

Chemical Resistance of Composite Laminates

Immersion-test results for Atlas Fibre's glass epoxy, phenolic and melamine grades across common solvents, acids and bases — to help you select the right material for a given chemical environment.

How to read this chart

Each table covers one test method. The six columns are the laminate **grades**; each chemical occupies a block of rows:

- **Visual** — condition of the sample after exposure (E / G / F).
- **± thickness %** and **± width %** — dimensional change measured after immersion.
- **Recommend** — Atlas Fibre's overall guidance for using that grade in that chemical.

Test coupons measured **0.062"** thick × **1.00"** wide. Method codes (e.g. C-168/23, E-24/38) note the exposure conditions.

Key to abbreviations

VISUAL

E = Excellent · G = Good · F = Fair · NA / X = no data

RECOMMENDATION

- **Excellent** — excellent for that application
- **Good** — good resistance to chemical
- **Ok** — usable; minor width/thickness change <10%
- **Caution** — use caution due to thickness increase
- **NR** — not recommended for use in this chemical

SOLVENTS (C-168/23)		FR-4 Glass Epoxy	G-3 Glass Phenolic	G-9 Glass Melamine	G-11 Glass Epoxy	L Linen Phenolic	C Canvas Phenolic
Acetone	Visual	G	G	E	G	E	F
	± thickness %	7.04	0.9	1.14	5.92	0.47	3.71
	± width %	0.09	0.07	0.02	0	0	0.26
RECOMMEND		Caution	Ok	Good	Caution	Good	Caution
Methyl Alcohol	Visual	G	E	E	E	E	E
	± thickness %	2.91	-1.14	0	3.7	1.09	2.78
	± width %	0.07	0.05	0.1	0.1	0	0.33
RECOMMEND		Caution	Good	Excellent	Caution	Ok	Caution
Unleaded Gasoline	Visual	E	E	E	E	E	E
	± thickness %	0.08	0.09	0.07	0.08	0.08	0.25
	± width %	0.05	0.1	0.04	0	0	0.8
RECOMMEND		Excellent	Excellent	Excellent	Excellent	Excellent	Good
Toluene	Visual	E	E	E	E	E	E
	± thickness %	0.72	0.36	0.07	0.41	0	0.25
	± width %	0.05	0.12	0.06	0	0	0.17
RECOMMEND		Ok	Good	Excellent	Good	Excellent	Good