Composites, Inc.

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Certified Test Report

Fiber Volume, Void Content, Density and Specific Gravity

Test Information

Test Control No.:	TC-3093	Customer Name:	GMT Composites
Testing Date:	12/10/01	Program:	Report
Overall Test Results:	Report	Purchase Order No.:	1063
Digestion Method:	Nitric Acid CEM Closed Vessel	Test Specification:	ASTM D792, D2734,D3171

Material Data

Composite Materials Designation: Carbon/Epoxy Laminate, **A=Web**

Material Lot/Batch: Newport 301 Resin System Prepreg containing 34-700 Carbon Fiber

Reinforcement Density, g/cc: 1.78

Resin Density, g/cc: 1.25

Density Measurement Liquid: D. Water

Spec. Grav. of Density Liquid: 1.00

Density Measurement Data

Specimen ID	Sample Wt. (in air)	Samp+Wire Wt.(in liq.)	Wire Wt.(in liq)	Specific Gravity	Density (g/cc)
A	.9616	2.4145	2.0764	1.542	1.538

(Note: Density (g/ml) = S.G. x 0.9975)

Average	1.542	1.538
Avg. Requirement	Report	Report

Matrix Digestion Results

Specimen ID	Specimen Weight	Filter Tare Wt.	Filter & Fiber Wt.	Fiber Weight	Specimen Density	Fiber Content	Resin Content	Fiber Volume	Void Volume
A	.9616	33.9664	34.5856	.6192	1.538	64.4%	35.6%	55.7%	0.5%

Average	64.4%	35.6%	55.7%	0.5%
Ind. Requirement	Report	Report	Report	Report
Avg. Requirement	Report	Report	Report	Report

Matrix Composites certifies that the above testing was performed in accordance with the terms of the purchase order and all applicable specifications. All equipment used in the performance of this testing has been calibrated to NIST traceable standards.

M. McLean (for) 12/10/01

Don McLean — Date

Quality Assurance Manager

Carl Patterson 12/10/01

Carl Patterson — Date

Laboratory Technician