

HM Wire International, Inc.

Ph: 330-244-8501 Fax: 330-244-8561

www.litz-wire.com info@litz-wire.com www.hmwire.com



Alloy 412 - Stainless Steel AL 412™

Description: AL 412 alloy is a low carbon, nickel containing, dual phase 12% CR Stainless Steel. AL 412 has superior toughness when compared to fully ferritic stainless steel alloys.

Applications: Rail Cars, Coal Handling equipment, sugar processing equipment, mining equipment, storage bins and hoppers and bus frames.

| | | | | | | | |
|---------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Nominal Composition: | C | Mn | Si | P | S | Cr | Ni |
| | 0.02 | 0.90 | 0.70 | 0.040 Max | 0.030 Max | 11.75 | 0.40 |
| | N | Fe | | | | | |
| | 0.030 Max | Balance | | | | | |

Mechanical Properties - typical room temperature

| | English Units | Metric Units |
|-----------------------------------|-----------------------|---------------------|
| Density | 0.280 lb/cu in @ 68°F | 7.75 gm/cu cm |
| 0.2% Offset Yield Strength | 60 ksi | 414 MPa |
| Ultimate Tensile Strength | 82 ksi | 565 MPa |
| Elongation in 2 inches | 24% | 24% |
| Rockwell Hardness | 87 Rb | 87 Rb |

*To be used as a guideline only.

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