

Technical Data

1 Performance Properties

Properties	TriStone	Standard Applied
Production method	Continuous casting	N/A
ISO 9002	Yes	N/A
ISO 14001	Yes	N/A
Water absorption coef.	0.03% (24hrs) 1/2" Sheets	ASTM D570
Hardness test	92 Rockell M scale	ASTM D785
Hardness test	63 Barcol Impressor	ASTM D2583
Pencil hardness (HRM)	92	KS D 6711
Izod impact strength	.26 ft-lbs/in of notch	ASTM D256
Tensile strength	6500 psi	ASTM D 638
Tensile modulus	1.4×106 psi	ASTM D-638
Ball drop	>125" 1/2lb steel ball	NEMA LD-3
Flexural strength	10000 psi	ASTM D 790
Flexural elastic modulus	1.30×105	ASTM D 790
Elongation	0.73%	ASTM D638
Thermal expansion coef. (°C)	3.5×10-5	ASTM D 696
Weatherability	no change – 1000 hours	ASTM D 1499
Gloss (60 gardner)	-	NEMA LD-3
Color stability	No-change – 200 hrs	NEMA LD-3
Thermal resistance	No change	NEMA LD-3
Boiling water resistance	no change	NEMA LD-3
Stain resistance	pass rating 41	ANSI Z 124
Food Zone acceptability	Accepted / Listed	NSF 51
Fungi and bacteria	No Growth	ASTM G21
Specific gravity solid colors	1.74	N/A
Specific gravity other colors	1.69	N/A
Wear & cleanability	Pass	ANSI Z 124.3 & Z 124.6
Flammability	Class 1	UBC 8-1
Flame spread	0-25	ASTM E 84
Smoke density	<25	ASTM E 84
Radiant heat resistance	No Visual effect	N/A

2 Fungal Resistance

ASTM G-21 is an agar plate method used to test synthetic polymers including poly(vinyl chloride) and plastics. Samples are placed on a carbon-free nutrient salts agar and directly inoculated with a known concentration of fungal spores.

Agar Solutions:

- Potassium dihydrogen orthophosphate : 0.7 g
- Magnesium sulfate : 0.7 g
- Ammonium nitrate : 1.0 g
- Sodium chloride : 0.005 g
- Ferrous sulfate : 0.002 g
- Zinc sulfate : 0.002 g
- Manganous sulfate : 0.001 g
- Agar : 15.0 g

Fungi Cultures:

- *Aspergillus niger*
- *Penicillium pinophilum*
- *Chaetomium globosum*
- *Aureobasidium pullulans*

Ratings:

- No Traces of Growth : 0
- Traces of Growth (less than 10%) : 1
- Light Growth (10 to 30%) : 2
- Medium Growth (30 to 60%) : 3
- Heavy Growth (60% to complete coverage) : 4

Test Result

- No Traces of Growth

Tristone	Week 1	Week 2	Week 3	Week 4
Specimen 1	0	0	0	0
Specimen 2	0	0	0	0
Specimen 3	0	0	0	0

3 Bacterial Resistance

ASTM G-22-96 is the Standard Practice for Determining Resistance of Synthetic Polymers and Plastics to Bacteria.

The Samples were placed on a mineral Salts medium and inoculated with the test organism *Pseudomonas aeruginosa*.

The test samples and controls were then incubated 21 days at 35° to 37°

Tristone	Day 0	Day 7	Day 14	Day 21
Specimen 1	0	0	0	0
Specimen 2	0	0	0	0
Specimen 3	0	0	0	0

Control Samples	Day 0	Day 7	Day 14	Day 21
Positive control (Vinyl)	0	3	3	4
Negative control (glass slide)	0	0	0	0

4 Stain Resistance

The details of the Stain Resistance Test and the Report can be acquired through contacting Lion Surfaces. The Standards and the Results can be found in the Performance Properties section.

SGS SGS U.S. Testing Company Inc.
IAPMO/ANSI Z124.1.2-2005 Plastic Bathtub and Shower Units

Stain resistance: Pass, Level 3 Compliance

Reagent	Exposure Time	Covered Specimen Rating	Uncovered Specimen Rating
Black Crayon	16 hrs.	2	2
Black Liquid Shoe Polish	16 hrs.	3	3
Blue Washable Ink	16 hrs.	4	3
Gentian Violet Solution	16 hrs.	4	3
Lipstick	16 hrs.	2	2
Hair Dye	16 hrs.	2	2
Iodine, 1%	16 hrs.	3	1
Total Stain Resistance Rating(50 max) : 36			

5 Flammability

Please refer to the Performance Properties section.