



DESCRIPTION

Exclusive to Duropal®, MicroPLUS is a postforming, antibacterial and chemical resistant High Pressure Laminate (HPL). MicroPLUS is totally encapsulated and integrated throughout the laminate matrix thus offering life time protection from common bacteria such as, E-coli, Salmonella, Staphylococcus and Pseudomonas aeruginosa and eradicating over 99% of these harmful bacteria's with 24 hours. With no transfer via atmospheric or contact with skin or food, MicroPLUS is inert and 100% safe to use in all applications which require an antibacterial surface.

* Please refer to the microPLUS brochure for more information on this product.

APPLICATIONS

MicroPLUS HPL is suitable for application in medical, healthcare, child & age care, hospitality, educational, food preparation, public amenities and other commercial applications to interior joinery such as countertops, benchtops, partitions, fixtures, decorative paneling, door and drawer fronts and other applications that would benefit from the use of an antibacterial and chemical resistant finish.

PRODUCT CHARACTERISTICS

Nominal Thickness	0.8mm ± 0.10mm permissible deviation (selected decors only) 0.5mm ± 0.05mm permissible deviation (selected decors only)
Density	1.400kg/m ³ approx
Standard Sheet Size	4100mm x 1300mm
Surface Finishes & Colour Range	Refer to the MicroPLUS section of the current Availability Chart & Decorative Surfaces Sample Folder

TECHNICAL DATA

Note: Duropal® laminates are tested and conform to DIN EN 438.1 / ISO 4586.1.1995 / AS/NZS 2924.1.1998 results published below refer to this standard unless otherwise stated.

Test	Result
Post formability	Thickness 0.8mm – 8mm radius Thickness 0.5mm – 5mm radius

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TECHNICAL DATA - continued

Impact strength	20N (11 small diameter ball)
Abrasion behaviour	Patterns & Woodgrains – 375-500 cycles Plain colour decors – 500-700 cycles
Scratch resistance	1.75 – 5.0 N depending HPL surface & décor colour
Resistance to staining Group 1 & 2	5 – no visible change
Group 3 & 4	4 – moderate change of gloss / colour
Resistance to steam	4 – Slight change of gloss / colour only visible at certain viewing angles
Resistance to cigarette burns	4-5 – No visible change / slight change of gloss or slight brown staining
Fire Test (AS/NZS 1530.3)	
Ignitability index (0-20)	14
Spread of flame index (0-10)	0
Heat evolved index (0-10)	0
Smoke developed (0-10)	3
Cone Calorimeter (AS/NZS 3837)	
Group number	B1
Average specific extinction area	155.8 m ² /kg
Light fastness (Xenon Lamp)	≥6 blue scale (general requirement not less than 6)

BACTERIAL EFFICIENCY**Surface tested** (Result effectiveness - power of 10)

Test Bacteria	Duropal microPLUS	Real stone / Granite	Ceramics	Real metal	PVC	Acrylic	Mineral Materials
Pseudomonas aeruginosa	>4.9	-0.6	< -0.6	0.2	-0.3	-0.5	0.3
Staphylococcus aureus	>4.8	0.2	0.3	1.8	0.2	0.2	0.6
Salmonella choleraesuis	>4.9	0.1	0.3	2.1	0.2	0.1	0.5
Escherichia coli	> 4.4	< -1.0	< -1.0	< -0.1	< -0.8	< -0.8	< -0.5
Result	Highly effective	No effect	No effect	Minimal effect	No Effect	No Effect	No Effect

ENVIRONMENTAL DATA

Quality Management System	ISO 9001 (LGA – InterCert)
Environmental Management System	ISO 14001 (LGA – InterCert)
VOC	PAH (GA – TÜVRheinland) / Certificate of conformity (ISEGA)
Antibacterial Certification	SGS (Fresenius Institut)

The information in this technical data sheet was prepared using information gathered at the time of publication. While Tekform endeavours to update this information and maintain the accuracy and currency of its content, it should only be used as a guide and should not necessarily be regarded as applying to all situations. Tekform cannot guarantee that the information provided is wholly comprehensive, nor is this information intended as an alternate to any testing that the user may conduct to determine the suitability of the product for a particular application. Tekform reserves the right to revise specification data at any time without notice.

CHEMICAL RESISTANCE

Duropal® Compact & Duropal High Pressure Laminates are resistant to all common disinfectants, most common chemicals and substances. Organic solvents such as acetone and alcohol leave no residue on the surface.

The same applies to the following substances:

ascorbic acid	cooking salt	ink	sulphur
benzene dextrose	ethanol	Insecticide	urine
blood	fats & oils	lacquers	vinegar
chloral hydrate	formalin	nail varnish & remover	wine/wine acid etc
coffee, caffeine	glycerin	paints	xylene

Also, no changes in surface structure occur should the following substances be spilt and left on the surface for a short time (10-15 minutes). Surfaces must be wiped with a wet cloth within 10-15 minutes, and then dried.

Aminsulphonic acid (up to10%)	Hair dye and bleach	Potassium chromate
Aniline dye	Hydrochloric Acid (up to 10%)	Potassium dichromate
Anorganic acids (up to 10%)	Hydrogen peroxide (above 3-30% perhydrole)	Potassium hydrogen sulphate
Arsenic Acid (up to 10%)	Iodine solution	Potassium iodide
Boric Acid	Limescale remover	Potassium permanganate
Caustic potash solution (over 10%)	Mercury chloride solution	Potassium salt solution (above 10%)
Caustic soda lye (over 10%)	Mercury dichromate	Silver nitrate
Chemical cured paints & adhesives	Methyl blue	Sodium sulphate
Esbachs reagent	Millons reagent	Sodium hypochloride
Ferric Chloride	Nitric acid (up to 10%)	Sodium thiosulphate
Ferrous Chloride	Nylanders reagent	Sulphuric acid (up to 10%)
Formic acid (above 10%)	Oxalic acid	Sulphurous acid (up to 10%)
Fuchsine	Phosphorous acid (up to 10%)	
Gentian violet	Picronitric acid	

The following chemicals listed below will damage the surface of Duropal HPL and should be removed immediately. Even short exposure is sufficient to cause the surface to become dull and rough.

Chemical concentrations above 10%.

Aminosulphic acid	Hydrochloric acid	Nitrohydrofluoric acid
Arsenic acid	Hydrogen bromide	Phosphoric acid
Chromium sulphuric acid	Inorganic acids	Sulphuric acid
Hydrofluoric acid	Nitric acid	

Frequent contact with the following aggressive gasses causes changes in the HPL surface.

Acid vapour	Chlorine	Sulphur dioxide
Bromine	Nitrous vapours	

Should you have further questions regarding the chemical properties of Duropal® HPL please contact your local customer service department.

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CLEANING RECOMMENDATIONS

A major advantage of your Duropal laminate is that cleaning is simple. Usually a moist cloth is sufficient. Grease is easily removed with the use of washing-up liquid. Brushes with hard bristles (but not wire brushes) may also be used.

If there is a more stubborn stain please read the following information and apply the recommended cleaning products, or contact our customer service centre for more information.

Light stains or dirt	Use a dry or damp paper towel, cloth or sponge.
Normal stains or dirt Fat, oil and dirt particles, finger marks, lime deposits, rust, juice, coffee, tea, wax, blood, universal marker.	Use a cloth or soft nylon brush and washing powder, soap, or diluted washing liquid. If necessary, leave for a while and then rinse thoroughly with clean water.
Heavy stains or dirt Discolouration through long exposure to tea, coffee, juice or other beverages.	Use a non abrasive household cleaning agent such as Nifty or similar.