



GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASME SA-182 Grade F 20

Standard Specification for Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings and Valves and Parts for High-Temperature Service

Group - Ferrous Stainless Steel Alloys

Sub Group - ASME SA-182 Grade F 20 Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings and Valves and Parts for High-Temperature Service

Application - Intended for Valve, Pump, General Engineering, Automotive and other Industries

Grade Belongs to the Industry - Pipe and Forging

| Chemical Composition | | | Heat Treatment | |
|----------------------|------|-----------------|-------------------------|----------|
| Carbon | C % | 0.070 max. | Solution Annealing | |
| Manganese | Mn % | 2.000 max. | | |
| Phosphorus | P % | 0.045 max. | | |
| Sulphur | S % | 0.035 max. | | |
| Silicon | Si % | 1.000 max. | | |
| Nickel | Ni % | 32.000 - 38.000 | | |
| Chromium | Cr % | 19.000 - 21.000 | | |
| Molybdenum | Mo % | 2.000 - 3.000 | | |
| Niobium | Nb % | 0.008 - 1.000 | Mechanical Properties | |
| Copper | Cu % | 3.000 - 4.000 | Tensile Strength in Mpa | 550 min. |
| Iron | Fe % | Balance | Yield Strength in Mpa | 240 min. |
| - | - | - | Elongation in % | 30 min. |
| - | - | - | Reduction of Area in % | 50 min. |
| - | - | - | Hardness in BHN | - |
| - | - | - | Impact in Joule | - |

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| Cross Reference Table | | | |
|-----------------------|----------|---------|------------------------------|
| Material | Standard | Country | Grade Belong to the Industry |
| N08022 | UNS | USA | Steel |
| A 240 N08020 | ASTM | USA | Plate, Sheet and Strip |
| A 182 F 20 | ASTM | USA | Steel and Pipe |
| A 358 N08020 | ASTM | USA | Steel and Pipe |
| A 959 N08020 | ASTM | USA | Steel |
| NiCr20CuMo | DIN | Germany | Steel |
| 17744 2.4660 | DIN | Germany | Steel |

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

All information in our data sheets and website is indicative only and is not intended to be a substitute for the full specification from which it is extracted. It is intended to provide typical values to allow comparison between metal alloy option rather than a definitive statement of mechanical performance or suitability for a particular application as these will vary with temperature, product type and product application. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of business.

ONE STOP SOLUTION FOR METAL PARTS