

# Material: AMS 316

## Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications

**Group:** Ferrous Stainless Steel Alloys

**Sub Group:** AMS 316 Chromium and Chromium-Nickel Stainless Steel for Pressure Vessels and for General Applications

**Application:** Intended for Valve, Pump, General Engineering, Automotive and Other Industries

**Grade Belongs to the Industry:** Steel, Bar, Wire, Shape and Forging

| Chemical Composition |      |                 |
|----------------------|------|-----------------|
| Carbon               | C %  | 0.080 max.      |
| Silicon              | Si % | 1.000 max.      |
| Manganese            | Mn % | 2.000 max.      |
| Phosphorus           | P %  | 0.040 max.      |
| Sulphur              | S %  | 0.030 max.      |
| Chromium             | Cr % | 16.000 - 18.000 |
| Molybdenum           | Mo % | 1.750 - 3.000   |
| Nickel               | Ni % | 10.000 - 14.000 |
| Copper               | Cu % | 0.500 max.      |
| Iron                 | Fe % | Balance         |
| -                    | -    | -               |
| -                    | -    | -               |
| -                    | -    | -               |
| -                    | -    | -               |
| -                    | -    | -               |
| -                    | -    | -               |

| Heat Treatment     |
|--------------------|
| Solution Annealing |

| Mechanical Properties   |          |
|-------------------------|----------|
| Tensile Strength in Mpa | 586 min. |
| Yield Strength in Mpa   | 276 min. |
| Elongation in %         | 15 min.  |
| Reduction of Area in %  | -        |
| Hardness in BHN         | -        |
| Impact in Joule         | -        |

| Cross Reference Table |          |         |                                     |
|-----------------------|----------|---------|-------------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry        |
| A240 UNS S31609       | ASTM     | USA     | Steel, Plate, Sheet and Strip       |
| 316H                  | SAE      | USA     | Steel                               |
| A182 F316H            | ASTM     | USA     | Steel, Pipe and Forging             |
| STS 316 HTP           | KS       | Korea   | Steel and Pipe                      |
| SUS F316H             | JIS      | Japan   | Steel and Forging                   |
| 316                   | AISI     | USA     | Steel, Sheet, Strip and Plate       |
| 316                   | SAE      | USA     | Steel, Bar, Wire, Shape and Forging |

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