



A WILSONART COMPANY

TESTING RESULTS EPOXY + SOLICOR-CR

CHEMICAL RESISTANT PROPERTIES TESTING

CHEMICAL Tested	TEST method	EPOXY results	SOLICOR-CR GRAPHITE	SOLICOR-CR GRAY
Amyl Acetate	A	1	0	0
Ethyl Acetate	A	1	0	0
Acetic Acid, 98%	B	0	0	0
Acetone	A	1	0	0
Acid Dichromate, 5%	B	0	0	1
Butyl Alcohol	A	1	0	0
Ethyl Alcohol	A	1	0	0
Methyl Alcohol	A	0	0	0
Ammonium Hydroxide, 28%	B	1	0	1
Benzene	A	1	0	0
Carbon Tetrachloride	A	1	0	0
Chloroform	A	1	0	0
Chromic Acid, 60%	B	3	1	2
Cresol	A	1	1	0
Dichloroacetic Acid	A	1	1	1
Dimethylformamide	A	1	0	0
Dioxane	A	1	0	0
Ethyl Ether	A	0	0	0
Formaldehyde, 37%	A	0	0	0
Formic Acid, 90%	B	1	0	0
Furfural	A	1	1	1
Gasoline	A	0	0	0
Hydrofluoric Acid, 37%	B	1	0	0
Hydrofluoric Acid, 48%	B	2	0	0
Hydrogen Peroxide, 28%	B	0	3	0
Tincture of Iodine	B	0	2	2
Methyl Ethyl Ketone	A	0	0	0
Methylene Chloride	A	1	0	0
Monochlorobenzene	A	1	0	0
Naphthalene	A	0	0	0
Nitric Acid, 20%	B	0	2	1
Nitric Acid, 30%	B	1	1	1
Nitric Acid, 70%	B	1	1	1
Phenol, 90%	A	1	0	0
Phosphoric Acid, 85%	B	0	0	0
Silver Nitrate, Saturated	B	1	0	0
Sodium Hydroxide, 10%	B	1	0	0
Sodium Hydroxide, 20%	B	1	0	0
Sodium Hydroxide, 40%	B	1	0	0
Sodium Hydroxide, Flake	B	0	0	0
Sodium Sulfide, Saturated	B	1	0	0
Sulfuric Acid, 33%	B	0	0	0
Sulfuric Acid, 77%	B	1	2	1
Sulfuric Acid, 96%	B	3	1	0
Sulfuric Acid 77%, and Nitric Acid 70%, equal parts	B	1	1	1
Toluene	A	1	0	0
Trichloroethylene	A	1	0	0
Xylene	A	1	0	0
Zink Chloride, Saturated	B	0	0	0

After 24-hours exposure, areas are washed with water, then a detergent solution and finally with isopropyl alcohol. Materials are then rinsed with distilled water and dried with a cloth.

0 = No effect, 1 = Excellent, 2 = Good, 3 = Fair

EPOXY PHYSICAL PROPERTIES TESTING

TEST Identification	TEST Description	EPOXY RESULTS [imperial]
ASTM D785-08	Rockwell Hardness	109 [M scale]
ASTM D696-03	Linear Thermal Expansion	1.2 x 10 ⁻⁵ in/in°F
ASTM D3801-00	Burning Characteristics Sample as Received	30 seconds max burning time
ASTM D3801-00	Burning Characteristics Samples as Received	41 seconds max burning time
ASTM D635-06	Fire Resistance	Self-extinguishing
ASTM D570-98	Water Absorption	0.03% [after 24 hours]
ASTM D792-00	Density	133.6 lbs/ft ³
ASTM D695-02	Compressive Strength	32.7 kpsi
ASTM D648-07	Heat Distortion Temperature	380°F
ASTM E84-06	Fire Resistance - Flame Spread Index	0 [Class A]
ASTM E84-06	Fire Resistance - Smoke Developed Index	300 [Class A]
ASTM D790-07	Flexural Strength	12.6 kpsi

SOLICOR - CHEMICAL RESISTANCE GRADE PHYSICAL PROPERTIES TESTING

TEST Identification	TEST Description	SOLICOR-CR RESULTS GRAPHITE [imperial]
EN 438:2 : 10	Resistance to Surface Wear	350 Revolutions
EN 438:2 : 25	Resistance to Scratch	5 Appearance*
EN 438:2 : 16	Resistance to Dry Heat (320°F)	5 Appearance*
EN 438:2 : 12	Resistance to Immersion in Boiling Water	0.3% Mass Increase 0.1% Thickness Increase
EN 438:2 : 17	Dimensional Stability in Elevated Temperature	0.3% Longitudinal 0.3% Transversal
EN 438:2 : 26	Resistance to Staining (Appearance Rating)	5 Group 1+2* 5 Group 3*
EN 438:2:27	Light fastness	5 Appearance* (Surface) 5 Appearance* (Core)
EN 438-2:24	Resistance to Crazing	5 Appearance* (Surface)
EN ISO 178	Modulus of Elasticity	2293 Longitudinal psi 1526 Transversal psi
EN 438	Water Absorption	1.07% [after 24 hours]
EN ISO 1183	Density	94.26 lbs/ft ³
ASTM E84-17a	Time to Ignition	00.48 Minutes
	Max Flamespread Distance	6.74 ft
	Time to Max Spread	07.45 Minutes

* Appearance Rating 5 = No Change