

# Laminex® Chemical Resistant Laminate

Laminex® Chemical Resistant Surfaces are a high-pressure decorative laminate manufactured to have improved chemical, stain and abrasion resistance. It will form around internal and external bends to a 15mm radius in the longitudinal direction without cracking or blistering.



## APPLICATIONS

Laminex® Chemical Resistant Redback™ is unaffected by many solvents, dyes, alkalis, acids and other chemicals. It is an ideal surfacing material for laboratories, hospitals, schools and factories where resistance to chemical attack and durability is required.

The rounded edges eliminate joins or seams which may permit chemical penetration into the edges.

## PRODUCT CHARACTERISTICS

Sizes:	3600mm x 1200mm
Thickness:	0.8mm (nominal)
Weight:	1.0kg/m <sup>2</sup> approx.
Finish:	Natural
Colours and Pattern Range:	Refer to current Product Availability Chart.

## FIRE TESTS

Cone Calorimeter AS/NZS 3837:1998 (Irradiance of 50kW/m <sup>2</sup> )		
<b>Classification</b>	<b>Result*</b>	<b>Unit/Range</b>
Group Number	2	1-3
Average Specific Extinction Area	97.3	m <sup>2</sup> / kg

\* Laminate unadhered

Laminex® Chemical Resistant Redback™ conforms with AS/NZS 2924.1 for high-pressure decorative laminates.

## PROPERTIES

(AS/NZS 2924.1)	
PROPERTY	REQUIREMENT
Resistance to Surface Wear:	Initial wear not less than 150 cycles. Average wear not less than 350 cycles.
Resistance to Immersion in Boiling Water:	Moderate loss of gloss and/or colour. Gain in weight of not more than 18%.
Resistance to Dry Heat at 180°C:	No deterioration other than slight loss of gloss/colour.
Resistance to Steam:	Moderate change of gloss and/or colour.
Dimensional Stability:	Dimensional change of not more than 0.7% with grain and 1.2% across grain.
Resistance to Staining:	Reagents Groups 1 and 2 = No visible change. Reagents Groups 3 and 4 = Slight change of colour/gloss. (see chemical list for selected reagents)
Resistance to Colour Change in Artificial Light*:	Not more than slight change in Xenon arc light. Grey Scale: >4 at Blue Wool Scale: 6
Resistance to Cigarette Burns:	No deterioration other than moderate change in gloss and moderate brown staining.

\* Laminex Chemical Resistant Surfaces has good colour retention and dimensional stability in normal interior applications. However, prolonged exposure to sunlight may cause shrinkage and/or some change in colour. Laminex® Chemical Resistant Surfaces is therefore not recommended for external applications or interior applications with prolonged exposure to direct sunlight

## WHEN SPECIFYING

Surfacing shall be Laminex® Chemical Resistant Surfaces as manufactured by The Laminex Group. Colours and/or patterns shall be ..... in ..... finish.

## PROCESSING

### Board Substrate Bend Profile

Laminex Chemical Resistant Surfaces must be fully supported when glued down. Keep joins away from sink areas. Do not bond directly to plaster, plasterboard or concrete. The correct profile on particleboard or medium density fibreboard can be obtained by using specially shaped router blades with a radius not less than 15mm.

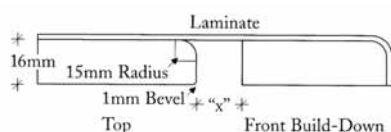
### Bend Time

The bend time can be approximated by heating the area to be bent to the required bending temperature of 163°C at a heat up time to Tempilaq melt of around 30 seconds. Allow a further 10 seconds for the core material to reach temperature, then make the bend.

### Extended Drop-Front Benchtops

Some specifications require the fabrication of extended drop-down front edges usually between 200mm and 250mm deep. It is therefore important to be aware of the formula required to achieve this result. Details of the mathematical specification for 16mm and 33mm thickness benchtops are as follows:

## a. 16mm thickness benchtop with 15mm radius

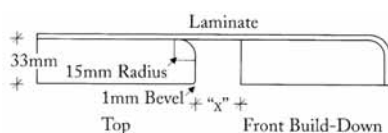


$$"X" = 2 \times 3.143 \times R \div 4 + (\text{Thickness} - \text{Radius}) - \text{Radius}$$

Example:  $2 \times 3.143 \times 15\text{mm} \div 4 + 1 - 15 = 9.6$  at "X".

Then allow 0.5 to 1mm for additional clearance which would give a suggested dimension at "X" of 10.5mm.

## b. 33mm thickness benchtop with 15mm radius



$$"X" = 2 \times 3.143 \times 15\text{mm} \div 4 + 18 - 15 = 26.6$$

at "X" say at "X" of 27.5mm.

In all cases it is important that the 1mm bevel be applied to the bottom of the front edge of the benchtop section. This bevel enables additional clearance for the drop-down component to clear when being bent into position.

**Note:** Bending across the direction of sanding is not recommended with Chemical Resistant Surfaces. For all other processing details refer to Laminex® Redback™ Technical Data Sheet.

## CHEMICAL RESISTANCE

Laminex Chemical Resistant Surfaces have been rated for the following list of chemicals and reagents in relation to 16 hours covered exposure at 20–22 degrees C. Many reagents listed below will not damage the laminate surface. Those reagents labelled with an asterisk (\*) may cause slight change in gloss or colour, depending upon the duration of exposure whereas those labelled with two asterisks (\*\*) will cause marked or severe damage. As with all fine cabinetry surfaces, Laminex recommends prompt cleanup of all spills using water, a cloth and mild detergent. A slight loss of gloss can occur from harsh rubbing. Never use abrasive cleaners. It is always a good idea to obtain large – size samples and perform in- situ tests with chemicals most likely to be in contact with the laminate before purchasing.

SCIENCE LABORATORIES	
<b>Acids</b>	
Acetic Acid,	40%
Acetic Acid (Glacial),	98%*
Chromic Acid,	60%**
Citric Acid,	10%
Dichromate Cleaning Solution**	
Formic Acid,	10%*
Formic Acid,	85%*
Hydrochloric Acid,	3%**
Hydrochloric Acid,	7%**
Nitric Acid,	5%**
Perchloric Acid,	60%**
Phosphoric Acid,	85%*
Sulphuric Acid,	5%*
Sulphuric Acid,	11%*
Sulphuric Acid,	33%**

Alkalis	
Ammonium Hydroxide,	28%
Barium Hydroxide	
Calcium Hydroxide	
Potassium Hydroxide,	15%*
Potassium Hydroxide,	42%*
Sodium Carbonate, saturated	
Sodium Hydroxide,	8%
Sodium Hydroxide,	24%*
Sodium Hydroxide,	50%*
Sodium Silicate	

Solvents	
Acetone	
Amyl Acetate	
Benzene	
Carbon Tetrachloride	
Cresol	
Dioxane	
Ethyl Acetate	
Ethyl Alcohol	
Ethylene Glycol	
Furfural	
Isopropanol	
Methyl Alcohol	
Methyl Ethyl Ketone	
Methylene Chloride	
Mineral Spirits	
Naphtha	
N - hexane	
Tetrahydrofuran	
Trichloroethylene	
Toluene	
Xylene	

Other Reagents	
Calcium Hypochlorite	
Copper Sulfate,	10%
Ferric Chloride,	10%
Phenol,	85%
Phenolphthalein,	1%
Potassium Permanganate,	2%*
Sodium Bisulphite	
Sodium Chloride	
Zinc Chloride	

HOSPITAL AND HEALTH CARE	
Amyl Alcohol	
Aniline Blue,	2.5%*
Bromocresol Green Solution*	
Bromothymol Blue,	0.1%
Carbol Fuschin	
Chloroform	
Coal Tar Solution,	20%
Crystal Violet	
Detachol Adhesive Remover	
Eosin Solution*	
Ethyl Alcohol	
Ethyl Ether	
Eucalyptol	
Ferric Subsulphate Purified,	13-14%
Formaldehyde,	37%
Gentian Violet,	1% solution*
Giemsa Bloodstain*	
Glycerinum Iodine Compositum*	
Haematoxylin*	
Hydrogen Peroxide,	3%
Hydrogen Peroxide,	20%
Iodine Tincture, USP,	2%*
Isopropyl Alcohol	
Methyl Alcohol	

Methyl Orange,	0.04%
Methyl Red	
Methylene Blue	
Mineral Oil	
Petroleum Jelly	
Povidone Iodine*	
PVP Iodine Swab*	
Silver Nitrate,	10%*
Steri-strip, 1544 Benzoin Tincture	
Sudan III	
Tincture Benzoin Compound	
Wrights Blood Stain*	
Zephiran Chloride,	17%
Zinc Oxide	

DENTAL SUPPLIES	
Acrylic Bonding Cement*	
Amalgam	
Disclosing Tablets	
Enthath Phosphoric Acid Etch,	37%*
Eugenol	
Fluoride Rinse	
Germicidal Disposable Cloth	

GENERAL REAGENTS	
Cellosolve	
Detergent	
Disinfectant	
Kerosene	
Disinfectant	
Methylated Spirits	
Nail Polish Remover	
Petroleum Jelly	
Pine Oil	
Sodium Hypochlorite,	5% (White King®)
Sodium Hypochlorite,	13% (White King®)
Trisodium Phosphate,	30%
Unleaded petrol	
Urea,	6.6%
Vegetable Oil	

## HARSH HOUSEHOLD PRODUCTS

*Bluing*®: Blu® liquid blue laundry brightness.  
*Ceramic Cook Top Cleaners*®: Cook Top cleaning crème for smooth top ranges.  
*Chlorine Bleaches*: White King® regular bleach, Pine O Clean® bathroom power foam bleach.  
*Coffeepot Cleaners*®: Glitz® calcium scale and rust remover; Rubbedin® descale magic.  
*Countertop Cleaners*: Ajax® Spray n'Wipe, White King® multi surface spray, Pine O Clean® orange oil antibacterial.  
*Crystal Drain Openers*®: Drano® drain cleaner crystal sachet, Diggers® caustic soda.  
*Hair Colourings*®: Miss Clairol® crème formula – black velvet, Clairol Pure White® crème developer  
*Lime Removers*®: Rubbedin® kettle magic, Lime-A-Way.  
*Liquid Drain Openers*®: Drano® drain cleaner gel.  
*Metal Cleaners*®: Brasso® metal polish, Silvo® metal polish.  
*Mildew Removers*: Selseys® rapid mould killer, Pine O Clean® bathroom power foam bleach, Exit Mould® stain remover.  
*Oven Cleaners*®: Mr Muscle® heavy duty oven cleaner, Easy-Off® Oven heavy duty cleaner.  
*Rust Removers*®: C L R® all purpose cleaner, Watty® kill rust, Dulux® quit rust.  
*Toilet Bowl Cleaners*: Toilet Duck® fresh pine toilet cleaner, Harpic® white & shine bleach gel toilet cleaner, Pine O Clean® foam bathroom cleaner, White King® lemon fresh toilet gel cleaner.

**Note:** Some reagents will become more concentrated if allowed to evaporate on the laminate. It is therefore recommended that all spillages be washed and rinsed off the laminate as soon as possible.

## General Site Work Notes

Appendix 1. Handling & Product Application Guidelines Section 9:1

## Laminate Product: Care & Maintenance

Appendix 2. General Care and Maintenance Section 9:2