



Why Epoxy Resin — Epoxy vs. Phenolic / HPL Work Surfaces

From research and clinical labs to teaching labs and school science classrooms, solid epoxy resin is the work surface that lasts. Its solid, homogeneous construction shrugs off the chemicals, heat and daily abuse that wear other materials down — and it ships on a quick lead time. Whatever the lab market, epoxy is the material to specify with confidence.

American Epoxy Scientific — independently tested: SEFA 3 certified · flexural strength 19,290 psi · Rockwell hardness 108 · water absorption 0.02% · withstands an open Bunsen flame with no blistering or cracking

Criteria	Epoxy resin (AES)	Phenolic / HPL (Trespa, Fundermax)
Construction	Solid, one-piece cast thermoset — homogeneous and non-porous through the full thickness; no coatings or laminates	Layers of kraft/wood-fibre paper and resin pressed into a laminate, with a thin resin surface layer over the core
Chemical resistance	The industry benchmark — resists strong acids, alkalis and solvents; passes the SEFA 3 reagent panel	Good on many common reagents, but can show wear under high-concentration acids and aggressive solvents
Damage tolerance	Homogeneous throughout — a scratch, gouge or refinish still exposes the same chemical-resistant material	Resistance is a surface property; if the top layer is cut or gouged, the more absorbent core can be exposed and lose chemical resistance
Heat & flame	Highest — withstands an open Bunsen flame (2 min) and a crucible heated to dull red with no blistering or cracking; ideal for school science classrooms	Good, but lower; not intended for direct flame or extreme localized heat
Seams & repair	Field joints epoxy-welded into a continuous, sealed surface; sinks molded one-piece; surface can be refinished	Mechanical/adhered joints; surface damage is difficult to restore without exposing the core
Service life	Solid material built to outlast the harshest labs; GreenGuard Gold / LEED documentation available	Durable for its class; typically a lighter-duty service life in aggressive environments
Value & lifecycle	A premium, solid surface engineered to last decades, on a quick lead time (about 5 weeks with approved drawings and PO) — the lower total cost of ownership in any lab	Lower up-front cost and weight, but a shorter effective service life once chemicals or heat are in play
Best for	Every lab market — research, clinical, industrial and education (teaching labs and school science classrooms) — wherever durability, chemicals or heat matter, which is virtually all of them	Best limited to light-duty or dry areas with minimal chemical and heat exposure

Specify epoxy resin as basis of design

From research and clinical labs to school science classrooms and teaching labs, specify solid epoxy resin. It stays chemical-resistant even when scratched or refinished, stands up to the open flames and reagents of a teaching lab, and ships on a quick lead time — about 5 weeks with approved drawings and PO. American Epoxy Scientific serves every lab market, and where performance matters, epoxy is the answer.

Ready-to-edit 3-part CSI specification (Section 12 36 53), SEFA 3 results, submittals, color charts and the full sink list are available at epoxysci.com. Request a sample kit or a lunch-and-learn for your team: sales@epoxysci.com.