CASCADIA METALS

GALVANNEALED STEEL
Grade Data Sheet

Galvannealed Steel - hot-dip zinc-iron coated structural steel, annealed, with guaranteed minimum yield strength. Meets ASTM A653-09 specifications/requirements.

GRADE 33

Mechanical Properties			Chemical Composition	
Steel base	Guaranteed	Typical Range	Guaranteed Maximum	Percent
Longitudinal tensile			Carbon (C)	0.20
Yield strength, minimum ksi	33	33-51	Phosphorus (P)	0.10
Tensile strength, minimum ksi	45	45-64	Manganese (Mn)	1.35
Elongation in 2 inch, minimum %	20	20-37	Sulfur (S)	0.04
Hardness, HRB	-	50-65	See ASTM A 653 for more details	
Supply Condition	Standard	Optional	Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)	
Coating class	A40	A25, A60	Bending	5
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed		Pressing	NR
			Pittsburgh Lock Seam	5
			Roll-forming	5
Chemical treatment	Passivated	Not Passivated	Welding *	5
			Painting	5

** Design must allow for some strength reduction near welds.*

GRADE 37

Mechanical Properties			Chemical Composition	
Steel base	Guaranteed	Typical Range	Guaranteed Maximum	Percent
Longitudinal tensile			Carbon (C)	0.20
Yield strength, minimum ksi	37	37-54	Phosphorus (P)	0.10
Tensile strength, minimum ksi	52	52-69	Manganese (Mn)	1.35
Elongation in 2 inch, minimum %	18	18-37	Sulfur (S)	0.04
Hardness, HRB	-	50-70	See ASTM A 653 for more details	
Supply Condition	Standard	Optional	Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)	
Coating class	A40	A25, A60	Bending	5
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	3
			Roll-forming	5
Chemical treatment	Passivated	Not Passivated	Welding *	5
			Painting	5

** Design must allow for some strength reduction near welds.*

CASCADIA METALS

GALVANNEALED STEEL
Grade Data Sheet

Galvannealed Steel - hot-dip zinc-iron coated structural steel, annealed, with guaranteed minimum yield strength. Meets ASTM A653-09 specifications/requirements.

GRADE 40

Mechanical Properties			Chemical Composition	
Steel base	Guaranteed	Typical Range	Guaranteed Maximum	Percent
Longitudinal tensile			Carbon (C)	0.25
Yield strength, minimum ksi	40	40-51	Phosphorus (P)	0.10
Tensile strength, minimum ksi	55	55-63	Manganese (Mn)	1.35
Elongation in 2 inch, minimum %	16	16-37	Sulfur (S)	0.04
Hardness, HRB	-	50-65	See ASTM A 653 for more details	
Supply Condition	Standard	Optional	Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)	
Coating class	A40	A25, A60	Bending	5
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	3
			Roll-forming	5
Chemical treatment	Passivated	Not Passivated	Welding *	5
			Painting	5

** Design must allow for some strength reduction near welds.*

GRADE 50 (Class 1)

Mechanical Properties			Chemical Composition	
Steel base	Guaranteed	Typical Range	Guaranteed Maximum	Percent
Longitudinal tensile			Carbon (C)	0.25
Yield strength, minimum ksi	50	50-60	Phosphorus (P)	0.20
Tensile strength, minimum ksi	65	65-73	Manganese (Mn)	1.35
Elongation in 2 inch, minimum %	12	12-36	Sulfur (S)	0.04
Hardness, HRB		65-75	See ASTM A 653 for more details	
Supply Condition	Standard	Optional	Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)	
Coating class	A40	A25, A60	Bending	4
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	3
			Roll-forming	5
Chemical treatment	Passivated	Not Passivated	Welding *	5
			Painting	5

** Design must allow for some strength reduction near welds.*

CASCADIA METALS

GALVANNEALED STEEL
Grade Data Sheet

Galvannealed Steel - hot-dip zinc-iron coated structural steel, annealed, with guaranteed minimum yield strength. Meets ASTM A653-09 specifications/requirements.

GRADE 80 (Class 1)

Mechanical Properties			Chemical Composition	
Steel base	Guaranteed	Typical Range	Guaranteed Maximum	Percent
Longitudinal tensile			Carbon (C)	0.25
Yield strength, minimum ksi	80	80-117	Phosphorus (P)	0.04
Tensile strength, minimum ksi	82	82-120	Manganese (Mn)	1.35
Elongation in 2 inch, minimum %	-	-	Sulfur (S)	0.04
Hardness, HRB	-	85-99	See ASTM A 653 for more details	
Supply Condition	Standard	Optional	Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)	
Coating class	A40	A25, A60	Bending	3
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	4
Chemical treatment	Passivated	Not Passivated	Welding *	5
			Painting	5

** Design must allow for some strength reduction near welds.*

GRADE CSA

Mechanical Properties			Chemical Composition	
Steel base	Guaranteed	Typical Range	Guaranteed Maximum	Percent
Longitudinal tensile			Carbon (C)	0.10
Yield strength, minimum ksi	-	25-55	Phosphorus (P)	0.03
Tensile strength, minimum ksi	-	50-65	Manganese (Mn)	0.60
Elongation in 2 inch, minimum %	-	20-40	Sulfur (S)	0.035
Hardness, HRB	-	50-70	See ASTM A 653 for more details	
Supply Condition	Standard	Optional	Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)	
Coating class	A40	A25, A60	Bending	5
Tension leveling	Leveled		Drawing	2
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	2
		(paint line feed)	Pittsburgh Lock Seam	5
			Roll-forming	5
Chemical treatment	Passivated	Not Passivated	Welding *	5
			Painting	5

** Design must allow for some strength reduction near welds.*