

COLD ROLL BASE GALVANIZED PRODUCT CAPABILITIES

GAUGE		
Min Ordered Gauge	SDI Tolerance	SDI Aim over Min
0.014 – 0.0215"	-0/ +0.003"	+ 0.0006"
0.0216 – 0.030"	-0/ + 0.004"	+ 0.001"
0.0301 – 0.042"	-0/ + 0.004"	+0.0015"
0.0421 – 0.0585"	-0/ + 0.005"	+0.002"
0.0586 – 0.071"	-0/ + 0.006"	+0.0025"
Order Gauge (nom)*	SDI Tolerance	
0.015 – 0.023"	+/- 0.0015"	
0.0231 – 0.043"	+/- 0.002"	
0.0431 – 0.061"	+/- 0.0025"	
0.0611 – 0.070"	+/- 0.003"	

*SDI will aim at nominal gauge. Cold-rolled galvanized products may be produced on either galvanizing line in Butler.

WIDTH		
Edge Type	Minimum Order Width	SDI Tolerance
Cut Edge*	36.0" – 48.0"	-0/+0.188"
	48.1" – 61.0"	-0/+0.250"
Mill Edge**	38.0" – 61.5"	-0/+1.125"****

* Cut edge width tolerance is measured with a tape-measure capable of measuring within 1/16".

** Mill edge can only be ordered at gauges ≥ 0.030" but not on SS 50, A1003 ST50 or NS50, or SAE 1015/1017/1018/1020

*** SDI will ship up to 1.5" over the min width; claims will be accepted for width in excess of the 1.125" ME tolerance.

ASTM A653						
Specification	Property Requirements (ksi and %)			Min Order Gauge	Min Order Width (Cut Edge)	Min Order Width (Mill Edge)
	Yield	Tensile	Elongation			
CS – Meets Types A, B, C	N/A	N/A	N/A	.013 – .015"	36.0 – 55.0"	----
FS Type A – Also Meets Type B	N/A	N/A	N/A			
SS 33	33 min	45 min	20 min	.016 – .030"	36.0 – 61.0"	----
S S37	37 min	52 min	18 min	.031 – .071"	36.0 – 61.0"	38.0 – 61.5"
SS 40	40 min	55 min	16 min			
SS 50 Class 1	50 min	65 min	12 min	.018 – .071"	36.0 – 61.0"	----
SS 50 Class 2 *	50 min	----	12 min			
SS 50 Class 3	50 min	70 min	12 min			
SS 50 Class 4 *	50 min	60 min	12 min			
SS80 (Class 1)	80 min	88 min	----	.013 – .015"	36.0 – 55.0"	----
				.016 – .030"	36.0 – 61.0"	----
				.031 – .071"	36.0 – 61.0"	38.0 – 61.5"

Standard specification for hot-dipped galvanized or galvanized steel sheet. * A653 SS50 Class 2 and Class 4 are available at 0.014 - 0.017" min x 36.0 - 55.0" cut edge.

ASTM A653						
Specification	Property Requirements (ksi and %)			Min Order Gauge	Min Order Width (Cut Edge)	Min Order Width (Mill Edge)
	Yield	Tensile	Elongation			
DS Modified	N/A	N/A	N/A	.014 – .015"	36.0 – 55.0"	----
SS 33	33 min	45 min	20 min	.016 – .035"	36.0 – 61.0"	----

Post annealed products. Non-aging. Substitute for IF steel in some applications; please inquire with Product Metallurgist.

ASTM A1003						
Specification	Property Requirements (ksi and %)			Min Order Gauge	Min Order Width (Cut Edge)	Min Order Width (Mill Edge)
	Yield	Tensile	Elongation			
A1003 ST33H	33 min	45 min	10 min	.013 – .015"	36.0 – 55.0"	----
ST37H	37 min	52 min	10 min			
ST40H	40 min	55 min	10 min	.016 – .030"	36.0 – 61.0"	----
NS 33	33 min	----	----	.031 – .071"	36.0 – 61.0"	38.0 – 61.5"
NS 40	40 min	----	----			
A1003 ST50H	50 min	65 min	10 min	.018 – .071"	36.0 – 61.0"	----
NS 50	50 min	----	----			

Steel for cold-formed framing members – Inquire with Product Metallurgist. SDI produces to coated min thickness, not base metal thickness; spec default is base metal unless discussed; ST grades must be ordered G60 (or A60) or above; NS grades must be ordered G40 (or A40) or above.

COLD ROLL BASE GALVANIZED PRODUCT CAPABILITIES

SAE J403

Specification	Carbon and Manganese Range		Min Order Gauge	Min Order Width (Cut Edge)	Min Order Width (Mill Edge)
	C	Mn			
1006	0.02 – 0.06	0.25 max	.013 – .015"	36.0 – 55.0"	----
1008	0.05 – 0.07	0.30 – 0.50	.016 – .030"	36.0 – 61.0"	----
1015	0.14 – 0.18	0.30 – 0.60	.018 – .071"	36.0 – 61.0"	38.0 – 61.5"
1017	0.16 – 0.20	0.40 – 0.60			
1018	0.16 – 0.20	0.60 – 0.90			
1020	0.18 – 0.23	0.40 – 0.60			

Chemistry only specifications (Si = 0.09 max, P = 0.025 max, S = 0.010 max).

SAE J1392

Specification	Property Requirements (ksi and %)			Min Order Gauge	Min Order Width (Cut Edge)	Min Order Width (Mill Edge)
	Yield	Tensile	Elongation			
040 XLF <small>(Recipe for this is not traditional HSLA Chemistry)</small>	40 min	----	25 min	.013 – .015" .016 – .030" .031 – .071"	36.0 – 55.0" 36.0 – 61.0" 36.0 – 61.0"	---- ---- 38.0 – 61.5"

High-strength, coated, hot-roll sheet/strip. Recipe for this is not traditional HSLA Chemistry.

COATING WEIGHTS

Type	Coating Weight Options
Galvanize (GI)	G30 (U), G40 (U), G60 (U), G90 (U), G100, G115
(Metric)	50G, 60G, 70G, 90G, 98G
Galvanneal* (GA)	A40 (U), A60 (U), 45A (metric)

Coating weights with (U) after are available as UL certified.

Heavier coating weights (G140, G165, G185, G210, G235) may be available on accumulation.

* Galvanneal minimum thickness is 0.022", however, thicknesses between 0.022" – 0.035" may be accepted on accumulation basis only.

Coating weights per ASTM A653.

FINISH OPTIONS

No Temper: On-line temper mill will not be used. This may help increase formability, but it is for unexposed nonsurface critical applications.

Regular Finish: On-line temper mill may or may not be used, depending on the visual appearance of the strip to the operators.

Extra Smooth: On-line temper mill will be used and surface is considered paintable. This may result in a loss of ductility on some grades due to increased aging effect.

All SDI Butler Galvanized Product is zero/min spangle or spangle free.

SHAPE

Cold Roll Galvanize Product from SDI Butler achieves flatness, as determined by visual inspection, by using a tension leveler. SDI Butler Galv lines do not have the ability to measure or guarantee flatness values, and some coil set should be expected and accounted for during coil processing. However, if the steel shape is determined to be unsuitable for a specific use, SDI Butler may investigate the issue (possibly with inspection of unprocessed material).

STANDARD PACKAGING

Reinforced shrink wrap applied by an automatic wrapping machine.

1 OD and 1 ID band under wrapping, 2 ID bands on outside of wrapping.

24" ID only.

PASSIVATION AND OIL OPTIONS

These coatings are used to prevent white rust from occurring during transportation. Depending on the passivation type, these may provide additional protection during processing/forming for a limited amount of time.

GI GA

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Rust Preventative Oil (Quaker 61 AUS).
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Hexavalent Chrome Passivation (Bulk RP 1031) – not RoHS compliant.
<input type="checkbox"/>	<input type="checkbox"/>	* Clear Acrylic Coating (Chemetal Gardobond PC 4610) – not RoHS compliant; this will provide longer protection of the zinc surface than traditional hex-chrome passivation.
<input type="checkbox"/>	<input type="checkbox"/>	* RoHS Trivalent Chrome Passivation (Quaker PrimeCoat Z838-4P) – this coating is RoHS compliant and shows similar or better protection than traditional hex-chrome passivation.

* Acrylic and RoHS are only available on accumulation basis for CR Galv Products and only on thickness ≥ 0.030"

COLD ROLL BASE GALVANIZED PRODUCT CAPABILITIES

SPECIAL APPLICATION RULES

Some G90 (or higher coating weight) orders may require the use of stagger wind to prevent spooling.

MECHANICAL PROPERTIES

Standard ASTM tensile samples are tested when required by the specification, and the properties are reported on the certification. Properties are as tested at the galvanizing lines. SDI cannot guarantee Rockwell hardness numbers. SDI may not be capable of satisfying customer specific mechanical property requirements. The Product Metallurgist will advise which SDI product is the best fit.

CHEMISTRY

Each heat chemistry is tested and reported on the certification. Specific chemistry requirements may not be available, and SDI may not be able to guarantee mechanical properties if chemistry restrictions apply. Please inquire with the Product Metallurgist if specific chemistries are required.

AUTOMOTIVE SPECIFICATIONS

Some automotive specifications are available. Please see the Butler Galvanized Automotive Product Limits or talk to an SDI Sales Rep for further information on capabilities.

CAPABILITIES FOR ASTM AND SAE SPECIFICATIONS

Please see pages 3-4 for general gauge and width capabilities for ASTM and SAE specifications. As a note, the gauge and width capabilities for each grade may depend on the coating weight requested. Please inquire with the Product Metallurgist for material outside of these ranges.