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SEFA Recommended Chemical/Stain Resistance Test Results

Chemical Resistance for Black Onyx

Reagent Tested	Test	Rating
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	1
Ammonium Hydroxide, 28%	B	0
Benzene	A	1
Carbon Tetrachloride	A	0
Chloroform	A	1
Chromic Acid, 60%	B	0
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	1
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	0
Mono Chlorobenzene	A	0
Naphthalene	A	0
Nitric Acid, 20%	B	0
Nitric Acid, 30%	B	1
Nitric Acid, 70%	B	1
Phenol, 90%	A	0
Phosphoric Acid, 85%	B	1
Silver Nitrate, Saturated	B	0
Sodium Hydroxide, 10%	B	1
Sodium Hydroxide, 20%	B	1
Sodium Hydroxide, 40%	B	1
Sodium Hydroxide, Flake	B	1
Sodium Sulfide, Saturated	B	2
Sulfuric Acid, 25%	B	1
Sulfuric Acid, 85%	B	2
Sulfuric Acid, 96%	B	3
Sulfuric Acid 85%, and Nitric Acid 70%, equal parts	B	3
Toluene	A	1
Trichloroethylene	A	0
Xylene	A	0
Zink Chloride, Saturated	B	0

Chemical/Stain Test Evaluation

After 24-hours exposure, exposed areas were washed with water, then a detergent solution and finally with isopropyl alcohol. Materials were then rinsed with distilled water and dried with a cloth. Samples are numerically rated as follows:

0 = No Effect	1 = Excellent	2 = Good	3 = Fair
No detectable change in the material surface.	Slight detectable change in color or gloss but no change in function or life of the surface.	A clearly discernible change in color or gloss but no significant impairment of surface life or function.	Objectionable change in appearance due to discoloration or etch, possibly resulting in deterioration of function over an extended period of time.

Test Method A

For volatile chemicals - A cotton ball saturated with the test chemical was placed in a one ounce bottle (10mm x 75mm test tube or similar container). The container was inverted on the test material surface for a period of 24 hours. Temperature of test: 23° +/-2° C (73° +/-4° F). This method was used for the organic solvents.

Test Method B

For non-volatile chemicals - Five drops (1/4cc) of the test chemical were placed on the test material surface. The chemical was covered with a watch glass (25mm) for a period of 24 hours. Temperature of test: 23° +/-2° C (73° +/-4° F). This method was used for all chemicals listed below other than the solvents.

SEFA Recommended ASTM Test Results

Physical Test Results

ASTM	Test	Imperial	Metric
ASTM D785-08	**Rockwell Hardness**	110 [M scale]	110 [M scale]
ASTM D696-03*	**Linear Thermal Expansion**	1.18x 10^{-5} [in/in˚F]	2.12 x 10^{-5} [mm/mm˚C]
ASTM D3801-00*	**Burning Characteristics Sample as Received**	30 Seconds Max. Burning Time	30 Seconds Max. Burning Time
ASTM D3801-00*	**Burning Characteristics Sample Heat Aged**	41 Seconds Max. Burning Time	41 Seconds Max. Burning Time
ASTM D635-06*	**Fire Resistance**	Self Extinguishing	Self Extinguishing
ASTM D570-98*	**Water Absorption**	0.008 [% after 24 hrs]	0.008 [% after 24 hrs]
ASTM D792-00	**Density**	133 [lb/ft^3]	2.13 [g/cm^3]
ASTM D695-02	**Compressive Strength**	33.5 [kpsi]	231 [MPa]
ASTM D648-07	**Heat Distortion Temperature**	518 [˚F]	270 [˚C]
ASTM E84-06*	**Fire Resistance - Flame Spread Index**	0.29 [in]	7.4 [mm]
ASTM E84-06*	**Fire Resistance - Smoke Developed Index**	0.88 [in]	221.2 [mm]
ASTM D790-07	**Flexural Strength**	14.9 [kpsi]	103 [MPa]

*** Lower number preferred**

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SEFA Recommended Chemical/Stain Resistance Test Results

These test results are based on the Scientific Equipment & Furniture Association's (SEFA) Standard Practices and are presented to help determine Durcon Epoxy Resin's suitability for a given application. Results are subjective and should be used as guidelines as they will vary by manufacturer due to differences in composition, finish, formulation and the independent test lab selected. The SEFA standard states, "Laboratory Grade work surface finishes shall result in no more than 4 Level 3 conditions."

Please refer to www.durcon.com/Chemical-Resistance for the latest test results.

THE MOST COST-EFFECTIVE LABORATORY WORKSURFACES AVAILABLE

DURABILITY
DURCON products are monolithic and non- porous; they cannot delaminate or swell.

APPEARANCE
DURCON products have a smooth, low glare surface that is easy to clean and maintain.

FOOD SAFETY
DURCON epoxy resin products are NSF/ANSI 51 certificated for use in food service areas.

HEAT RESISTANT
DURCON products withstand temperatures normally encountered in laboratory work.

SAFETY
DURCON epoxy products contain no asbestos, will not ignite, are non-conductive and are certified "excellent" for ease of decontamination for use in radioactive areas.

REAGENT RESISTANT
DURCON products are highly resistant to the corrosive effects of most chemicals.

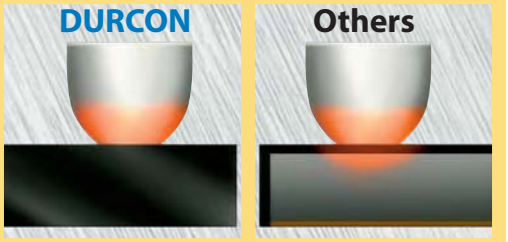
EXPERIENCE
DURCON products have been used successfully for decades worldwide in virtually every type of laboratory.

INDOOR AIR QUALITY
DURCON epoxy resin products are low-emission certified by Greenguard®

MADE IN THE USA
DURCON epoxy resin products are 100% manufactured in the USA.

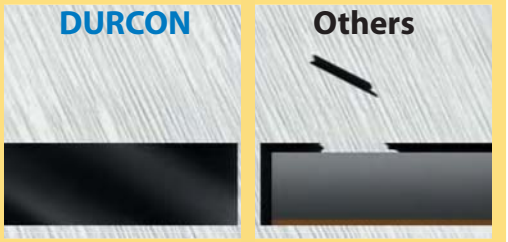
MADE IN THE USA

Durcon Is Heat Resistant



Durcon Is Reagent Resistant

Durcon Will Not Delaminate



SUSTAINABILITY

Durcon is a member of the United States Green Building Council and our worksurfaces meet various Leadership in Energy and Environmental Design (LEED) standards which may contribute toward LEED Certification.* DURCON products can contribute towards the following LEED Credits:

U.S. GREEN BUILDING COUNCIL MEMBER

Credit MR 5.1 & 5.2 Point of Manufacture / Point of Extraction
Credit EQ 4.1 VOC Content (Health Care & School Buildings)
Credit MR 4.1 & 4.2 Recycled Content (Greenstone)
MR 3.1 and 3.2 Material Reuse

* *LEED is an independent certification program by the US Green Building Council that considers the number of eco-friendly materials used in a construction project.*