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BAZ-45/150 Profiled Steel Sheeting (GI) - Properties & Load Tables

* Material: ASTM A653 Grade: 50 ($F_y=35.0 \text{ KN/cm}^2$).

* Sheets available in Mill finish and Colour coated (GI).

* Paint applied is Polyester coated 25 to 30 microns on the exposed surface and 5 to 7 microns epoxy on inner surface.

* Colours available as per BAZ RAL Colour chart (subject to the availability).

| Section Properties (per meter of coverage width) | | | | | | | | | | | |
|--------------------------------------------------|-------------------|-----------------|--------------------|-----------------------|--------------------------|---------|-----------------------|-----------------------|--------------------------|---------|-------|
| Thickness | Weight | Area | Top in Compression | | | | Bottom in Compression | | | | Shear |
| mm | Kg/m ² | cm ² | Ix cm ⁴ | Sx Topcm ³ | Sx Bottomcm ³ | Ma KN-m | Ix cm ⁴ | Sx Topcm ³ | Sx Bottomcm ³ | Ma KN-m | Va KN |
| 0.4 | 3.82 | 4.88 | 9.97 | 2.88 | 9.4 | 0.96 | 9.57 | 4.04 | 4.44 | 1.34 | 7.54 |
| 0.5 | 4.78 | 6.09 | 14.09 | 4.23 | 11.77 | 1.41 | 12.53 | 5.14 | 5.99 | 1.71 | 14.72 |
| 0.6 | 5.73 | 7.31 | 18.54 | 5.75 | 14.13 | 1.91 | 15.59 | 6.24 | 7.64 | 2.08 | 25.43 |
| 0.7 | 6.69 | 8.53 | 23.2 | 7.4 | 16.5 | 2.46 | 18.75 | 7.36 | 9.4 | 2.45 | 37.17 |
| 0.8 | 7.65 | 9.75 | 27.72 | 9 | 18.87 | 2.99 | 22.04 | 8.49 | 11.28 | 2.82 | 45.82 |
| 0.9 | 8.6 | 10.97 | 31.36 | 10.2 | 21.16 | 3.39 | 25.39 | 9.62 | 13.25 | 3.2 | 51.18 |
| 1 | 9.56 | 12.19 | 34.98 | 11.4 | 23.42 | 3.79 | 28.81 | 10.76 | 15.3 | 3.58 | 56.85 |

| Allowable Uniform Load Capacities (KN/m ²) | | | | | | | | | | | | |
|--------------------------------------------------------|-----------------|--------|----------------|-------|-------|-------|------|------|------|------|------|--|
| Thickness | No. of Spans | Load | Span in Meters | | | | | | | | | |
| mm | No's | Case | 1 | 1.25 | 1.5 | 1.75 | 2 | 2.25 | 2.5 | 2.75 | 3 | |
| 0.40 | upto 2 spans | D + L | 7.66 | 4.43 | 2.56 | 1.61 | 1.08 | 0.76 | 0.55 | 0.42 | 0.32 | |
| | | Uplift | 10.74 | 6.38 | 3.69 | 2.32 | 1.56 | 1.09 | 0.80 | 0.60 | 0.46 | |
| | 3 or more spans | D + L | 9.57 | 6.12 | 4.25 | 3.05 | 2.04 | 1.43 | 1.05 | 0.79 | 0.60 | |
| | | Uplift | 12.57 | 8.60 | 5.97 | 4.39 | 2.94 | 2.06 | 1.50 | 1.13 | 0.87 | |
| 0.50 | upto 2 spans | D + L | 11.25 | 6.26 | 3.62 | 2.28 | 1.53 | 1.07 | 0.78 | 0.59 | 0.45 | |
| | | Uplift | 13.66 | 8.35 | 4.83 | 3.04 | 2.04 | 1.43 | 1.04 | 0.78 | 0.60 | |
| | 3 or more spans | D + L | 14.06 | 9.00 | 6.25 | 4.31 | 2.88 | 2.03 | 1.48 | 1.11 | 0.85 | |
| | | Uplift | 17.07 | 10.92 | 7.59 | 5.57 | 3.85 | 2.70 | 1.97 | 1.48 | 1.14 | |
| 0.60 | upto 2 spans | D + L | 15.28 | 8.24 | 4.77 | 3.00 | 2.01 | 1.41 | 1.03 | 0.77 | 0.60 | |
| | | Uplift | 16.60 | 10.39 | 6.01 | 3.79 | 2.54 | 1.78 | 1.30 | 0.98 | 0.75 | |
| | 3 or more spans | D + L | 19.10 | 12.22 | 8.49 | 5.66 | 3.79 | 2.66 | 1.94 | 1.46 | 1.12 | |
| | | Uplift | 20.75 | 13.28 | 9.22 | 6.78 | 4.79 | 3.36 | 2.45 | 1.84 | 1.42 | |
| 0.70 | upto 2 spans | D + L | 19.67 | 10.31 | 5.97 | 3.76 | 2.52 | 1.77 | 1.29 | 0.97 | 0.75 | |
| | | Uplift | 19.57 | 12.50 | 7.23 | 4.55 | 3.05 | 2.14 | 1.56 | 1.17 | 0.90 | |
| | 3 or more spans | D + L | 24.59 | 15.74 | 10.93 | 7.09 | 4.75 | 3.34 | 2.43 | 1.83 | 1.41 | |
| | | Uplift | 24.46 | 15.65 | 10.87 | 7.99 | 5.76 | 4.04 | 2.95 | 2.21 | 1.71 | |
| 0.80 | upto 2 spans | D + L | 23.94 | 12.32 | 7.13 | 4.49 | 3.01 | 2.11 | 1.54 | 1.16 | 0.89 | |
| | | Uplift | 22.58 | 14.45 | 8.50 | 5.35 | 3.59 | 2.52 | 1.84 | 1.38 | 1.06 | |
| | 3 or more spans | D + L | 29.92 | 19.15 | 13.30 | 8.47 | 5.67 | 3.99 | 2.91 | 2.18 | 1.68 | |
| | | Uplift | 28.22 | 18.06 | 12.54 | 9.21 | 6.77 | 4.75 | 3.46 | 2.60 | 2.00 | |
| 0.90 | upto 2 spans | D + L | 27.14 | 13.94 | 8.06 | 5.08 | 3.40 | 2.39 | 1.74 | 1.31 | 1.01 | |
| | | Uplift | 25.59 | 16.38 | 9.79 | 6.17 | 4.13 | 2.90 | 2.12 | 1.59 | 1.22 | |
| | 3 or more spans | D + L | 33.92 | 21.71 | 15.08 | 9.58 | 6.42 | 4.51 | 3.29 | 2.47 | 1.90 | |
| | | Uplift | 31.99 | 20.47 | 14.22 | 10.45 | 7.80 | 5.47 | 3.99 | 3.00 | 2.31 | |
| 1.00 | upto 2 spans | D + L | 30.33 | 15.54 | 9.00 | 5.66 | 3.80 | 2.67 | 1.94 | 1.46 | 1.12 | |
| | | Uplift | 28.61 | 18.31 | 11.11 | 7.00 | 4.69 | 3.29 | 2.40 | 1.80 | 1.39 | |
| | 3 or more spans | D + L | 37.91 | 24.26 | 16.85 | 10.69 | 7.16 | 5.03 | 3.67 | 2.75 | 2.12 | |
| | | Uplift | 35.76 | 22.89 | 15.89 | 11.68 | 8.85 | 6.21 | 4.53 | 3.40 | 2.62 | |

Notes:

1. Design of Sheeting is based on equations of AISI-2001 (ASD-Allowable stress design).
2. D+ L = Dead + Live Load (Deflection Limitation: Span / 180)
3. Wind Uplift (Deflection Limitation: Span / 120)