

Patterson Protective Coatings Limited

Calculation Tables

Connection between the construction's weight and its surface area

Steel thickness (mm)	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>15</u>	<u>25</u>	<u>50</u>
Surface in m ² /mt steel	254	127	85	63	51	42	36	32	28	25	17	10	5

Calculation Formulae

Solids by volume. %	=	$\frac{\text{Dry film} \times 100}{\text{Wet film}}$
Wet film in microns	=	$\frac{\text{Dry film} \times 100}{\text{Solid by Vol. \%}}$
Dry film in microns	=	$\frac{\text{Wet film} \times \text{solid by Vol. \%}}{100}$
Theoretical spreading rate, m²/ltr	=	$\frac{10 \times \text{Solid by Vol. \%}}{\text{Dry film in microns}}$
Theoretical cost /m²	=	$\frac{\text{Dry film in microns} \times \text{ltr. Price}}{10 \times \text{Solid by Vol. \%}}$
Weight of dry film, gm/cm²	=	$\frac{\text{Weight of dry film} \times \text{Solid by Weight \%}}{\text{Solid by Vol. \%}}$
Weight/m² of dry paint film, kg/m²	=	$\frac{\text{Dry film (microns)} \times \text{wt of dry Film} \times \text{Solid by weight \%}}{1000 \times \text{Solid by Vol. \%}}$
Price/m²	=	$\frac{\text{Dry film} \times \text{Price/Ltr}}{10 \times \text{Solid by Vol. \%}}$
Theoretical paint consumption, ltr	=	$\frac{\text{Dry film in microns} \times \text{area (m}^2\text{)}}{10 \times \text{Solid by Vol. \%}}$
Paint consumption with loss	=	$\frac{\text{Dry film} \times \text{area (m}^2\text{)}}{10 \times \text{Solid by Vol. \%} \times \text{loss factor}}$

LOSS FACTOR

30% loss = 0.7
20% loss = 0.8
10% loss = 0.9