
McGill University

Mechanics of Composite Materials

MECH 530

# Assignment

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| | $\epsilon_1$ | $\epsilon_2$ | $\epsilon_6$ | $\epsilon_x$ | $\epsilon_y$ | $\epsilon_s$ | $\sigma_1$ | $\sigma_2$ | $\sigma_6$ |
|---|---|---|---|---|---|---|---|---|---|
| Ply 0 (0°) bottom | 0.0175 | -0.0061 | -0.0001 | 0.0175 | -0.0061 | -0.0001 | 2.3481 | -0.0102 | -0.0005 |
| Ply 0 (0°) top | 0.0172 | -0.0059 | -0.0001 | 0.0172 | -0.0059 | -0.0001 | 2.2970 | -0.0100 | -0.0005 |
| Ply 1 (0°) bottom | 0.0172 | -0.0059 | -0.0001 | 0.0172 | -0.0059 | -0.0001 | 2.2970 | -0.0100 | -0.0005 |
| Ply 1 (0°) top | 0.0168 | -0.0058 | -0.0001 | 0.0168 | -0.0058 | -0.0001 | 2.2460 | -0.0098 | -0.0005 |
| Ply 2 (25°) bottom | 0.0168 | -0.0058 | -0.0001 | 0.0127 | -0.0017 | -0.0174 | 1.7083 | 0.0164 | -0.0885 |
| Ply 2 (25°) top | 0.0164 | -0.0057 | -0.0001 | 0.0124 | -0.0017 | -0.0170 | 1.6695 | 0.0161 | -0.0865 |
| Ply 3 (-25°) bottom | 0.0164 | -0.0057 | -0.0001 | 0.0125 | -0.0018 | 0.0168 | 1.6787 | 0.0156 | 0.0859 |
| Ply 3 (-25°) top | 0.0160 | -0.0055 | -0.0001 | 0.0122 | -0.0017 | 0.0164 | 1.6397 | 0.0152 | 0.0839 |
| Ply 4 (0°) bottom | 0.0160 | -0.0055 | -0.0001 | 0.0160 | -0.0055 | -0.0001 | 2.1439 | -0.0093 | -0.0005 |
| Ply 4 (0°) top | 0.0156 | -0.0054 | -0.0001 | 0.0156 | -0.0054 | -0.0001 | 2.0928 | -0.0091 | -0.0004 |
| Ply 5 (0°) bottom | 0.0156 | -0.0054 | -0.0001 | 0.0156 | -0.0054 | -0.0001 | 2.0928 | -0.0091 | -0.0004 |
| Ply 5 (0°) top | 0.0153 | -0.0053 | -0.0001 | 0.0153 | -0.0053 | -0.0001 | 2.0418 | -0.0089 | -0.0004 |