

# Theoretical Coverage

Transfer Efficiency of powder coating is the ratio of the powder coatings actually deposited on the substrate as compared to the amount directed at the parts to be coated.

To evaluate the actual transfer efficiency of powder coating is very important. The following coverage table is helpful in estimating the amount of powder needed to coat a given amount of surface area.

Specific Gravity	Thickness							
	1MIL	2MIL	3MIL	4MIL	5MIL	6MIL	7MIL	8MIL
1	192.2	96.1	84.1	48.1	38.4	32	27.5	24
1.1	174.7	87.4	58.2	43.7	34.9	29.1	25	21.8
1.2	160.2	80.1	53.4	40	32	26.7	22.9	20
1.3	147.8	73.9	49.3	37	29.6	24.6	21.1	18.5
1.4	137.3	68.6	45.8	34.3	27.4	22.9	19.6	17.2
1.5	128.8	64.1	42.7	32	25.6	21.4	18.3	16
1.6	120.1	60.1	40	30	24	20	17.2	15
1.7	113.1	58.5	37.7	28.3	22.6	18.8	16.2	14.1
1.8	106.8	53.4	35.6	28.7	21.4	17.8	15.3	13.3
1.9	101.2	50.6	33.7	25.3	20.2	16.9	14.5	12.6
2	96.1	48.1	32	24	19.2	16	13.7	12

coverage unit: square feet

### Theoretical coverage formulation

$$\text{Coverage of powder (m}^2\text{/kg)} = \frac{1000}{\text{S.G.} \times \text{film thickness } (\mu\text{m})}$$

Please note that the coverage of powder coating in the table above shows only theoretical coverage. It does not take into account any losses during spraying process. The loss factor is determined by individual recovery system.

Conversion			Area		
m <sup>2</sup> to ft <sup>2</sup>	:	×10.76	Of a circle	:	0.785 × D <sup>2</sup>
μm to thou	:	+ 25.4	Surface area of a round pipe	:	3.14 × D × L
Micron (μm)	:	0.001 mm	Area of sphere	:	3.14 × D <sup>2</sup>
1 kg	:	2.2 lbs	Where D = diameter		
1 m	:	3.281 ft	L = length		