



Document No.: NMS 451/14, Revision B, November 18, 2024

NCAMP Material Specia04 Tf 0 20474f0 20474f0 20474f0 204

REVISIONS:

<b>Rev</b>	<b>By</b>	<b>Date</b>	<b>Pages Revised or Added</b>
N/C	Yeow Ng and John Tomblin Vinsensius	3/24/2016	Document Initial Release.
A	Tanoto, Royal Lovingfoss		





## 3.5.3 Cured Laminate Mechanical Properties:

TABLE 4 - Required Cured Laminate Tests for Mechanical Properties (Class 1)

Property	Test Method <sup>(1)</sup>	Requirements <sup>(3)</sup>
0/90° Tension Strength and Modulus, Room Temperature Dry Layup: [0/90] <sub>4s</sub>	ASTM D3039	Strength <sup>(2)</sup> : Min. Ind. 134.9 ksi Strength <sup>(2)</sup> : Average 154.0 ksi Modulus <sup>(2)</sup> : 9.25 and 10.97 msi avg.
90/0° Compression Strength, Room Temperature Dry Layup: [90/0] <sub>4s</sub>	ASTM D6641	Strength <sup>(2)</sup> : Min. Ind. 80.68 ksi Strength <sup>(2)</sup> : Average 97.55 ksi
0° Short Beam Strength, Room Temperature Dry Layup: [0] <sub>16</sub>	ASTM D2344	Strength: Min. Ind. 11.85 ksi Strength: Average 13.53 ksi

<sup>(1)</sup> Specific procedures should be identical to those used in the original material qualification program.

<sup>(2)</sup> Normalize the properties to a nominal cured ply thickness (CPT) value of 0.0055 inch based on

QUALIFIED PRODUCTS LIST

Supplier Product Designation	Supplier Name and Production Location	Date Qualified	Specification Callout <sup>(1)</sup>
MTM45-1-32%-12KHTS40-145-610  (Formerly MTM45-1/HTS(12K)-145-32%RW)	Supplier Name: Cytec Engineered Materials Inc.  <i>(Cytec Engineered Materials Inc. is wholly owned subsidiary of Solvay)</i>  Production Location: 4300 Jackson Street Greenville, TX 75402 USA  Cage Code: 0LHZ4	March 24, 2016	NMS 451/14  Classification callout is optional because Type 32, Class 1, Grade 145 is the only classification allowed in this QPL.

(1) In accordance with NCAMP Standard Operating Procedures, NSP 100, this QPL shall not contain alternate materials/products. Additional production location may be included in the QPL only after successful equivalency demonstration and approval per NCAMP Prepreg Process Control Document (PCD) Preparation and Maintenance Guide, NRP 101.

(1) The proper specification callout for material procurement purpose is “NMS 451/14.” This specification was developed based on the material properties that are available publicly. The purchaser may specify additional requirements beyond those specified in this specification, especially when the purchaser has generated additional material properties beyond those available publicly or when the application requires additional requirements. The additional requirements are subject to supplier review and approval.