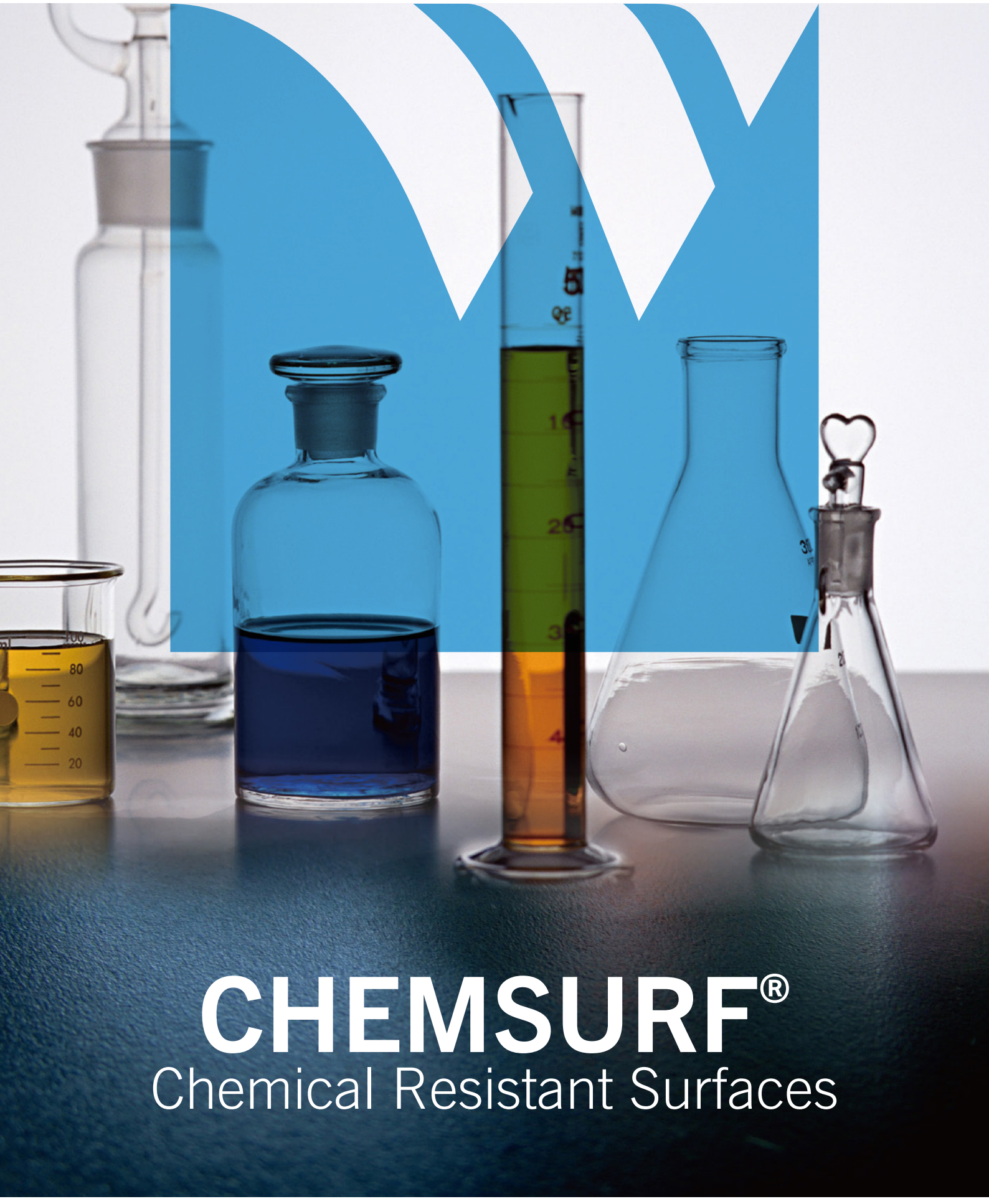


CHEMSURF®

Chemical Resistant Surfaces

Wilsonart®

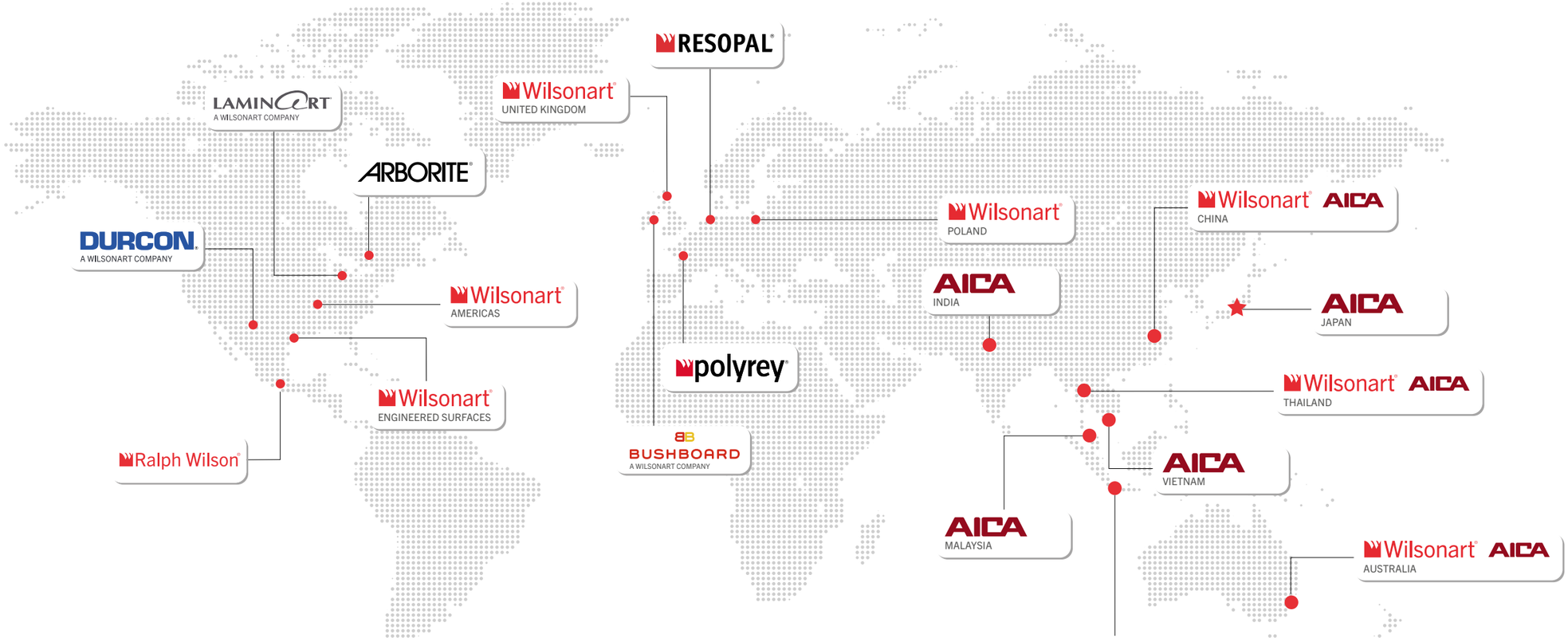
Wilsonart Asia-Pacific by AICA Group

WELCOME TO WILSONART

Wilsonart is recognised as one of the global leaders pioneering decorative engineered surfaces. With manufacturing facilities in 16 locations including North America, United Kingdom, France, Germany, China, Thailand and Australia, Wilsonart has developed an enviable reputation in solutions for healthcare, aged care, education, office, retail, hospitality and residential market segments.

Wilsonart is known for its innovation in decorative panels, high pressure and specialty laminates that reflect the latest trends, through a focus on colour, texture and performance.

CONTENTS



1956 — Ralph Wilson Plastics (now Wilsonart) founded by Mr. Ralph Wilson in Temple, Texas, USA

1961 — First 5'X12' press

1964 — A publicly held corporation，the first golden age

1975 — Invented chemical-resistant laminate and patented Chemsurf®

1976 — Launched decorative metal-look laminate

1982 — Began distribution of anodized aluminum panels

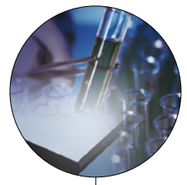
1995 — Known as Wilsonart International Inc.. Launched Marker board laminate. Introduced custom-made laminates

1996 — Established Wilsonart (Shanghai) Co., Ltd. for the Asian market

1997 — Shanghai, China production base broke ground. Acquired Resopal® in Germany and Arborite® in Canada

2005 — Launched HD® High Definition® laminate with AEON™ technology

2008 — Protector®, the third generation of chemical resistant compact laminate, was born



2011 — Launched Class-A noncombustible panel

2013 — Famous epoxy resin panel Durcon® joined in Wilsonart family

2016 — Australian LPM Panel production facility acquired

2019 — AICA Group invested Wilsonart's Asia-Pacific subsidiaries

2020 — Launched Solid Surfaces

WILSONART® BRINGS YOU INTO A NEW ERA OF LABORATORY

When the surface spec requires resistance to the hardest of acids, bases and solvents but not at the expense of design and style, Wilsonart® Chemsurf® answers the challenge. Specifically designed for highly corrosive environments, Chemsurf® provides exceptional chemical and wear resistance in an extensive array of decorative patterns. This versatile product is an ideal alternative to slate, stainless steel or epoxy when either cost or weight is prohibitive, and is also preferable for applications where the use of cleaning agents is indiscriminate.

WILSONART® CHEMSURF CHEMICAL-RESISTANT HPL LAMINATE

Available in postforming grade High Pressure Laminate, Wilsonart Chemsurf offers practicality without sacrificing design and style. And is often less expensive upfront and over its life cycle than alternatives such as stainless steel, or slate while also being more versatile.
Intended for both horizontal and vertical applications, Wilsonart® Chemsurf laminate can be applied and is perfect for areas that are vulnerable to chemical attack.
Ideal for benchtops, doors, splash backs and low traffic, low equipment use areas.
Range of ten decors, including neutrals and accent colours.

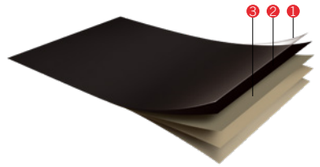
WILSONART® CHEMSURF PROTECTOR CHEMICAL-RESISTANT COMPACT LAMINATE

As the inventor of chemical-resistant laminate, WILSONART® has been devoted to the new product development and technology improvement and always been the leader in the industry. Specific applications include laboratory cabinets, casework, counters and tabletops in hospitals, photographers' darkrooms, beauty salons and product testing facilities. Chemsurf® is ideal for nurses' stations, physicians' and dentists' examining and treatment rooms and pathologists' work rooms. It is also the practical and attractive surfacing for wainscoting in any of these areas.

VARIOUS THICKNESS

As a smart source provider, we do our best to provide customers with the most suitable products. Various specifications are given to meet different needs of the customers.

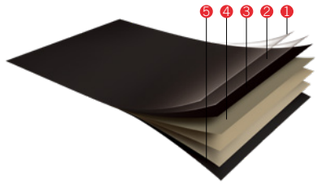
Product Composition



Wilsonart Chemsurf HPL

Postforming grade thin laminate, an ideal surface material for less traffic application.

1. Chemical Resistant Film
2. Decorative Paper
3. Kraft Paper



Wilsonart Chemsurf Protector Compact

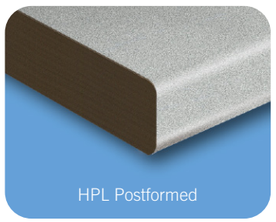
Self-supporting structural material to provide one solution for high traffic and most corrosive application.

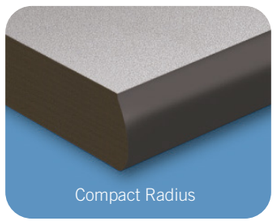
1. Chemical Resistant Film+Protector Scratch Resistant Armour
2. Overlay Paper+Protector Scratch Resistant Armour
3. Decorative Paper
4. Kraft Paper
5. Logo Paper

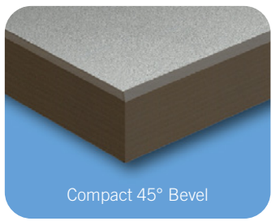
Product Specification

Type	Colour Option	Sheet Size (mm)	Thickness (mm)	Application
Chemsurf HPL	10 (different colors may have different sheet size)	3660*1220 3050*1220 3660*1530	0.8 (to be bonded with substrate)	Door Cabinet Splash back Low-use Bench
Chemsurf Protector Compact	4	3660*1525	12.7 (2-sided decor) 16 (surface decor only)	High Traffic Most Corrosive Tabletop and Shelf

Edge Treatment







CHEMSURF® DECOR RANGE

Wilsonart® Chemsurf® offers varieties of patterns for customers to choose from.

Designer White D354

Graphite Nebula 4623

Frosty White 1573 — Also in Compact

Black 1595 — Also in Compact

Soft Grey 1500

Atlantis D25 — Only in 3660x1220mm

Fashion Grey D381 — Also in Compact

Island D498 — Only in 3050x1220mm

North Sea D90 — Also in Compact

Orange Grove D501 — Only in 3050x1220mm

Two Sizes 3660x1220mm: Benchtops / 3660x1350mm: HPL Panel & Vertical

The colour image on our catalogue is subject to the accuracy of printing limitations. Please review actual samples before specifying and ordering.

Fashion Grey D381, Tabletop
Island D498, Shelf

SCRATCH RESISTANCE

The worktops could be damaged by the movement of the equipment on the surface. If customers require enhanced scratch resistance, please consult your local Wilsonart sales representative for a ready solution with performance greater than 4N.

Fashion Grey D381

CHEMICAL AND STAIN RESISTANCE

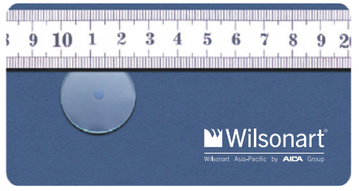
Wilsonart® Chemsurf® has been chosen by our customers widely around the world in the past 40 years because of its excellent performance.

Applied Areas								
Education	R&D Center		Application &Testing		Biological & Hospital		Dental Clinic	
Perfect Chemical-Resistant Performance								
Acids	Nitric Acid	√	Solvents	Acetone	√	Bases	$NaBH_4$	√
	Sulfuric Acid	√		Cresol	√		$LiAlH_4$	√
	Hydrochloric Acid	√		Toluene	√		BuLi	√
	……			……			……	
General Reagents	Aluminon	√	Stains and Indicators	Cresol Red	√			
	Gasoline	√		Crystal Violet	√			
	Lodine	√		Sudan III	√			
	……			……				

Note: The performance list of chemical and stain resistance on page 28-30.

Test Procedure (Per Reference Diagram)

1. Clean the test specimen with a clean, dry and soft cloth prior to the test.
2. Two drops (one drop: 1/20cc) of the test chemical is placed on the test specimen surface. The chemical is covered with a watch glass (45mm) for a period of 24 hours at the room temperature (23°C).
3. Rinse the test chemical with water after 24 hours and dry with a cloth. Evaluate the effect from the test specimen.



Chemsurf® VS. Other Work Surface Materials

	Chemsurf®	Epoxy	Ceramic
H_2SO_4	0	2	2
HF	0	3	3
HNO_3	0	2	1
NaOH	0	0	0

Rating key: 0=No effect, 1=Excellent, 2=Good, 3=Fair

Test Standard: SEFA 3-2010


Fashion Grey ˊ D381

VARIOUS APPLIED AREAS

Wilsonart® Chemsurf Protector is an excellent choice for the worktops of laboratory furniture, fume hood etc., which are frequently exposed to chemical or bacteria pollution, such as those in the scientific research institutions and testing facilities in the industries of chemistry, pharmacy, food and cosmetics, and those in the healthcare facilities such as hospital reception desks, nurse stations, healthcare offices etc.. Other than all these, all testing organizations, all environment-related departments like waste water treatment factories, dark rooms for photography and beauty salons are all to find Wilsonart® Chemsurf Protector with high performance.


Black 1595


Fashion Grey D381


Black 1595, Tabletop
Atlantis D25, Cabinet

UNIVERSITY


LOVE
CHEMISTRY
LOVE
CHEMISTRY
LOVE
CHEMISTRY
LOVE
CHEMISTR

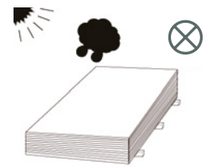
HOSPITAL AND PHARMACEUTICAL FACTORY

RESEARCH INSTITUTIONS

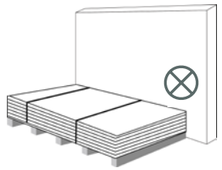
OTHERS

STORAGE GUIDE

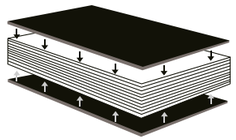
(1) No direct exposure to sunlight. Recommended warehouse temperature 24℃ , RH 45%.



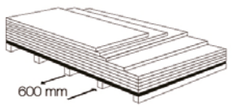
(2) Strictly no direct contact against wall when store.



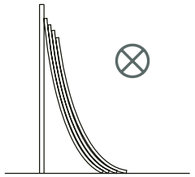
(3) No direct contact with floor. Top and bottom with cover sheets. Wrap one stack with plastic film to avoid wet.



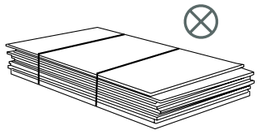
(4) Use strong and flat pallet. Bottom cover sheet with a thickness ≥3mm and a size bigger than panel. Pallet reinforcement distance ≤600mm.



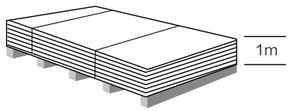
(5) Horizontal storage ONLY and Strictly No vertical stacking.



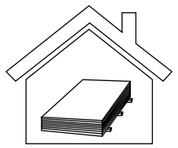
(6) Lay the panels neat and flat. Arrange big to small size sequentially from the bottom to the top.



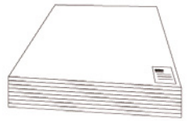
(7) One stack height≤1m
Maximum Stacking Height ≤3m



(8) Conditioning at job site for at least 72 hours before installation.

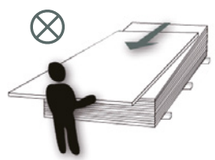


(9) Face the side with Wilsonart label upward.

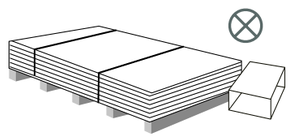


TRANSFER GUIDE

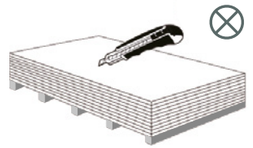
(1) No pull or drag while lifting/moving.



(2) Not crashing the corner with hard objects.



(3) Strictly not scratching surface with sharp objects.

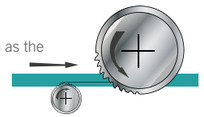


(4) Lift vertically upward manually or by suction machine.

PROCESSING AND INSTALLATION GUIDE

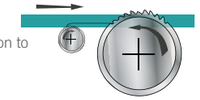
(1) Keep the blade sharp and cutting trail narrow. A small blade to cut the surface open before the master blade to make the cutting even and smooth.

The same direction as the pre-cutting.



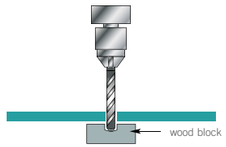
(2) Adjust the height of blade position and cutting in angle to minimize broken edge. Blade position higher if edge broken on face side, blade position lower if edge broken on back.

The opposite direction to pre-cutting.



(3) Use professional drilling tools with a 60° angled drilling head.

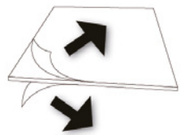
(4) Decrease the speed and pressure of the drilling head in a progressive manner. Put a wood block under the drilling hole.



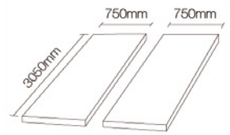
(5) Reserve at least 1.5mm undrilled in depth for blind drilling. Reserve at least 3mm from the hole to each surface for parallel drilling.

(6) Drilling head with a diameter 0.05mm bigger than the inner diameter of the drilling hole.

(7) Keep the protective film of both sides while fabrication. Peel off the film simultaneously after fabrication.



(8) Cut the panel along machine direction (lengthwise).

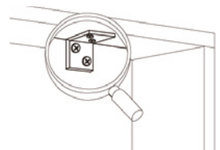


(9) Apply general-purpose sealant or structural adhesive first before fixing the worktop with hardware. Joint along the same lengthwise or widthwise of two panels.

(10) Recommend 3mm expansion space between two joint panels. Recommend at least 5mm expansion space while panel to be jointed with wall or other building materials.

(11) Fix the worktop every 80cm by right-angled hardware and flat head screw (diameter 5mm).

(12) Drill holes by multi-stage gun drill to pinpoint the drilling depth.



(13) Allow enough expansion space between two joint worktops. Recommend silica gel to seal the joint in damp environment.·

(14) No panel joint adjacent to the water tank. No panel joint the position of water tank.

PERFORMANCE LIST OF CHEMSURF®

Chemical and Stain Resistance Test

	Applied Areas	Education	R&D	Application & Testing	Biology & Hospital	Dental Clinic
	Acids					
1	Acetic Acid (all concentrations)	√	√	√	√	-
2	Aqua Regia	√	√	√	√	-
3	Chromic Trioxide (Chromic Acid Cleaning Solution)	√	√	√	√	-
4	Formic Acid (all concentrations)	√	√	√	√	-
5	Glacial Acetic Acid 99% (concentrated)	√	√	√	√	-
6	Hydrochloric Acid (all concentrations)	√	√	√	√	-
7	Hydrofluoric Acid 48% (concentrated)	√	√	√	√	-
8	Nitric Acid (65%)	√	√	√	√	-
9	Perchloric Acid	√	√	√	√	-
10	Phosphoric Acid (all concentrations)	√	√	√	√	-
11	Picric Acid 1.2% (0.05M)	√	√	√	√	-
12	Sulfuric Acid (98%)	√	√	√	√	-
13	Tannic Acid (sat.)	√	√	√	√	-
14	Uric Acid (sat.)	√	√	√	√	-
	Solvents					
15	Acetone	√	√	√	√	-
16	Amyl Acetate	√	√	√	√	-
17	Amyl Alcohol	√	√	√	√	-
18	Butyl Alcohol	√	√	√	√	-
19	Carbon Disulfide	√	√	√	√	-
20	Carbon Tetrachloride	√	√	√	√	-
21	Chlorobenzene	√	√	√	√	-
22	Chloroform	√	√	√	√	-
23	Cresol	√	√	√	√	-
24	Dimethylformamide	√	√	√	√	-
25	Dioxane	√	√	√	√	-
26	EDTA	√	√	√	√	-
27	Ethyl Acetate	√	√	√	√	-
28	Ethyl Alcohol	√	√	√	√	-
29	Ethyl Ether	√	√	√	√	-
30	Formaldehyde	√	√	√	√	-
31	Isopropyl Alcohol	√	√	√	√	-
32	Methanol	√	√	√	√	-
33	Methyl Ethyl Ketone	√	√	√	√	-
34	Methylene Chloride	√	√	√	√	-
35	Naphthalene	√	√	√	√	-
36	N-Hexane	√	√	√	√	-
37	Phenol (all concentrations)	√	√	√	√	-
38	Tetrahydrofuran	√	√	√	√	-
39	Toluene	√	√	√	√	-
40	Trichloroethane	√	√	√	√	-
41	Xylene	√	√	√	√	-
	Bases					
42	Ammonium Hydroxide (all concentrations)	√	√	√	√	-
43	BuLi	√	√	-	-	-
44	KOH65%	√	√	√	√	-
45	$LiAlH_4$	√	√	-	-	-
46	NaH	√	√	-	-	-
47	$NaBH_4$	√	√	-	-	-
48	Sodium Hydroxide (all concentrations)	√	√	√	√	-
49	Sodium Sulfide 15%	√	√	√	√	-
	General Reagents					
50	Acid Etch	-	-	-	-	√
51	Alconox(Lab. Detergent)	√	√	√	√	-
52	Aluminon	√	√	√	√	-
53	Ammonium Phosphate	√	√	√	√	-
54	Aromatic Ammonia	√	√	√	√	-
55	Benedicts Solution	√	√	√	√	-
56	Bromogeramine 5%	-	-	-	√	√
57	Bromogeramine Tincture	-	-	-	√	√
58	Calcium Hypochlorite (concentrated)	√	√	√	√	-
59	Camphorated Parachlorophenol	√	√	√	√	-
60	Camphor-phenol Mixture	-	-	-	-	√
61	Colloid Acid Etch	-	-	-	-	√
62	Cellosolve	√	√	√	√	_
63	Copper Sulfate	√	√	√	√	_
64	Dental Cresol Water	-	-	-	-	√
65	Dental Zinc Phosphate Cement	-	-	-	-	√
66	Dental Iodine	-	-	-	-	√
67	Desensitizer	-	-	-	-	√
68	Entoiodine	-	-	-	√	-
69	Enhanced Valeraldehyde Disinfector 2%	-	-	-	√	√
70	Elastic Mould Paste	-	-	-	-	√
71	Ethylene Glyco	√	√	√	√	-
72	Eucalyptol	-	-	-	√	-
73	Eugenol	-	-	-	√	√
74	Formalin	√	√	√	√	-
75	Gasoline	√	√	√	√	-
76	General Acid Etch for Dentine And Ename	-	-	-	-	√
77	Hydrogen Peroxide 3%	√	√	√	√	√
78	Hydrogen Peroxide 34%	√	√	√	√	√
79	Karl Fisher Reagent	-	-	√	√	-
80	Kerosene	√	√	√	√	-
81	Lactated Ringers	√	√	√	√	-
82	Light-cured Acid Etch	-	-	-	-	√
83	Light-cured Adhesive	-	-	-	-	√
84	Light-cured Composite Resin	-	-	-	-	√
85	Light-cured Composite-resin Type Adhesive For Enamel	-	-	-	-	√
86	Lodine	√	√	√	√	-
87	Lodine Glycerin	-	-	-	-	√
88	Lysol	√	-	-	√	-
89	Magnesium Sulfate 50%	-	-	-	√	-
90	Methyl Methacrylate	√	√	√	√	-
91	Mineral Oil	√	√	√	√	-
92	Monsel's Solution (Ferric Subsulfete)	√	√	√	√	-
93	Naphtha	√	√	√	√	-
94	Petroleum Jelly	√	√	√	√	-
95	Pine Oil	√	√	√	√	-
96	Phosphate Buffered Saline (PBS)	√	√	√	√	-
97	Phenolic Alcohol 3%	-	-	-	√	√
98	Poly Carboxylic Zinc Cement	-	-	-	-	√
99	Potassium Permanganate	√	√	√	√	-
100	Povidone Iodine	√	√	√	√	-
101	Procaine	-	-	-	√	-
102	Quaternary Ammonia Compounds	√	√	√	√	-
103	Separating Medium	-	-	-	-	√
104	Silver Nitrate	√	√	√	√	_
105	Sterile Pack Fluid I	-	-	-	√	√
106	Sodium Azide	√	√	√	√	-
107	Sodium Chromate	√	√	√	√	-
108	Sodium Fluoride Glycerine Paste	-	-	-	-	√
109	Sodium Hypochlorite 5%	√	√	√	√	-
110	Sodium Thiocyanate	√	√	√	√	-

PERFORMANCE LIST OF CHEMSURF®

	Applied Areas	Education	R&D	Application & Testing	Biology & Hospital	Dental Clinic
111	Sucrose 50%	√	√	√	√	-
112	Thymol & Alcohol	√	√	√	√	-
113	Tincture of Mercurochrome	-	-	-	√	-
114	Tincture of Iodine	-	-	-	√	-
115	Tincture of Merthiolate	-	-	-	√	-
116	Trisodium Phosphate 30%	√	√	√	√	√
117	Urea	√	√	√	√	-
118	Vegetable Oils	√	√	√	√	-
119	Water	√	√	√	√	√
120	Zephiran Chloride	-	-	-	√	-
121	Zinc Chloride (all concentrations)	√	√	√	√	-
122	Zinc Oxide Ointment	-	-	-	√	-
123	0.02% Furacilinum	-	-	-	√	√
124	Glass Ionomer Cement	-	-	-	-	√
125	Methyl Methacrylate	-	-	-	-	√
126	3008 SBMP Multi-function Treating Agent	-	-	-	-	√
127	3009 SBMP Multi-function Adhesive	-	-	-	-	√
128	Metal Cleaning Agent	-	-	-	-	√
129	Zinc Phosphate Cement	-	-	-	-	√
130	GIC	-	-	-	-	√
	Stain and Indicators					
131	Ag Eosin Bluish 5% in Alcohol	√	√	√	√	-
132	Bromothymol Blue	√	√	√	√	-
133	Bromocresol Green Solution	-	-	-	√	-
134	Bromocresol Purple Solution	-	-	-	√	-
135	Cresol Red	√	√	√	√	-
136	Crystal Violet	√	√	√	√	-
137	Gentain Violet 1%	√	√	√	√	-
138	Giemsa Bloodstain Giemsa	√	√	√	√	-
139	Gram Stains	√	√	√	√	-
140	Malachite Green	√	√	√	√	-
141	Methylene Blue	√	√	√	√	-
142	Methyl Orange	√	√	√	√	-
143	Methyl Red	√	√	√	√	-
144	Nigrosine	√	√	√	√	-
145	Phenolphthalein	√	√	√	√	-
146	Safranin O	√	√	√	√	-
147	Sudan III	√	√	√	√	-
148	Thymol Blue	√	√	√	√	-
149	Wright's Blood Stain	√	√	√	√	-

Educational Labs refer to all kinds of chemical, physical and biological labs of universities and schools. Research Labs refer to both basic science and applied science labs in Scientific Research Institutes or R&D center of the enterprises. Application & Testing Labs refer to the quality control labs of enterprises, as well as the inspection & quarantine labs. Biological & Chemical Industry Labs refer to drug research centers and various pharmaceutical work shops. Hospitals Labs refer to surgeries, chemical examination rooms and clinical inspection labs in hospitals.

Postforming grade and compact may have different chemical resistant performance to certain reagents. Specific technical data could be obtained through sales representative.

ANTIMICROBIAL ACTIVITY (Chemsurf Protector)

Antimicrobial performance of Wilsonart Chemsurf® is tested in accordance with ISO 22196:2011 standard:

- Klebsiella pneumoniae ATCC 4352
- Staphylococcus aureus ATCC 6538P
- Escherichia coli ATCC 8739
- Enterococcus faecalis ATCC 29212
- Salmonella enterica subsp. Enterica ATCC 14028

PHYSICAL PROPERTY

Chemsurf Protector Compact**	Test Standard	Unit	Typical Value*	EN Standard (CGS Values)
Resistance to surface wear	EN 438-2:2016	Revolutions	170	150 (min.)
Resistance to immersion in boiling water				
Mass increase	EN 438-2:2016	%	1.0	2 (max.)
Thickness increase	EN 438-2:2016	%	1.5	2 (max.)
Surface rating scale	EN 438-2:2016	rating	5	3 (min.)
Edge rating scale	EN 438-2:2016	rating	5	3 (min.)
Resistance to water vapour	EN 438-2:2016	rating	5	3 (min.)
Resistance to dry heat (160°C)	EN 438-2:2016	rating	5	3 (min.)
Resistance to wet heat (100°C)	EN 438-2:2016	rating	5	4 (min.)
Dimensional stability at elevated temperature	EN 438-2:2016	%	0	0.30 (max.)
Resistance to impact by large diameter ball	EN 438-2:2016	mm	2000	1800 (min.)
Resistance to crazing	EN 438-2:2016	rating	5	4 (min.)
Resistance to scratching (Chemsurf)	EN 438-2:2016	rating	4	2 (min.)
Resistance to scratching (Protector)	EN 438-2:2016	rating	5	2 (min.)
Water absorption	EN ISO 62:2008	%	0.5	/
Density	EN ISO 1183-1:2012	g/cm³	1.38	1.35 (min.)
Flexural Test				
Flexural Strength	EN ISO 178:2010/Amd.1:2013	MPa	131	80 (min.)
Flexural Modulus	EN ISO 178:2010/Amd.1:2013	MPa	12800	9000 (min.)
Rockwell Hardness	EN ISO 2039-2:1999	L	112	/
Tensile Strength	EN ISO 527-1:2012 EN ISO 527-2:2012	N	3720	/

Physical property performance of Wilsonart Chemsurf Protector is tested in accordance with EN standard.

* Typical values are measured under standard test method which may vary subject to different colors, finishes and thickness. Typical values are for reference ONLY and could not serve as the benchmark for quality claim.

**Physical property performance of Wilsonart Chemsurf HPL could be obtained through Wilsonart Sales Representative.

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