, etc., will damage the finish of each and can permanently reduce the stain and chemical resistance of the **Chemtop2** surface.
Good laboratory practice dictates that all chemical spills should be wiped up promptly.
If in doubt about the suitability of a particular cleaner or detergent, check with the manufacturer of the cleaning product.
Do not use furniture polish, as this can cause build up of silicone wax on the surface that can cause discolouration and smear marks.
Do not cut directly onto the surface of **Chemtop2** or **Formica Compact** laminate.

Chemtop2 and **Formica Compact** laminate surfaces should be protected from damage caused by heat, such as heat created from Bunsen burners. The Bunsen burner should be placed on a trivet to protect the surface.

For more information on storage, handling and fabrication please visit **www.formica.com**

NCS Natural Color System®
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reducing with the Carbon Trust
CO2
We have committed to reduce the carbon footprint of this product
carbon-label.com

BUREAU VERITAS Certification
ISO 14001:2004

CE
Nº 0402

GREENGUARD Indoor Air Quality Certified

FSC www.fsc.org FSC® C106553
The mark of responsible forestry

Formica Group are FSC® certified and comply with the requirements of FSC. Network of participating European Formica Group sites is shown on certificate number TTCOC-003588.


F2255
Polar White

Designs given in this publication have been matched as closely as printing conditions allow. We do recommend, however, that you order samples before final specification, fabrication or installation, as the colour samples in the brochure may differ in shade, hue, tone or brightness to the products purchased.

The Company retains the right to change specifications, product offer and range content at any time without prior notification.

The information given in this brochure is correct at the time of publication. However, as we have a policy of constant product development and improvement, product details may change in the future.

Formica Group is committed to making sustainable principles and practices a part of everything we do. We strive to adhere to the highest ethical standards as we advance in our efforts to protect vital resources for future needs.

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