



## REVISIONS:

<b>Rev</b>	<b>By</b>	<b>Date</b>	<b>Pages Revised or Added</b>
-	Kim-Leng Poon	10/27/2022	Initial release
A	Kim-Leng Poon	3/8/2023	Added NCAMP Layup on product table
B	Kim-Leng Poon	7/26/2024	Revised notes for equivalency requirement in Table 3 & Table 4 equivalency test matrix.
	Kim-Leng Poon	11/25/2024	Revised equivalency test matrix with ETW tests.





3.2.3 Consolidated Laminate Mechanical Properties:

TABLE 3 - Required Consolidated Laminate Tests for Mechanical Properties<sup>(2)</sup>  
 (Class 2 “semi-preg” after consolidation and Class 3 “consolidated laminate”)

Property	Test Method <sup>(1)</sup>	Requirements <sup>(3)</sup>
0° (warp) Tension Strength and Modulus, Room Temperature NCAMP Layup: [0°]4s	ASTM D3039	Strength <sup>(2)</sup> : Min. Ind. • 104.97 ksi Strength <sup>(2)</sup> : Average • 121.04 ksi Modulus <sup>(2)</sup> : Between 7.83 and 9.30 msi, avg.
45° IPS Strength and Modulus Room Temperature NCAMP Layup: [45°]4s	ASTM D3518	Strength at 4%: Min. Ind. • 7.62 ksi Strength at 4%: Average • 8.70 ksi Modulus: Between 0.55 and 0.68 msi, avg.

- (1) Specific procedures should be identical to those used in the original material qualification program.
- (2) Normalize the properties to a consolidated ply thickness value of 0.01226" (Theoretical CPT).
- (3) “ind.” refers to individual measurements. “avg.” refers to the average of 5 Replicates. Limits c D O F X O D W H G Z L W K . D Q G 0 R G L I L H G & 9





Class 3 Product Code (Continued):-

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.

The proper specification callout for material procurement purpose is "NMS 401/3." This specification is 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.