

Subject index

- Abrasion resistance37
- Acetone replacements7, 9
- Accelerators6, 9
- Aerating resin.....54, 55
- Air inhibition13
- Anchors for concrete.....37
- Antimony compounds.....26
- Antifoam agents.....10
- Applying FRP lining.....34 through 36
 - to metal35
 - to FRP.....36
 - to concrete.....36
- Applying a test batch.....34
- Bulk storage.....55
- Catalysts (initiators).....4, 5, 8, 9
- Checking for complete cure.....38
- Conductive linings33
- Conversion factors15
- Defects38 through 41
- Disposal53
- Environmental information53
- Equipment for resin
 - transfer molding49
- Exposure limits (personal protection)52
- Extending resin shelf life54
- FDA/USDA compliance14
- Filament winding.....43, 44
- First aid.....52
- Food contact14
- Formulating guide.....15 through 25
- Formulating for spray-up42
- Gel times (typical).....16 through 25
- Glass evaluation.....3
- Glass fibers storage4
- Glass types2, 3, 8
- Guide to making a laminate.....29 through 32
- Inspecting laminates.....38 through 41
- Internal mold releases.....44, 46, 49
- Inventory rotation54
- Laminate construction29 through 32
- Making a laminate.....29 through 32
- Making a test laminate29, 30
- Masterbatches15
- Material Safety Data Sheets50
- Material suppliers8, 9
- Mold release agents.....11, 12
- Non-foaming catalysts (initiators)5
- Paints12
- Personnel protection52
- Physical properties50
- Polyamide epoxy paints.....12
- Postcuring33
- Product stewardship55
- Promoted resin storage55
- Promoters.....5, 9
- Pultrusion.....44 through 48
- Reactivity of resins.....16, 26, 51
- Reinforcement for pultrusion46
- Reinforcements used in FRP.....3, 42, 43, 48
- Resin shelf life.....54
- Resin transfer molding48, 49
- Retarders (gel time)6, 9
- Safety15, 50 through 53
- Secondary bonding33
- Spills53
- Spray-up.....42
- Storage temperatures54
- Styrene, carcinogenicity
 - classification53
- Styrene suppressant/
 - secondary adhesion promoter13
- Surfactants10
- Thixotropic additives.....10, 11
- Tooling for RTM49
- Trade names8, 9
- Troubleshooting.....27, 28
- Ultraviolet protection.....12
- Wax topcoats.....12, 13
- Working life of resins.....26

Contents

Foreword	1	Section 8 — Making a laminate and applying FRP linings	29
Section 1 — Selecting reinforcements, catalysts, and cure-control additives	2	making a test laminate	29
reinforcement types	2	guide to making a laminate	30-32
evaluating glass	3	postcuring	33
glass storage	4	secondary bonding	33
catalysts	4	applying a test batch	34
non-foaming MEKP substitutes	5	making a laminate lining	34
promoters, accelerators, gel time retardant	5-6	lining metal	35
acetone replacements	7	lining FRP	36
trade names and material suppliers	8-9	lining concrete	36
Section 2 — Other additives	10	epoxy vinyl ester resin anchors for concrete	37
surfactants, antifoam agents	10	Section 9 — Inspecting a laminate	38
thixotropic additives	10	checking for complete cure	38
mold release agents	11	recognizing FRP defects	38
UV protection materials	12	Section 10 — Other processing techniques	42
wax top coats	13	spray-up applications	42
styrene suppressant/secondary adhesion promoter	13	filament winding	43
Section 3 — Food contact	14	pultrusion	44-47
resins able to comply	14	resin transfer molding	48-49
fabricating for FDA/USDA compliance	14	Section 11 — Industrial health information	50
Section 4 — Formulating guide	15	MSD sheets	50
preparing a masterbatch of resin	15	base resins and styrene dilutions	50
conversion factors	15	physical properties	50
measuring small quantities of chemicals	15	fire and explosion hazard data	51
Section 5 — Typical gel time formulations	16-25	in case of fire	51
Section 6 — Working life of resins	26	reactivity data	51
factors affecting working life	26	first aid	52
effect of antimony compounds	26	personnel protection	52
Section 7 — Troubleshooting guide	27	spills	53
gels too slow	27	environmental and disposal information	53
resin does not get hard after gelling	27	health and hazard data	53
gels too fast	27	Section 12 — Resin storage	54
resin gel time drifts	28	storage temperature	54
too much exotherm	28	resin shelf life	54
		inventory rotation	54
		aerating the resin	54
		bulk storage	55
		storage of promoted resin	55
		product stewardship	55
		Subject Index	56

This revised version of "Fabricating Tips" has been expanded to include new information dealing with the fabrication of FRP linings, the use of styrene suppressants, FDA/USDA compliance, and a troubleshooting guide. It also contains updated information dealing with the selection, formulation and application of DERAKANE resins and information for safe handling and storage of resins.

"Fabricating Tips" provides practical information to help fabricators choose the most effective resin system and reinforcement combination for many FRP applications.