

# Loading Chart

## OPTIMO Type O5 Gratings in kilo Newtons per square metre (kN/m<sup>2</sup>)

**1kN ≈ 100 kilos**

Figures detailed below are calculated in accordance with BS 4592-0:2006+A1: 2012 (Industrial use flooring) OR BS EN 1991-1-1:2002 (Actions on Structures which superseded BS 6399: Part 1 1996). All loadings reduced to maintain deflections within 1/200th of the clear span or 10mm whichever the lesser.

BS 4592 - 0 recommends a max deflection of 4mm with a concentrated load of 1.5kN/200x200mm contact areas based on edge of grating, BS EN 1991-1-1: 2002 Category C38 for Heavy duty (high density pedestrian traffic including escape routes) recommends a concentrated load of 4.5kN. Whilst the contact area is not defined in the standard and is to be determined by the use and criteria; we have based the chart on a 300x300mm edge of grating as a general guide that also ensures compliance with the minimum requirements of BS 4592. For any other contact areas please contact our sales department who can assist with providing you the optimum profile to suit your criteria.

Profile	Weight m <sup>2</sup> *	Loading Category	BS 4592-0 mm	BS EN 1991-1-1 mm
100/32x2mm	24,6	5 kN/m <sup>2</sup>	1350	700
		7.5 kN/m <sup>2</sup>		
100/45+15x2mm	32,5	5 kN/m <sup>2</sup>	2200	2200
		7.5 kN/m <sup>2</sup>		
150/32x2mm	21,8	5 kN/m <sup>2</sup>	1000	650
		7.5 kN/m <sup>2</sup>		
150/45+15x2mm	27,0	5 kN/m <sup>2</sup>	1880	1880
		7.5 kN/m <sup>2</sup>		
200/45x2mm	22,5	5 kN/m <sup>2</sup>	1500	-
		7.5 kN/m <sup>2</sup>	1300	
200/45+15x2mm	24,3	5 kN/m <sup>2</sup>	1810	1300
		7.5 kN/m <sup>2</sup>		
300/45x2mm	20,4	5 kN/m <sup>2</sup>	1330	650
		7.5 kN/m <sup>2</sup>	1000	

\* Weight based on approx m<sup>2</sup> grating

The above chart is to assist in identifying the nearest specification to your requirements Please contact PcP Gratings Ltd for alternative loading calculations / plank profiles.