



Material Properties: Polyurea Coating/Veil Safe

Mechanical Properties: Polyurea

The material properties of UGT coatings which includes; UGT Polyarmor 475-375 formulation for the coating of the rings, and the UGT Veil Safe product.

Typical Properties of High Density Molded EPS

Property	Units	ASTM Test	Results
Flexural Modulus	Psi	D790	375,000
Tensile Strength	psi	D638	8,600
Elongation	%	D638	300
Tear Strength	Psi	D624	575
Shore Hardness	D scale	D2240	80-82
Moisture Vapor Transition	Perm. in.	E96	0.010
Abrasion Resistance H-18, 1000g, 1000 rev. Cs-17, 1000g, 1000 rev.	Wt. loss-mg.	D6040	65 <5
Flash Point	°F		>400
Coefficient of Thermal Expansion	In/in/°C	D696	4×10^{-5}
Flame Spread		E108	UL790

The licensed manufacturer is Visuron Technologies in Bay City Michigan. The formulations have been enhanced for chemical resistance.

Processing:

UGT Polyarmor 475-375 – Aromatic Plural Component Sprayable Polyurea – Color Orange

Veil Safe – Brush on grade, manually mixed by proportion amounts. Color Black



Chemical Resistance Properties: Polyurea Coating/Veil Safe

Chemical	Results	Chemical	Results
Acetic Acid, 10%	R	Methyl Ethyl Ketone	R-1
Acetone	R-8	Mineral Spirits	R
Ammonium Hydroxide 20%	R	Motor Oil	R
Ammonium Nitrate	R	Nitric Acid, 10%, 20%	R
Ammonium Phosphate	R	Nitric Acid, 40%	R-8
Antifreeze (50% Ethylene Glycol)	R	Nitric Acid, 50%	R-1
Battery Acid (Sulfuric Acid)	R	Phosphoric Acid, 10%	R
Benzene	R-8	Phosphoric Acid, 25%, 50%, 85% (conc.)	R
brine (saturated 130,000 ppm)	R	Potassium Hydroxide, 10%	R
Brake Fluid	R-1	Potassium Hydroxide, 20%, 50%	R
Chlorine (2,000 ppm in H ₂ O)	R	Propylene Carbonate	R
Citric Acid	R	Skydrol (aircraft hydraulic oil)	R-1
Copper Chromatic Arsenic (4% working sol'n)	R	Sodium Chloride	R
Diesel Fuel	R	Sodium Hydroxide, 5%, 10%, 25%	R
Dimethyl Formamide	R-1	Sodium Hydroxide, 50% (conc.)	R
Gasoline (Unleaded)	R	Sodium Hypochlorite (household bleach)	R
Hexane	R	Stearic Acid	R
Hydrogen Sulfide	R	Sulfuric Acid, 5%, 10%, 20%	R
Hydrochloric Acid, 5%, 10%	R	Sulfuric Acid, 25%, 50%	R
Hydrochloric Acid, 25%	R	Sulfuric Acid, 98% (conc.)	R-1
Hydrofluoric Acid	N	Toluene	R-8
Hydraulic Oil	R 1, 1,1	Trichloroethane	R-8
Isopropyl Alcohol	R	Trisodium Phosphate	R
Lactic Acid	R	Vinegar (5% Acetic Acid)	R
Liquid Nitrogen Fertilizer (28-0-0)	R	Water	R
Liquid Urea Fertilizer	R	Xylene	R
Methanol	R		
LEGEND			
Legend 7 day exposure per ASTM-1308—immersion @ 77°F			
R Recommended (No Damage)			
C Caution			
R-8 Recommended with 8 hours washdown			
R-1 Recommended with 1 hour washdown			
N Not Recommended			