Epoxy Resin

Part 1 – Specifications for Modified Epoxy Resin

Tops and curbs shall be molded from a modified epoxy resin that has been especially compounded and cured to provide optimum physical and chemical resistance required for a heavy duty laboratory working surface. Impregnated stone and/or furane resins are not equal. Tops and curbs shall be a uniform mixture throughout, and shall not depend on a surface coating that can be readily removed by chemical or physical abuse.

Tops and curbs shall be non-glaring matte finish and black in color.

Tops shall be a thickness as required with a drip groove provided on underside of all sink top exposed edges. All edges shall have a slight radius.

Curbs shall be bonded to the surface on the top to form a square water-tight joint. All joints in tops to be bonded with an approved epoxy cement and shall be smooth and water-tight.

Counters with integral curbs shall have a junction with a ¾” radius, except around columns and special cutouts, which will have a standard bonded curb.

Part 2 – Chemical Resistance

Epoxy Resin is highly resistant to the normally used laboratory alkalies, alcohol, acids and solvents. The following solutions listed were tested for a period of 24 hours with optimum resistance.

Acetic Acid Glacial Chloroform Methyl Alcohol
Acetone Chromic Acid Nitric Acid
Ammonium Hydroxide Ethyl Alcohol Phenol
Amyl Acetate Ethyl Ether Phosphoric Acid
Aqua Regia Formaldehyde Silver Nitrate
Benzene Hydrochloric Acid Sodium Hydroxide
Butyl Alcohol Hydrofluoric Acid Sulphuric Acid
Calcium Hypochlorite Hydrogen Peroxide Xylene
Carbon Disulfide Kerosene Zinc Chloride

Part 3 – Physical Properties

Flexural Strength ASTM-Method D-790 16000/psi
Compressive Strength ASTM-Method D-695 36,500/psi
Hardness Rockwell M ASTM-Method D-785 110
Density Gr./CC. ASTM-Method D-792 123.55 lbs/ft³
Water Absorption ASTM-Method D-570 0.0076%
Flame Test ASTM-Method D-635 Self-extinguishing
Part 4 – Fire Resistance

A Bunsen burner overturned on working surface for several minutes causes no adverse effects. Epoxy resin is self-extinguishing, in accordance with ASTM-Method D-635. Independent laboratory test reports available upon request.