

## Material - ASTM A 249 S31050

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 - ASTM A 249 S31050 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 and Tube

| Chemical Composition |      |                 | Heat Treatment          |          |
|----------------------|------|-----------------|-------------------------|----------|
| Carbon               | C %  | 0.030 max.      |                         |          |
| Silicon              | Si % | 0.400 max.      |                         |          |
| Manganese            | Mn % | 2.000 max.      | Solution Annealing      |          |
| Phosphorus           | P %  | 0.030 max.      |                         |          |
| Sulphur              | S %  | 0.015 max.      |                         |          |
| Chromium             | Cr % | 24.000 - 26.000 |                         |          |
| Molybdenum           | Mo % | 2.000 - 3.000   |                         |          |
| Nickel               | Ni % | 21.000 - 23.000 |                         |          |
| Nitrogen             | N %  | 0.100 - 0.160   | Mechanical Properties   |          |
| Iron                 | Fe % | Balance         | Tensile Strength in Mpa | 540 min. |
| -                    | -    | -               | Yield Strength in Mpa   | 255 min. |
| -                    | -    | -               | Elongation in %         | 25 min.  |
| -                    | -    | -               | Reduction of Area in %  | -        |
| -                    | -    | -               | Hardness in HRB         | 95 max.  |
| -                    | -    |                 | Impact in Joule         | -        |

| Cross Reference Table |          |                                      |                               |  |
|-----------------------|----------|--------------------------------------|-------------------------------|--|
| Material              | Standard | Country Grade Belong to the Industry |                               |  |
| A240 UNS S31050       | ASTM     | USA                                  | Steel, Plate, Sheet and Strip |  |
| S31050                | UNS      | USA                                  | Steel                         |  |
| A213 S31050           | ASTM     | USA                                  | Steel and Tube                |  |
| A312 S31050           | ASTM     | USA                                  | Steel and Pipe                |  |
| A943 S31050           | ASTM     | USA                                  | Steel and Pipe                |  |
| SA-312 UNS S31050     | ASME     | USA                                  | Steel and Pipe                |  |
| A182 F 310MoLN        | ASTM     | USA                                  | Steel, Pipe and Forging       |  |

Further any inquiry to discuss with Gravity Cast Pvt. Ltd. – Gravity Group of Companies team member Call on +918469160029, or email marketing@gravitycastindia.com

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