technical information



essa[™] stone is a remarkably durable and virtually maintenance free quartz surface material created with the latest engineering technology. A meticulously designed colour palette ensures that essa stone is naturally at home in the most discerning kitchens, bathrooms and commercial interiors.

essa stone is composed of approximately 95% (by weight) natural quartz based aggregates and 5% high quality resins and pigments to provide a non-porous, homogenous material.

Note: the actual composition of each stone slab will vary marginally between colours due to the quartz particulate designs and dimensions.

PRODUCT APPLICATIONS

essa stone can be used for kitchen and vanity benchtops, splashbacks, furniture components, internal cladding, wet area partitioning, flooring, stairwells and fireplace surrounds.

Note: When used for splashback applications, the installation must conform to the minimum Australian & New Zealand Standards for installation behind gas cook tops, for clearances in relation to appliances generating heat. Please refer to AS 5601-2004 Gas installations and AS NZS 4386.2-1996 Domestic kitchen assemblies - Installation.

essa stone is suitable for most interior applications. Exposure to direct sunlight for extended periods can cause colour fading. Therefore, it is not recommended for use in exterior applications where it is exposed to direct sunlight.

PRODUCT SPECIFICATIONS - essa stone slab

Slab Dimensions

Nominal Thickness	20mm
Nominal slab size	3000 x 1400mm (4.20m2)
Actual size of trimmed slab	3030 x 1415mm (4.29m2)

Dimensional Tolerance of Trimmed Slab

Thickness	± 0.08mm
Length	± 20mm
Width	± 10mm

Nominal Weight

Slab	220kg per slab
m2	55kg per m2

Note: Each slab is produced with a purposely tapered edge to accommodate any mild edge damage that may occur during handling and transportation.

ENVIRONMENTAL

essa stone is manufactured to the specifications of The Laminex Group by Hanwha L&C Corporation Korea in one of the latest and most advanced Breton manufacturing plants in the world. The facility has a strict Environmental Management system and complies with the requirements of the ISO 14001:1996. In 2001, The Minister of Environment of the Republic of Korea recognized Hanwha as an "Environmentally friendly Company" for its contributions toward the Environment, Health and Safety.



TYPICAL PHYSICAL PROPERTIES

Abrasion Resistance (Weight Loss)ASTM D 40601094mgIzod Impact StrengthASTM D 256 (Method A)13.3 J/mBoiling Water ResistanceNEMA LD3 2000 3.5No effectColourfastnessANSI 124.6.5.1PassCompression Strength (Dry)ASTM C 170209 MPa(Wet)203 MPa203 MPaDeflection Temperature Under Load (1.82 MPa)ASTM D 648243 °CFlexural ModulusASTM D 79039.7 GPaFlexural StrengthASTM D 79042.4 MPaFreeze and Thaw CyclingASTM C 1026UnaffectedFungal Bacterial ResistanceASTM G 21No GrowthSurface GlossHoriba IG-320over 45Barcol HardnessASTM D 258386Rockwell Hardness (HRM)ASTM D 785 (Proceedure A)115Point ImpactANSI Z 124.6.4.2.1PassSlip ResistanceANSI Z 124.6.4.2.1PassStatic Coefficient of Friction (Dry)ASTM D 792 (Method A)2.432Statin ResistanceANSI Z 124.6.5.2PassTensile StrengthASTM D 68817.8 MPaToxicityNSF51 for food zone certifiedTThermal ExpansionASTM D 6961.52x10*in/in/°CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%Wear and CleanabilityANSI Z124.6.5.3Pass	Property	Test Method	Result
Boiling Water ResistanceNEMA LD3 2000 3.5No effectColourfastnessANSI 124.6.5.1PassCompression Strength (Dry)ASTM C 170209 MPa(Wet)203 MPaDeflection Temperature Under Load (1.82 MPa)ASTM D 648243 °CFlexural ModulusASTM D 79039.7 GPaFlexural StrengthASTM D 79042.4 MPaFreeze and Thaw CyclingASTM C 1026UnaffectedFungal Bacterial ResistanceASTM G 21No GrowthSurface GlossHoriba IG-320over 45Barcol HardnessASTM D 258386Rockwell Hardness (HRM)ASTM D 785 (Proceedure A)115Point ImpactANSI Z 124.6.4.2.1PassSlip ResistanceSITM C 10280.67(Wet)0.492.432Specific Gravity (23/23 °C)ASTM D 792 (Method A)2.432Stain ResistanceANSI Z124.6.5.2PassTensile StrengthASTM D 63817.8 MPaToxicityNSF51 for food zone certifiedThermal ExpansionMater AbsorptionASTM D 570 (24hr. immersion)<0.011%	Abrasion Resistance (Weight Loss)	ASTM D 4060	1094mg
ColourfastnessANSI 124.6.5.1PassCompression Strength (Dry) (Wet)ASTM C 170209 MPa	Izod Impact Strength	ASTM D 256 (Method A)	13.3 J/m
Compression Strength (Dry) (Wet) ASTM C 170 209 MPa Deflection Temperature Under Load (1.82 MPa) ASTM D 648 243 °C Flexural Modulus ASTM D 790 39.7 GPa Flexural Strength ASTM D 790 42.4 MPa Freeze and Thaw Cycling ASTM C 1026 Unaffected Fungal Bacterial Resistance ASTM G 21 No Growth Surface Gloss Horiba IG-320 over 45 Barcol Hardness ASTM D 785 (Proceedure A) 115 Point Impact ANSTM C 1028 0.67 (Wet) 0.49 0.49 Specific Gravity (23/23 °C) ASTM D 792 (Method A) 2.432 Stain Resistance ANSI Z 124.6.5.2 Pass Tensile Strength ASTM D 638 17.8 MPa Toxicity NSF51 for food zone certified 17.8 MPa Toxicity NSF51 for food zone certified 1.52x10°fin/in/°C Water Absorption ASTM D 570 (24hr. immersion) <0.011%	Boiling Water Resistance	NEMA LD3 2000 3.5	No effect
(Wet)203 MPaDeflection Temperature Under Load (1.82 MPa)ASTM D 648243 °CFlexural ModulusASTM D 79039.7 GPaFlexural StrengthASTM D 79042.4 MPaFreeze and Thaw CyclingASTM C 1026UnaffectedFungal Bacterial ResistanceASTM G 21No GrowthSurface GlossHoriba IG-320over 45Barcol HardnessASTM D 258386Rockwell Hardness (HRM)ASTM D 785 (Proceedure A)115Point ImpactANSI Z 124.6.4.2.1PassSlip ResistanceUwet)0.67(Wet)0.490.49Specific Gravity (23/23 °C)ASTM D 792 (Method A)2.432Stain ResistanceASTM D 63817.8 MPaToxicityNSF51 for food zone certified1.52x10*in/in/°CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%	Colourfastness	ANSI 124.6.5.1	Pass
Deflection Temperature Under Load (1.82 MPa)ASTM D 648243 °CFlexural ModulusASTM D 79039.7 GPaFlexural StrengthASTM D 79042.4 MPaFreeze and Thaw CyclingASTM C 1026UnaffectedFungal Bacterial ResistanceASTM G 21No GrowthSurface GlossHoriba IG-320over 45Barcol HardnessASTM D 785 (Proceedure A)115Point ImpactANSI Z 124.6.4.2.1PassSlip ResistanceStatic Coefficient of Friction (Dry)ASTM D 792 (Method A)2.432Specific Gravity (23/23 °C)ASTM D 792 (Method A)2.432Stain ResistanceASTM D 63817.8 MPaToxicityNSF51 for food zone certifiedThermal ExpansionASTM D 6381.52x10 °in/in/°CWater Absorption<.0.011%	Compression Strength (Dry)	ASTM C 170	209 MPa
Flexural ModulusASTM D 79039.7 GPaFlexural StrengthASTM D 79042.4 MPaFreeze and Thaw CyclingASTM C 1026UnaffectedFungal Bacterial ResistanceASTM G 21No GrowthSurface GlossHoriba IG-320over 45Barcol HardnessASTM D 258386Rockwell Hardness (HRM)ASTM D 785 (Proceedure A)115Point ImpactANSI Z 124.6.4.2.1PassSlip ResistanceUverty0.67(Wet)0.490.67Specific Gravity (23/23 °C)ASTM D 792 (Method A)2.432Stain ResistanceASTM D 63817.8 MPaToxicityNSF51 for food zone certified1.52x10*in/in/*CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%	(Wet)		203 MPa
Flexural StrengthASTM D 79042.4 MPaFreeze and Thaw CyclingASTM C 1026UnaffectedFungal Bacterial ResistanceASTM G 21No GrowthSurface GlossHoriba IG-320over 45Barcol HardnessASTM D 258386Rockwell Hardness (HRM)ASTM D 785 (Proceedure A)115Point ImpactANSI Z 124.6.4.2.1PassSlip Resistance	Deflection Temperature Under Load (1.82 MPa)	ASTM D 648	243 °C
Freeze and Thaw CyclingASTM C 1026UnaffectedFungal Bacterial ResistanceASTM G 21No GrowthSurface GlossHoriba IG-320over 45Barcol HardnessASTM D 258386Rockwell Hardness (HRM)ASTM D 785 (Proceedure A)115Point ImpactANSI Z 124.6.4.2.1PassSlip ResistanceUnaffected0.67(Wet)0.490.49Specific Gravity (23/23 °C)ASTM D 792 (Method A)2.432Stain ResistanceANSI Z 124.6.5.2PassTensile StrengthASTM D 63817.8 MPaToxicityNSF51 for food zone certified1.52x10°šin/in/°CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%	Flexural Modulus	ASTM D 790	39.7 GPa
Fungal Bacterial ResistanceASTM G 21No GrowthSurface GlossHoriba IG-320over 45Barcol HardnessASTM D 258386Rockwell Hardness (HRM)ASTM D 785 (Proceedure A)115Point ImpactANSI Z 124.6.4.2.1PassSlip ResistanceU0.67(Wet)0.49Specific Gravity (23/23 °C)ASTM D 792 (Method A)2.432Stain ResistanceANSI Z 124.6.5.2PassTensile StrengthASTM D 63817.8 MPaToxicityNSF51 for food zone certified1.52x10*5in/in/°CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%	Flexural Strength	ASTM D 790	42.4 MPa
Surface GlossHoriba IG-320over 45Barcol HardnessASTM D 258386Rockwell Hardness (HRM)ASTM D 785 (Proceedure A)115Point ImpactANSI Z 124.6.4.2.1PassSlip ResistanceStatic Coefficient of Friction (Dry)ASTM C 10280.67(Wet)0.49Specific Gravity (23/23 °C)ASTM D 792 (Method A)2.432Stain ResistanceANSI Z124.6.5.2PassTensile StrengthASTM D 63817.8 MPaToxicityNSF51 for food zone certified1.52x10*5in/in/°CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%	Freeze and Thaw Cycling	ASTM C 1026	Unaffected
Barcol HardnessASTM D 258386Rockwell Hardness (HRM)ASTM D 785 (Proceedure A)115Point ImpactANSI Z 124.6.4.2.1PassSlip Resistance	Fungal Bacterial Resistance	ASTM G 21	No Growth
Rockwell Hardness (HRM)ASTM D 785 (Proceedure A)115Point ImpactANSI Z 124.6.4.2.1PassSlip ResistanceStatic Coefficient of Friction (Dry)ASTM C 10280.67(Wet)0.490.49Specific Gravity (23/23 °C)ASTM D 792 (Method A)2.432Stain ResistanceANSI Z124.6.5.2PassTensile StrengthASTM D 63817.8 MPaToxicityNSF51 for food zone certified1.52x10 ⁵ in/in/°CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%	Surface Gloss	Horiba IG-320	over 45
Point ImpactANSI Z 124.6.4.2.1PassSlip ResistanceStatic Coefficient of Friction (Dry)ASTM C 10280.67(Wet)0.49Specific Gravity (23/23 °C)ASTM D 792 (Method A)2.432Stain ResistanceANSI Z124.6.5.2PassTensile StrengthASTM D 63817.8 MPaToxicityNSF51 for food zone certifiedThermal ExpansionASTM D-6961.52x10-5in/in/°CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%	Barcol Hardness	ASTM D 2583	86
Slip ResistanceASTM C 10280.67Static Coefficient of Friction (Dry)ASTM C 10280.49(Wet)0.490.49Specific Gravity (23/23 °C)ASTM D 792 (Method A)2.432Stain ResistanceANSI Z124.6.5.2PassTensile StrengthASTM D 63817.8 MPaToxicityNSF51 for food zone certifiedThermal ExpansionASTM D-6961.52x10-5in/in/°CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%	Rockwell Hardness (HRM)	ASTM D 785 (Proceedure A)	115
Static Coefficient of Friction (Dry) (Wet)ASTM C 10280.67(Wet)0.49Specific Gravity (23/23 °C)ASTM D 792 (Method A)2.432Stain ResistanceANSI Z124.6.5.2PassTensile StrengthASTM D 63817.8 MPaToxicityNSF51 for food zone certifiedThermal ExpansionASTM D-6961.52x10-5in/in/°CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%	Point Impact	ANSI Z 124.6.4.2.1	Pass
(Wet)0.49Specific Gravity (23/23 °C)ASTM D 792 (Method A)2.432Stain ResistanceANSI Z124.6.5.2PassTensile StrengthASTM D 63817.8 MPaToxicityNSF51 for food zone certifiedThermal ExpansionASTM D-6961.52x10 ⁻⁵ in/in/°CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%	Slip Resistance		
Specific Gravity (23/23 °C)ASTM D 792 (Method A)2.432Stain ResistanceANSI Z124.6.5.2PassTensile StrengthASTM D 63817.8 MPaToxicityNSF51 for food zone certifiedThermal ExpansionASTM D-6961.52x10-5in/in/°CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%	Static Coefficient of Friction (Dry)	ASTM C 1028	0.67
Stain ResistanceANSI Z124.6.5.2PassTensile StrengthASTM D 63817.8 MPaToxicityNSF51 for food zone certifiedThermal ExpansionASTM D-6961.52x10 ⁻⁵ in/in/°CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%	(Wet)		0.49
Tensile StrengthASTM D 63817.8 MPaToxicityNSF51 for food zone certifiedThermal ExpansionASTM D-6961.52x10-5in/in/°CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%	Specific Gravity (23/23 °C)	ASTM D 792 (Method A)	2.432
ToxicityNSF51 for food zone certifiedThermal ExpansionASTM D-6961.52x10 ⁻⁵ in/in/°CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%	Stain Resistance	ANSI Z124.6.5.2	Pass
Thermal ExpansionASTM D-6961.52x10-5in/in/°CWater AbsorptionASTM D 570 (24hr. immersion)<0.011%	Tensile Strength	ASTM D 638	17.8 MPa
Water AbsorptionASTM D 570 (24hr. immersion)<0.011%	Toxicity	NSF51 for food zone certified	
	Thermal Expansion	ASTM D-696	1.52x10 ⁻⁵ in/in/°C
Wear and Cleanability ANSI Z124.6.5.3 Pass	Water Absorption	ASTM D 570 (24hr. immersion)	<0.011%
	Wear and Cleanability	ANSI Z124.6.5.3	Pass

Note: This data shall be considered as an indication only. It may vary depending on the colours and batches of the products.

NSF essa stone is tested and approved for use in food preparation areas.

FIRE TEST RESULTS

Detailed information on the fire hazard properties are available on line at www.essastone.com.au or by calling 132 136. METHOD OF TEST FOR HEAT RELEASE (Cone Calorimeter test) - Typically achieved when tested to AS/NZS 3837:1998

Indicies	Unit	Result
Average heat release rate at 50 kW/m ²	kW/m ²	91.0
Average specific extinction area	m²/kg	778
BCA Classification		3

FIRE HAZARD INDICIES - Typically achieved when tested to AS/NZS 1530.3:1999

Indicies	Unit	Result
Ignitability	7	0-20
Spread of Flame	0	0-10
Heat Evolved	2	0-10
Smoke Developed	7	0-10

COLOUR AND PATTERN

essa stone is manufactured from natural quartz. Variations in colour, pattern and shade will exist, and are unique characteristics inherent in natural quartz. Small blotches or off-colour particulate (chips) or irregular particulate distribution will also occur in engineered quartz surfaces and are considered a normal characteristic of the surface.

SURFACE FINISH

essa stone quartz surfaces are factory polished and are available as a gloss surface finish. See actual samples for gloss level.

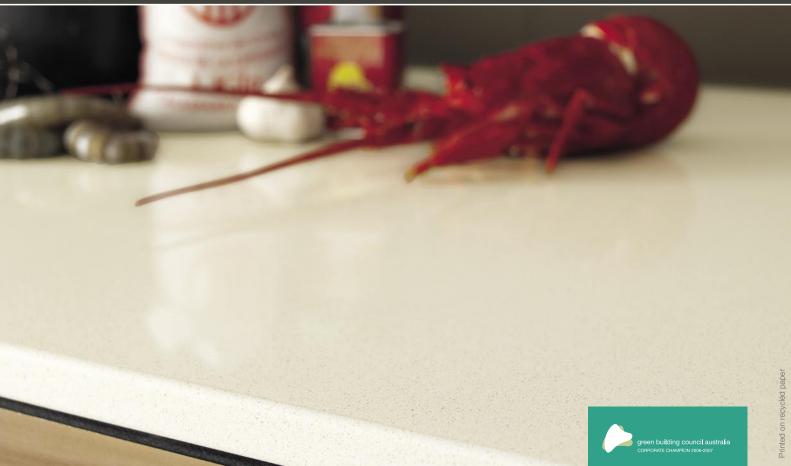
WARRANTY

essa stone is supported by a 10 year limited* warranty.

OTHER INFORMATION

- essa stone Product Brochure
- essa stone Sample Folder
- essa stone Design Guide
- essa stone Care & Maintenance
- essa stone Limited Warranty

To order essa stone samples or brochures contact 1800 002 204 or visit our website www.essastone.com.au



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