# PROWOOD LIMITED

## PROLAM COMPOSITE BEAM
## PLX20-250100

### CHARACTERISTIC DESIGN STRENGTHS

Based on testing carried out by SCION with results dated 8 September 2020
Applies only to 240x90 with 40x8 steel insert top and bottom,

| E<br>*Lower bound Modulus of Elasticity*<br>GPa | f'b<br>*Bending*<br>MPa | f's<br>*Shear*<br>MPa | f'c<br>*Compression parallel to grain*<br>MPa | f't<br>*Tension*<br>MPa | G<br>*Modulus of Rigidity*<br>MPa |
|---|---|---|---|---|---|
| 20 | 40 | 3.7 | 18 | 4 | 480 |

Section properties for design:

Moment of Intertia I = **$1.04 \times 10^{-4}$** $m^4$

Section Modulus Z = **$8.64 \times 10^{-4}$** $m^3$

Area A = **0.0216** $m^2$

***NOTES:***

1 Beam design to be in accordance with NZS3603 or NZSAS1720 assuming a solid timber member. Use the appropriate k factors and $\phi$=0.8 with the properties as above. Refer to the Prolam Specific Engineering Design Guide for further information.
2 $k_2$ / $j_2$ factor for creep deflection = 1.25
3 Joint group J5 for design of connections.
4 Bending strength and MoE have been determined from testing. Other properties are based on SG6 timber
5 Intended for use as a beam and not as tension or compression member

Oliver Greeff
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TASMAN CONSULTING ENGINEERS
25 May 2026

# PROWOOD LIMITED

## PROLAM COMPOSITE BEAM
## PLX20-300100

### CHARACTERISTIC DESIGN STRENGTHS

Based on testing carried out by SCION with results dated 21 April 2021
Applies only to 290x90 with 40x10 steel insert top and bottom,

| E<br>*Lower bound Modulus of Elasticity*<br>GPa | f'b<br>*Bending*<br>MPa | f's<br>*Shear*<br>MPa | f'c<br>*Compression parallel to grain*<br>MPa | f't<br>*Tension*<br>MPa | G<br>*Modulus of Rigidity*<br>MPa |
|---|---|---|---|---|---|
| 21 | 45 | 3.7 | 18 | 4 | 480 |

Section properties for design:

Moment of Intertia I = **$1.83 \times 10^{-4}$** $m^4$

Section Modulus Z = **$1.26 \times 10^{-3}$** $m^3$

Area A = **0.0261** $m^2$

***NOTES:***

1 Beam design to be in accordance with NZS3603 or NZSAS1720 assuming a solid timber member. Use the appropriate k factors and $\phi$=0.8 with the properties as above. Refer to the Prolam Specific Engineering Design Guide for further information.
2 $k_2$ / $j_2$ factor for creep deflection = 1.25
3 Joint group J5 for design of connections.
4 Bending strength and MoE have been determined from testing. Other properties are based on SG6 timber
5 Intended for use as a beam and not as tension or compression member

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