



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, (paint line feed)	Pressing	NR
			Pittsburgh Lock Seam	3
			Roll-forming	5
Chemical treatment	Passivated	Not Passivated	Welding *	5
			Painting	5

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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, (paint line feed)	Pressing	NR
			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, (paint line feed)	Pressing	NR
			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.



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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, (paint line feed)	Pressing	NR
			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, (paint line feed)	Pressing	2
			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.