American Epoxy Scientific LLC.

Chemical Resistant Laboratory Grade Epoxy Resin Cast Work-surfaces

American Epoxy Scientific's chemical resistant and durable work-surfaces are manufactured via a thermosetting process. The raw materials, which include an epoxy resin, are mixed to a proprietary formula and then cast flat, creating a solid, continuous product. The result is a non-porous, chemical and heat resistant product designed to withstand the harshest of laboratory conditions.

TECHNICAL DATA:

Thickness:

Imperial (Inches)	2 ½	1 ¼	1	¾	½	1/4
Metric (mm)	64	32	25	19	12	6

Standard: 1"

Thickness Tolerance: +/- 0.03

Flatness Tolerance: +/- 1/32 per running foot

Weight Per SQF: 10lbs

Colors:

Standard Color: Black;

Regular Colors: Charcoal Grey; Platinum; Grey; Pearl; Rock White; Sand; Sandstone: Ocean Blue; Dark Khaki; Brite White

Special Colors: A color matching program is available on request.

Surface finish: a uniform non-glare matte finish

Color Tolerance:

Name/Color	Minimum "L" Value	Nominal "L" Value	Maximum "L" Value	Minimum "A" Value	Nominal "A" Value	Maximum "A" Value	Minimum "B" Value	Nominal "B" Value	Maximum "B" Value
	(black)		(White)	(Green)		(Red)	(Blue)		(Yellow)
Black	10.00	14.50	19.00	-0.10	0.20	0.50	0.00	1.50	3.00
Charcoal Gray	37.00	39.00	41.00	-1.00	0.00	1.00	-1.50	-0.50	1.50
Dark Khaki	33.50	37.00	40.50	0.00	0.75	1.50	3.50	5.50	7.50
Gray	60.00	62.00	64.00	-2.00	-1.00	0.00	-3.00	-1.50	0.00
Rock White	76.50	78.50	81.50	-2.00	-1.25	-0.50	-1.25	1.25	3.75
Sand	73.00	75.00	78.00	0.50	2.00	3.50	10.00	12.00	14.00
Brite White	89.50	92.00	94.50	-2.50	-1.25	0.00	2.50	5.00	7.50

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Chemical and Stain Resistance

Chemical	Method	Epoxysci-040
Amyl Acetate	A	0
Ethyl Acetate	A	0
Acetic Acid, 98%	B	0
Acetone	A	1
Acid Dichromate, 5%	B	0
Butyl Alcohol	A	0
Ethyl Alcohol	A	0
Methyl Alcohol	A	0
Ammonium Hydroxide, 28%	B	0
Benzene	A	0
Carbon Tetrachloride	A	0
Chloroform	A	0
Chromic Acid, 60%	B	2
Cresol	A	0
Dichloro Acetic Acid	A	0
Dimethylformamide	A	0
Dioxane	A	0
Ethyl Ether	A	0
Formaldehyde, 37%	A	0
Formic Acid, 90%	B	0
Furfural	A	0
Gasoline	A	0
Hydrochloric Acid, 37%	B	0
Hydrofluoric Acid, 48%	B	3
Hydrogen Peroxide, 28%	B	0
Tincture of Iodine	B	0
Methyl Ethyl Ketone	A	0
Methylene Chloride	A	1
Mono Chlorobezene	A	0
Napthalene	A	0
Nitric Acid, 20%	B	0
Nitric Acid, 30%	B	0
Nitric Acid, 70%	B	0
Phenol, 90%	A	0
Phosphoric Acid, 85%	B	1
Silver Nitrate, Saturated	B	0
Sodium Hydroxide, 10%	B	0
Sodium Hydroxide, 20%	B	0
Sodium Hydroxide, 40%	B	0
Sodium Hydroxide, Flake	B	0
Sodium Sulfide, Saturated	B	0
Sulfuric Acid, 33%	B	0
Sulfuric Acid, 77%	B	1
Sulfuric Acid, 96%	B	3
Sulfuric Acid 77% and Nitric Acid 70%, equal parts	B	1
Toluene	A	0
Trichloroethylene	A	0
Xylene	A	0
Zink Chloride, Saturated	B	0

A SEFA approved independent test house was used to test the American Epoxy Scientific's chemical resistant epoxy resin cast stone. The results highlight it passes the SEFA 3 Chemical and Stain resistant test.

Test Methodology:
The test was conducted in accordance with SEFA 3 Work Surfaces, Section 2.1.1 Chemical/Stain Resistance Test.

Test Method A - For volatile chemicals - A cotton ball, saturated with the test chemical, was placed in a small glass bottle (approx. 1 oz.). The container was inverted on the test material surface for a period of 24 hours at 73° +/- 4° F.

Test Method B - For non-volatile chemicals - 5 drops (1/4 cc) of the test chemical were placed on the test material surface. The chemical was covered with a domed plastic cover (approx. 25 mm) for a period of 24 hours at 73° +/- 4° F.

After 24 hours exposure, exposed areas were washed with water, then a detergent solution and finally with isopropyl alcohol. The panels were then rinsed with distilled (deionized) water and dried with a cloth. Each area of chemical exposure was numerically rated per Section 2.1.2. The panel was visually evaluated (under fluorescent lighting).

Rating:
0 No Effect - No detectable change in the material surface.

1 Excellent - Slight detectable change in color or gloss but no change in function or life of the surface.

2 Good - A clearly discernible change in color or gloss but no significant impairment of surface life or function.

3 Fair - Objectionable change in appearance due to discoloration or etch, possibly resulting in deterioration of function over an extended period of time.

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Physical Property Test Results

Physical properties were also tested by an approved SEFA laboratory. Testing was done in accordance with ASTM guidelines

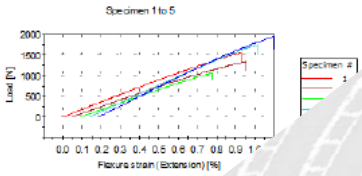
ASTM D638, Tensile Strength: 10,298 psi
ASTM D790, Flexural Strength: 19,290 psi
ASTM D790, Flexural Modulus: 2.43 x 106 psi
ASTM D695, Compressive Strength: 37,420 psi
ASTM D785, Rockwell Hardness: 108
ASTM D570, Water Absorption (24hrs): +.02%
ASTM D696, Coefficient of Linear Expansion: 34 x 10-6
ASTM D792, Specific Gravity/Density: 1.987/1.9831(g/m3)
ASTM D635, Fire Resistance: 0 burn rate or self-extinguishing
Heat & Char Resistance: The material showed no blistering, cracking, or breakdown.

Flexural Strength- Results

Procedure

SEFA 3 2010, SECTION 2.8, ASTM D790 (2015)

Test Speed: 4.9 mm/min
Support Span and Radius: 184 mm and 5 mm loading bar with 9.6 mm supports per ASTM
D790 (2015), Section 6.1.2.2
Test Conditions: +23°C, 46% RH



	Flexural Strength [MPa]	Modulus (Auto Young's) [MPa]	Maximum Load [N]
1	147	17400	1550
2	138	16800	1350
3	107	16500	1070
4	133	16500	1750
5	138	16700	1950
Mean	133	16800	1540
Standard Deviation	15.19	401.51	339.77

Heat Resistance –Results

A 3/8 inch Bunsen Burner with a flame of approximately 38mm core was allowed to remain on the material surface for two minutes. The specimen was tested in two locations. The surface was then evaluated for any blistering or cracking.

R**esults**: No blistering or cracking

Char Resistance - Results

A porcelain crucible was heated until it was a dull red. The hot crucible was immediately placed on the material's surface and left on the work-surface until cooled to room temperature. The specimen was tested in two locations. The work-surface was then evaluated for any blistering, cracking or breakdown.
Results: No blistering, cracking or breakdown

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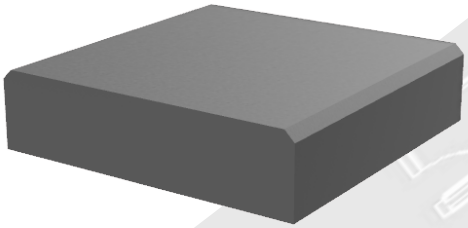
Work-Surface Edging

- All exposed edges and corners will be free of saw marks, have a smooth uniformed bevel or radius as required by architect drawings, and have a special formulated edge dressing applied to allow for a smooth look.
- The bottom side of the work-surfaces can also be finished if the laboratory design specifies exposure to the underside.
- Any cutouts can be made to the countertops to meet the designer's needs. Sink cutouts will have no less than ¾" radius in the corners, with drop in and under mounted sinks having a finish around the cutouts allowing for a clean transition from work-surface to sink.
- Work-surfaces have a continuous drip groove as needed under the surface ½" from the edge. In conjunction with the drip groove a front and end overhang of 1" over the base of cabinets shall allow for additional protection to the cabinetry.
- Work-surfaces shall be fabricated to allow for a smooth square watertight joint that can be bonded with an epoxy resin to allow for a smooth seamline.
- Work-surfaces can also be provided with a marine edge, either molded or glued. A variety of molds are used to ensure a seamless finish.

1/8" Beveled Edge



3/16" Radius Edge

Marine Edge