

**FORMABLE PRODUCTS : ZINC COATED STEEL****PUBLIC RECORD**

## OVERSEAS STANDARDS EQUIVALENT TO ZINC COATED STEEL AUSTRALIAN STANDARDS FOR FORMABLE GRADES

AS1397		EN10346	JIS3302	ASTM A653
PRODUCT	GRADE	GRADE	GRADE	GRADE
				CSB
		DX51D	SGCC	
GALVABOND G2/S	G2	DX52D / DX53D	SGCD1	
GALVABOND G3N/S	G3	DX53D / DX54D	SGCD1	DDS Type C

## OVERSEAS STANDARDS EQUIVALENT : MECHANICAL PROPERTIES FOR ZINC COATED STEEL (as tested in transverse direction)

AS1397		EN10346		JIS3302 <sup>a</sup>		ASTM A653			
PRODUCT	GRADE	Min%e		GRADE	Min%e Lo' =80mm	GRADE	Min%e Lo=50mm	GRADE	Min%e Lo=50mm
		Lo' =50mm	Lo' =80mm						
				DX51D <sup>2</sup>	22				
GALVABOND G2/S	G2	30	27	DX52D <sup>2</sup>	26	SGCC	No specn.	CSB	≥ 20
GALVABOND G3N/S	G3	35	32	DX53D <sup>2</sup>	30	SGCD1	36	DDS Type C	≥ 32
				DX54D	36	SGCD2	38		

1. Applies to test pieces equal to or greater than 0.6mm and tested in transverse direction, where Lo = original gauge length
2. The guaranteed minimum elongation for the British grade falls slightly below the Australian standard
3. The Japanese standard requires tensile tests to be carried out in the longitudinal direction
4. Note: SGCC ex JIS 3302 has no minimum % elongation requirements.

## STRUCTURAL PRODUCTS : ZINC COATED STEEL

### OVERSEAS STANDARDS EQUIVALENT TO ZINC COATED STEEL AUSTRALIAN STANDARDS

AS1397		EN10346 GRADE	JIS3302 GRADE		ASTM A653M GRADE
PRODUCT	GRADE		Hot Rolled	Cold Rolled	
ZINCFORMG250	G250	S220GD S250GD S280GD	SGH340	SGC340	ASTM 653-33 ASTM 653-37
ZINCFORMG300	G300	S320GD	SGH400	SGC400	ASTM 653-40
ZINCFORMG350	G350	S350GD	SGH440 SGH490	SGC440 SGC490	ASTM 653-50 ASTM 653-55
ZINCHITENG450	G450				
ZINCHITENG500	G500				
ZINCHITENG550	G550	S550GD	No equivalent	SGC570	ASTM 653-80

### OVERSEAS STANDARDS EQUIVALENT: MECHANICAL PROPERTIES FOR ZINC COATED STEEL (as tested in longitudinal direction)

AS1397					EN10346				JIS3302 <sup>7</sup>				ASTM A653/M			
GRADE	Min YS MPa	Min TS MPa	Min %e		GRADE	Min YS MPa	Min TS MPa	Min%e Lo <sup>1</sup> =80mm	GRADE	Min YS MPa	Min TS MPa	Min%e Lo <sup>1</sup> =80mm	GRADE	Min YS Ksi/MPa	Min TS Ksi/MPa	Min%e Lo <sup>1</sup> =50mm
			Lo <sup>1</sup> =50mm	Lo <sup>1</sup> =80mm												
G250	250	320	25	22	S220GD <sup>2</sup>	220	300	20	SGC340 <sup>3</sup>	245	340	20	33 <sup>8</sup> 37	33/230 37/255	45/310 52/360	20 18
					S250GD <sup>2</sup>	250	330	19								
					S280GD <sup>2</sup>	280	360	18								
G300	300	340	20	18	S320GD <sup>2</sup>	320	390	17	SGC400 <sup>3</sup>	295	400	18	40	40/275	55/380	16
G350	350	420	15	14	S350GD	350	420	16	SGC440 <sup>4</sup> SGC490	335	440	16	50/1	50/340	65/450	12 <sup>5</sup>
										365	490	14	50/2 55	50/340 55/380	- 70/480	12 <sup>5</sup> 11
G450	450	480	10	9												
G500	500	520	8	7												
G550	550	550	2	2	S550GD	550	560	Note 6	SGC570	560	570	Note 6	80	80/550	82/570	Note 6

- 1 Applies to test pieces equal to or greater than 0.6mm, where Lo = original gauge length
- 2 The guaranteed minimum elongation for the British grade falls slightly below the Australian standard
- 3 The guaranteed minimum yield stress and elongation for the equivalent Japanese grade falls slightly below the Australian standard
- 4 The guaranteed minimum elongation for the equivalent Japanese grade falls slightly below the Australian standard (alternative for G300 grade)
- 5 The guaranteed minimum elongation for the equivalent American grade falls slightly below the Australian standard
- 6 There is no minimum elongation requirement
- 7 The properties of the Hot and Cold Rolled Japanese equivalents are the same
- 8 The guaranteed minimum yield and tensile strength for the equivalent American grade falls slightly below the Australian standard (alternative for G250 grade)

OVERSEAS STANDARDS EQUIVALENT: COATING MASS (g/m<sup>2</sup>) BOTH SURFACE FOR ZINC COATED STEEL

AS1397			EN10346			JIS3302			ASTM A653/M		
GRADE	Triple Spot	Single Spot	GRADE	Triple Spot	Single Spot <sup>1</sup>	GRADE	Triple Spot	Single Spot <sup>1</sup>	GRADE oz/ft <sup>2</sup> / (g/m <sup>2</sup> )	Triple Spot oz/ft <sup>2</sup> / (g/m <sup>2</sup> )	Single Spot <sup>1</sup> oz/ft <sup>2</sup> / (g/m <sup>2</sup> )
Z100	100	90	Z100	100	85	Z100	100	85	G40 / (Z120)	0.40 / (120)	0.30 / (90)
Z200	200	180	Z200	200	170	Z200	200	170	G60 / (Z180)	0.60 / (180)	0.50 / (150)
Z275	275	250	Z275	275	235	Z275	275	234	G90 / (Z275)	0.90 / (275)	0.80 / (235)
Z350	350	315	Z350	350	300	Z350	350	298	G115 / (Z350)	1.15 / (350)	1.00 / (300)
Z450	450	405	Z450	450	385	Z450	450	383	G140 / (Z450)	1.40 / (450)	1.20 / (385)
Z600	600	540	Z600	600	510	Z600	600	510	G210 / (Z600)	2.10 / (600)	1.80 / (510)

1 oz/ft<sup>2</sup> = 305.15 g/m<sup>2</sup>

Triple Spot : Average of 3 coating mass specimens on one sample, as determined by strip:weigh:strip method  
 Single Spot : Minimum coating mass on any one of the 3 specimens, as determined by strip:weigh:strip method

1 The guaranteed single spot is slightly below the Australian standard

## **AUSTRALIAN AND OVERSEAS STANDARDS**

### **AUSTRALIAN STANDARD**

AS1397-2011      Steel Sheet and Strip - Hot-Dip Zinc-Coated or Aluminium/Zinc-Coated

### **BRITISH STANDARDS**

BS EN 10346 : 2009      Continuously Hot-Dip Coated Flat Sheet products – Technical Delivery Conditions

### **UNITED STATES STANDARDS**

ASTM 653/653M      Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process (2006)

### **JAPANESE STANDARDS**

JIS G3302 : 2005      Hot-Dip Zinc-Coated Steel Sheets and Coils