

CHEM-SURF LAMINATE WORK SURFACES

PRODUCT DEFINITION

CHEM-SURF Laminates are produced for work tops and cabinet surfacing in intermediate type laboratories. Type 390 is intended for horizontal, vertical and post-forming surfaces and applications, including those where it is necessary or desirable to roll the laminate on a simple radius over the edge of a substrate. This eliminates seams, which are otherwise vulnerable to chemical attack. This type may also be applied to horizontal and vertical surfaces where a functional, durable, decorative material should also be chemical-resistant.

RECOMMENDED USES

CHEM-SURF Laminates are recommended for intermediate laboratory surfacing where:

- weight or cost constraints rule out resin, slate, marble or granite;
- the possibility of chemical spills rules out conventional high pressure decorative laminate;
- a white surface is advantageous;
- a trend-aware colored or patterned surface is desired.

Specific applications include laboratory cabinets, casework, counters and table tops in hospitals, photographers' darkrooms and product testing facilities. CHEM-SURF Laminates are ideal surfacing for nurses' stations, physicians' and dentists' examining and treatment rooms and pathologists' work rooms. They are also practical and attractive surfacing for wainscoting in any of these areas.

BASIC LIMITATIONS

CHEM-SURF Laminates are interior surfacing, and not structural materials. They must be bonded to suitable substrates. Do not subject these laminates to extremes in humidity, nor to temperatures over 275° F (135° C) for sustained periods of time. They should not be exposed to flame, molten metal, metallic sparks or intense, direct sunlight. Nor should they be used as cutting surfaces.

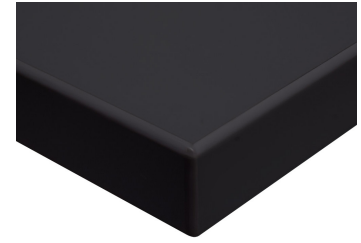
TECHNICAL SPECIFICATIONS

Physical Properties of CHEM-SURF Surfacing.

NEMA Test	Typical horizontal CHEM-SURF Value	NEMA Standard (PF30 Values)
Wear Resistance (cycles)	800	300 (min.)
Boiling Water Resistance	No Effect	Slight Effect
High Temperature Resistance	No Effect	Slight Effect
Radiant Heat Resistance (seconds)	150	80 (min.)
Stain Resistance * Reagents 1-23 24-29	No Effect No Effect	No Effect Moderate Effect
Dimensional Stability (machine direction) (cross direction)	0.30% 0.60%	1.1% (max.) 1.4% (max.)
Impact Resistance	45 inches (1143mm)	20 Inches (min.) (508mm)
Cleanability (cycles)	10	25 (max.)
Scuff Resistance	Slight Effect	No Effect
Blister Resistance (seconds)	45	40
Formability **	5/8" (15.875mm) face 3/16" (4.762mm) back	1/2" (12.700mm)
Appearance	No ABC defects	No ABC defects

* For a complete list of acids, bases, solvents, reagents, indicators and other lab materials safe for use on CHEM-SURF laminates, please see following page.

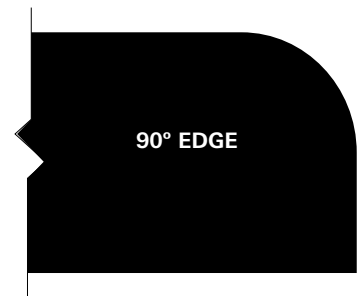
** Radius listed for face is actually the radius of the form around which the plastic is postformed. The radius listed for back is actually the radius to which the decorative face is postformed.



AVAILABLE COLORS:

White, Tan, Gray and Black.

EDGE PROFILES:



CHEM-SURF LAMINATE WORK SURFACES

CHEMICAL AND STAIN RESISTANCE OF CHEM-SURF DECORATIVE LAMINATES*

ACIDS

- 1 Nitric Acid (all concentrations)**
- 2 Glacial Acetic Acid 99% (concentrated)
- 3 Sulfuric Acid (all concentrations)**
- 4 Hydrochloric Acid (all concentrations)
- 5 Phosphoric Acid (all concentrations)
- 6 Formic Acid (all concentrations)
- 7 Acetic Acid (all concentrations)
- 8 Hydrofluoric Acid 48% (concentrated)*
- 9 Aqua Regia
- 10 Chromic Trioxide (Chromic Acid Cleaning Solution)*
- 11 Perchloric Acid (concentrated)
- 12 Picric Acid 1.2% (0.05M)
- 13 Tannic Acid (sat.)
- 14 Uric Acid (sat.)

SOLVENTS

- 15 Carbon Tetrachloride
- 16 Carbon Disulfide
- 17 Acetone
- 18 Formaldehyde
- 19 Methanol
- 20 Ethyl Acetate
- 21 Toluene
- 22 n-Hexane
- 23 Ethyl Alcohol
- 24 Chloroform
- 25 Phenol (all concentrations)*
- 26 Benzene
- 27 Xylene
- 28 Butyl Alcohol
- 29 Amyl Alcohol
- 30 Amyl Acetate
- 31 Cresol
- 32 Dioxane
- 33 Trichloroethylene
- 34 Chlorobenzene
- 35 Dimethyl Foramide

- 36 Methylene Chloride
- 37 Methyl Ethyl Ketone
- 38 Naphthalene
- 39 Tetrahydrofuran

BASES

- 40 Sodium Hydroxide (all concentrations)
- 41 Sodium Sulfide 15%
- 42 Ammonium Hydroxide (all concentrations)

GENERAL REAGENTS

- 43 Sodium Hypochlorite 5%
- 44 Calcium Hypochlorite (concentrated)
- 45 Hydrogen Peroxide 3%
- 46 Trisodium Phosphate 30%
- 47 Cupra Ammonia (all concentrations)
- 48 Zinc Chloride (all concentrations)
- 49 Salt Mixture
- 50 Sucrose 50%
- 51 Gasoline
- 52 Kerosene
- 53 Mineral Oil
- 54 Vegetable Oils
- 55 Water
- 56 Phosphorus Pentoxide
- 57 Potassium Permanganate
- 58 Silver Nitrate
- 59 Formalin
- 60 Benedicts Solution
- 61 Phosphate Buffered Saline (PBS)
- 62 Copper Sulfate
- 63 Petroleum Jelly
- 64 Tannic Acid
- 65 Ethylene Glycol
- 66 Pine Oil
- 67 Methyl Methacrylate
- 68 Alconox (Lab. Detergent)
- 69 Karl Fisher Reagent

- 70 Urea
- 71 Naptha
- 72 Cellosolve
- 73 Ammonia Phosphate
- 74 Iodine
- 75 Providine Iodine
- 76 Tincture of Mercurochrome
- 77 Tincture of Iodine
- 78 Tincture of Merthiolate
- 79 Eucalyptol
- 80 Procaine
- 81 Zephiran Chloride
- 82 Zinc Oxide Ointment
- 83 Lysol
- 84 Aromatic Ammonia
- 85 Thymol & Alcohol
- 86 CMC (Camphorated para-chlorophenol)*
- 87 Ergenol
- 88 Monsel's Solution (Ferric Subsulfate)
- 89 Depacterol
- 90 Liquid Silicate Cement

STAINS AND INDICATORS

- 91 Phenolphthalein
- 92 Methyl Red
- 93 Methyl Orange
- 94 Ag Eosin Bluish 5% in Alcohol
- 95 Ag Gentian Violet 1%
- 96 Wright's Blood Stain
- 97 Methylene Blue
- 98 Sudan III
- 99 India Ink
- 100 Crystal Violet
- 101 Malachite Green
- 102 Cresol Red
- 103 Gram Stains
- 104 Safranin O
- 105 Thymol Blue

* Test Procedure: Listed materials were placed in contact with CHEM-SURF surface under 1" (25.4mm) diameter watch cover glass for 16 hours' duration prior to evaluation for effect. Those marked (*) cause slight change of gloss or color. Those marked (**) cause slight damage, with degree of damage proportionate to length of exposure and concentration. Other items leave no effect.

CODES AND CERTIFICATIONS

CHEM-SURF decorative laminates conform to typical standards of the American National Standards Institute/National Electrical Manufacturers Association, per publication (ANSI/NEMA), LD3-1991, for Type PF30 Postforming Laminate. At present, there is no general industry standard for a high pressure, chemical-resistant decorative laminate.

CARE AND MAINTENANCE

CHEM-SURF decorative laminate-clad surfaces may be cleaned with warm water and mild soaps such as those used for hands or dishes. Do not use abrasive cleaners - they will scratch the decorative surface, and can permanently decrease its stain and chemical resistance.

Stubborn stains may be removed with organic solvents, or with a 2-minute exposure to hypochlorite bleach such as Clorox®, followed by a clean water rinse.

Minor cuts or abrasions due to wear or mild abuse may be less noticeable when a light, non-oily furniture spray, such as Favor® or Pledge®, is used regularly.