Coating Factors for Zinc and Zinc-Alloy Coated Sheet

Coating Factor: The densities of all zinc-based coatings are lower than the density of steel, so the weight (mass) per unit area of coated sheet is less than uncoated sheet of the same thickness. This small difference can be of importance when large volumes of sheet are being consumed. When calculating Theoretical Weight, the "Coating Factor" is an adjustment of weight (mass) per unit area and varies as a function of coating type and coating thickness. The Coating Factor is actually the difference in weight (mass) between the coating metal and steel of the same thickness as the coating. For example, the Coating Factor for very thin G90 sheet, e.g., 0.013", is about 1.2% of the sheet weight. At 0.080" it is only about 0.20% of the weight.

Coating Type	Inch-Pound			SI (Metric)		
	Designation	Typical Actual Coating Weight (oz/ft^2)	Coating Factor (lb/ft^2)	Designation	Typical Actual Coating Mass (g/m^2)	Coating Factor (kg/m^2)
A653 Galvanize	A25	0.35	**0.0022**	ZF75	105	**0.010**
	A40	0.46	**0.0029**	ZF120	138	**0.014**
	A60	0.66	**0.0041**	ZF180	198	**0.020**
	G30	0.40	**0.0025**	Z90	120	**0.012**
	G40	0.48	**0.0030**	Z120	144	**0.014**
	G60	0.66	**0.0041**	Z180	198	**0.020**
	G90	0.96	**0.0060**	Z275	293	**0.029**
	G115	1.23	**0.0076**	Z350	375	**0.037**
	G140	1.50	**0.0093**	Z450	482	**0.048**
	G165	1.76	**0.0109**	Z500	533	**0.053**
	G185	1.98	**0.0123**	Z550	588	**0.058**
	G210	2.25	**0.0140**	Z600	643	**0.064**
	G235	2.54	**0.0158**	Z700	756	**0.075**
	G300	3.25	**0.0202**	Z900	975	**0.097**
	G360	3.90	**0.0242**	Z1100	1190	**0.118**
A792 55% Aluminum-Zinc	AZ50	0.55	**0.0375**	AZM150	165	**0.180**
	AZ55	0.61	**0.0416**	AZM165	180	**0.196**
	AZ60	0.66	**0.0450**	AZM180	198	**0.216**
A875 Zinc-5% Aluminum	GF30	0.40	**0.0047**	ZGF90	120	**0.023**
	GF45	0.51	**0.0060**	ZGF135	153	**0.029**
	GF60	0.66	**0.0078**	ZGF180	198	**0.038**
	GF75	0.82	**0.0097**	ZGF225	245	**0.046**
	GF90	0.96	**0.0114**	ZGF275	293	**0.055**
	GF115	1.23	**0.0146**	ZGF350	375	**0.071**
	GF140	1.50	**0.0177**	ZGF450	482	**0.091**
	GF210	2.25	**0.0266**	ZGF600	643	**0.122**
	GF235	2.54	**0.0301**	ZGF700	756	**0.143**

446	**- Zinc Density (lb/ft^3)**
40.833	**- Steel Density (lb/ft^2 - 1" thick)**
7140	**- Zinc Density (kg/m^3)**
7850	**- Steel Density (kg/m^3)**
234	**- 55% Aluminum-Zinc Density (lb/ft^3)**
3754	**- 55% Aluminum-Zinc Density (kg/m^3)**
412	**- Zinc-5% Aluminum Density (lb/ft^3)**
6600	**- Zinc-5% Aluminum Density (kg/m^3)**

Using the Coating Factor, the calculated Theorectical Weight is more exact. The formula for calculating Theoretical Weight is **TW = t x 40.833 - CF**, where t is the desired sheet thickness, and CF is the Coating Factor. For Theoretical Mass the formula is **TM = t x 7.85 - CF**.