



55% ALUMINUM-ZINC ALLOY COATED STEEL Grade Data Sheet

55% Aluminum-Zinc Alloy Coated Steel - hot-dip aluminum & zinc alloy coated structural steel with guaranteed minimum yield strength. Meets ASTM A792-09 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 | 33-53 | Phosphorus (P) | 0.04 |
| Tensile strength, minimum ksi | 45 | 45-64 | Manganese (Mn) | 1.35 |
| Elongation in 2 inch, minimum % | 20 | 20-35 | Sulfur (S) | 0.04 |
| Hardness, HRB | - | 50-70 | See ASTM A 792 for more details | |
| Supply Condition | Standard | Optional | Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended) | |
| Coating class | AZ50, AZ55 | AZ35 | Bending | 5 |
| Tension leveling | Leveled | | Drawing | NR |
| Surface conditioning | Not Skin-passed | Skin passed, (paint line feed) | Pressing | NR |
| | | | Pittsburgh Lock Seam | 4 |
| | | | Roll-forming | 5 |
| Chemical treatment | Passivated | | Welding * | 5 |
| | | | Painting ** | 5 |

* Design must allow for some strength reduction near welds. ** Maximum thickness suitable for organic coil coating is 0.0466".

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 | 37-59 | Phosphorus (P) | 0.10 |
| Tensile strength, minimum ksi | 52 | 52-67 | Manganese (Mn) | 1.35 |
| Elongation in 2 inch, minimum % | 18 | 18-35 | Sulfur (S) | 0.04 |
| Hardness, HRB | - | 50-70 | See ASTM A 792 for more details | |
| Supply Condition | Standard | Optional | Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended) | |
| Coating class | AZ50, AZ55 | AZ35 | 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 | | 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 | 40-55 | Phosphorus (P) | 0.10 |
| Tensile strength, minimum ksi | 55 | 55-68 | Manganese (Mn) | 1.35 |
| Elongation in 2 inch, minimum % | 16 | 16-35 | Sulfur (S) | 0.04 |
| Hardness, HRB | - | 50-70 | See ASTM A 792 for more details | |
| Supply Condition | Standard | Optional | Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended) | |
| Coating class | AZ50, AZ55 | AZ35 | 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 | | Welding * | 5 |
| | | | Painting ** | 5 |

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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 | 50-65 | Phosphorus (P) | 0.20 |
| Tensile strength, minimum ksi | 65 | 65-70 | Manganese (Mn) | 1.35 |
| Elongation in 2 inch, minimum % | 12 | 12-34 | Sulfur (S) | 0.04 |
| Hardness, HRB | - | 60-74 | See ASTM A 792 for more details | |
| Supply Condition | Standard | Optional | Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended) | |
| Coating class | AZ50, AZ55 | AZ35 | 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 | | Welding * | 5 |
| | | | Painting ** | 5 |

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GRADE 80 (Class 1)

| Mechanical Properties | | | Chemical Composition | |
|---------------------------------|-----------------|-----------------------------------|--|---------|
| Steel base | Guaranteed | Typical Range | Guaranteed Maximum | Percent |
| Longitudinal tensile | | | Carbon (C) | 0.20 |
| Yield strength, minimum ksi | 80 | 80-120 | Phosphorus (P) | 0.04 |
| Tensile strength, minimum ksi | 82 | 82-120 | Manganese (Mn) | 1.35 |
| Elongation in 2 inch, minimum % | - | 0-10 | Sulfur (S) | 0.04 |
| Hardness, HRB | - | 84-99 | See ASTM A 792 for more details | |
| Supply Condition | Standard | Optional | Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended) | |
| Coating class | AZ50, AZ55 | AZ35 | Bending | 2 |
| 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 | | Welding * | 5 |
| | | | Painting ** | 5 |

* Design must allow for some strength reduction near welds. ** Maximum thickness suitable for organic coil coating is 0.0466".

GRADE CSA

| Mechanical Properties | | | Chemical Composition | |
|---------------------------------|-----------------|-----------------------------------|--|---------|
| Steel base | Guaranteed | Typical Range | Guaranteed Maximum | Percent |
| Longitudinal tensile | | | Carbon (C) | 0.10 |
| Yield strength, minimum ksi | - | 30-59 | Phosphorus (P) | 0.03 |
| Tensile strength, minimum ksi | - | 50-67 | Manganese (Mn) | 0.60 |
| Elongation in 2 inch, minimum % | - | 24-36 | Sulfur (S) | 0.035 |
| Hardness, HRB | - | 50-70 | See ASTM A 792 for more details | |
| Supply Condition | Standard | Optional | Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended) | |
| Coating class | AZ50, AZ55 | AZ35 | 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 | | Welding * | 5 |
| | | | Painting ** | 5 |

* Design must allow for some strength reduction near welds. ** Maximum thickness suitable for organic coil coating is 0.0466".