THE Composites GROUP®
SHAPING THE WORLD WITH COMPOSITES

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NEWS RELEASE

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TCG Introduces Premier*LT*™ Family of Low-Weight Compounds

Highland Heights, Ohio – May 28, 2014 – The Composites Group introduces Premier*LT*™, a new family of lightweight, low-density, high-performance thermoset sheet molding compounds (SMC) designed to meet current and future market needs for structural and semi-structural applications.

"Lightweighting is a driving dynamic for manufacturers today and a high priority for our product development efforts," said Marc Imbrogno, corporate director of Market/Product Development. "We're introducing our Premier*LT* family with two low-density product lines and will be adding more.

"Our goal is to offer a portfolio of lightweighting solutions with different cost and performance characteristics, so customers can choose the optimal value equation for their needs," he added.

Premier*LT* L701S, one of the initial Premier*LT* products, boasts a specific gravity of 1.2 along with excellent moldability. It is pigmentable and offers low shrink, making it ideal for a wide range of applications where performance and aesthetics are important. TCG's Quantum Composites business unit will manufacture Premier*LT* L701S.

The second initial offering in the Premier*LT* family, Premier*LT* L702S, offers superior strength and moldability with a specific gravity of 1.5. Premier*LT* L702S is manufactured by TCG's Premix compounding business unit. It delivers excellent flexural strength and toughness, and accepts automotive primers and powder in-mold coatings, making it ideally suited for demanding structural and semi-structural applications in the transportation industry.

"Our Premier*LT* product line uses different chemistries to achieve the desired weight reduction, providing great diversity of choice for customers. In the coming months, we expect to announce two additions to the Premier*LT* family, including a carbon fiber SMC," said Imbrogno.

Visit the Premier*LT* L701S and Premier*LT* L702S data sheets for more information.

About The Composites Group: Comprised of three longstanding entities within the thermoset composites industry, The Composites Group (TCG) and its three business units—Premix, Hadlock Plastics and Quantum Composites—offer a comprehensive portfolio of thermoset composite compounds and parts along with forward-thinking research and development initiatives plus a successful history of delivering creative solutions for myriad applications throughout diverse markets. TCG is headquartered in Highland Heights, Ohio, with manufacturing facilities located in northeastern Ohio and Bay City, Mich. Premix formulates and produces a variety of thermoset compounds and offers diverse molding capabilities; Hadlock Plastics provides value-added thermoset molding solutions; and Quantum Composites develops and manufactures high-performance fiberglass and carbon fiber composite compounds. For more information about The Composites Group, visit thecompositesgroup.com.

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PREMIX
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Premier*LT*™ L701S
Sheet Molding Compound

Preliminary Technical Data Sheet

Typical Application — Low Density Structural / Semi-Structural

Premier*LT*™ L701S is a fiberglass reinforced thermoset sheet molding compound for structural and semi-structural applications where high strength and durability are required in a low density composite.

Key Features and Benefits:

- Specific gravity of 1.2 for weight savings vs. standard composites.
- Excellent flexural strength and outstanding toughness.
- Pigmentable with uniform color at low shrinkage.

Typical Values. Mechanical values are from 12"X12" Compression Molded Cut Specimens .

Properties	Test Method	Values (US)	Values (Metric)
Flexural Strength	ASTM D-790	23,000 psi	160 MPa
Flexural Modulus (RT)	ASTM D-790	1.00 X 10^6 psi	7.0 GPa
Flexural Secant Modulus @ 0.5 mm (RT)	ASTM D-790	1.00 X 10^6 psi	7.0 GPa
Flexural Secant Modulus @ 0.5 mm (150° C)	ASTM D-790	6.40 X 10^5 psi	4.4 GPa
Flexural Secant Modulus @ 0.5 mm (175° C)	ASTM D-790	5.90 X 10^5 psi	4.1 GPa
Flexural Secant Modulus @ 2.5 mm (RT)	ASTM D-790	1.00 X 10^6 psi	7.0 GPa
Flexural Secant Modulus @ 2.5 mm (150° C)	ASTM D-790	5.80 X 10^5 psi	4.0 GPa
Flexural Secant Modulus @ 2.5 mm (175° C)	ASTM D-790	4.50 X 10^5 psi	3.1 GPa
Tensile Strength	ASTM D-638	9,000 psi	65 MPa
Tensile Modulus	ASTM D-638	1.20 X 10^6 psi	8.0 GPa
Tensile Elongation	ASTM D-638	1.40%	1.40%
Notched Impact	ASTM D-256	13 ft*lb/in	700 Joules/m
Unnotched Impact	ASTM D-4812	21 ft*lb/in	1,100 Joules/m
Compressive Strength	ASTM D-695	23,000 psi	160 MPa
Specific Gravity	ASTM D-792	1.20	1.20
Moisture Absorption	ASTM D-2584	0.20%	0.20%
Glass %, Weight Fraction	Premix Washout	41%	41%

This SMC product is generally intended to be compression molded in matched metal die molds, typically at 300°F (150°C) and 500 to 1000 psi (35-65 BAR) molding pressure. Strength values may be affected by the molding process. Polymerization shrinkage is approximately -0.00025 in/in. Contact your Premix sales representative for specific design recommendations.

Following physical characteristics are typical of this product:

CLTE, XY direction:	19.0	ppm / deg. C
CLTE, Z direction:	56.0	ppm / deg. C
Thermal Conductivity:	0.21	W / m * deg. K
Poisson's Ratio:	0.33	

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Premier*LT*™ L702S
Sheet Molding Compound

Technical Data Sheet

Typical Application — Low Density Transportation/Structural

Premier*LT*™ L702S is a fiberglass reinforced thermoset sheet molding compound for transportation or structural and semi-structural applications where good surface appearance, high strength, and durability are required in a low density composite.

Key Features and Benefits:

- Specific gravity of 1.5 for weight savings vs. standard composites.
- Excellent flexural strength and outstanding toughness.
- Very good surface profile for highly visible painted surfaces.
- Accepts automotive primers and powder in-mold-coatings.

Typical Values. Mechanical values are for Specimens cut from Compression-Molded panels.			
Properties	Test Method	Values (US)	Values (Metric)
Flexural Strength	ASTM D-790	32,000 psi	220 MPa
Flexural Modulus	ASTM D-790	1.15 x 10^6 psi	8 GPa
Tensile Strength	ASTM D-638	14,500 psi	100 MPa
Tensile Modulus	ASTM D-638	1.2 x 10^6 psi	8.5 GPa
Tensile Elongation	ASTM D-638	1.9%	1.9%
Notched Izod	ASTM D-256	21 ft*lb/in	1100 Joules/m
Unnotched Impact	ASTM D-4812	27 ft*lb/in	1500 Joules/m
Specific Gravity	ASTM D-792	1.50	1.50
Glass %, Weight Fraction	Premix Washout	38%	38%

This SMC product is generally intended to be compression molded in matched metal die molds, typically at 300°F (150°C) and 500 to 1000 psi (35-65 BAR) molding pressure. Strength values may be affected by the molding process. Polymerization shrinkage is an expansion of approximately 0.00025 in/in. Contact your Premix sales representative for specific design recommendations.

Following physical characteristics are typical of this product:

CLTE, XY direction: 13 ppm/deg C
CLTE, Z direction: 90 ppm/deg C
Poisson's Ratio: .31

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