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2. MATERIAL PROPERTIES

Introduction. This section contains ply properties for BMS, (Boeing Material Specification), 8-276, BMS 8-212, BMS 8-256, BMS 8-294, BMS 8-297, BMS 8-168, BMS 8-79, BMS 8-139 and strength properties for BMS 8-276 and 8-256 material systems. Nominal moduli (average of 70^{0}F tension and compression secant values at 4000 micro-strain) are presented as both ply properties as well as laminate carpet plots. Nominal moduli values are to be used for most analyses. This ensures a consistent use of strain based strength values. For stability analyses, compression and environmental factors must be applied to adjust the nominal values. Refer to Section 5.4 for more details.

Strain based material strength values are presented as both typical and design values at 70^{0}F. Environmental adjustment factors are included. **For the BMS 8-276 material system these strengths do not include the effects of impact damage, ply dropoffs, or manufacturing defects. They <u>are not</u> to be used directly for ultimate strength analyses. Refer to Section 5.7 and the component specific sections (30.0-39.0) for details on determining appropriate design values.**

Example problems for calculating both the stiffness and strength of laminates may be found in Section 5.10.