

## Material - ASTM A176 Type XM-27

### Standard Specification for Stainless and Heat-Resisting Chromium Steel Plate, Sheet and Strip

Group - Ferrous Stainless Steel Alloys

Sub Group - ASTM A176 Type XM-27 Stainless and Heat-Resisting Chromium Steel Plate, Sheet and Strip

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

Grade Belongs to the Industry - Plate, Sheet and Strip

| Chemical Composition |           |                 | Heat Treatment                                                                                                                                                                                                                                |  |
|----------------------|-----------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Carbon               | C %       | 0.010 max.      | Normalising or Annealing or Hardening + Tempering                                                                                                                                                                                             |  |
| Silicon              | Si %      | 0.400 max.      |                                                                                                                                                                                                                                               |  |
| Manganese            | Mn %      | 0.400 max.      |                                                                                                                                                                                                                                               |  |
| Phosphorus           | P %       | 0.020 max.      |                                                                                                                                                                                                                                               |  |
| Sulphur              | S %       | 0.020 max.      |                                                                                                                                                                                                                                               |  |
| Chromium             | Cr %      | 25.000 - 27.500 |                                                                                                                                                                                                                                               |  |
| Molybdenum           | Mo %      | 0.750 - 1.500   |                                                                                                                                                                                                                                               |  |
| Nickel               | Ni %      | 0.500 max.      | <b>Mechanical Properties</b><br>Tensile Strength in Mpa      450 min.<br>Yield Strength in Mpa      275 min.<br>Elongation in %      20 min.<br>Reduction of Area in %      45 min.<br>Hardness in HB      190 max.<br>Impact in Joule      - |  |
| Niobium              | Nb %      | 0.050 - 0.200   |                                                                                                                                                                                                                                               |  |
| Nitrogen             | N %       | 0.015 max.      |                                                                                                                                                                                                                                               |  |
| Ni+Cu                | Ni% + Cu% | 0.500 max.      |                                                                                                                                                                                                                                               |  |
| Copper               | Cu %      | 0.200 max.      |                                                                                                                                                                                                                                               |  |
| Iron                 | Fe %      | Balance         |                                                                                                                                                                                                                                               |  |
| -                    | -         | -               |                                                                                                                                                                                                                                               |  |
| -                    | -         | -               |                                                                                                                                                                                                                                               |  |

| Cross Reference Table |          |         |                              |
|-----------------------|----------|---------|------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry |
| SA-731 TPXM-27        | ASME     | USA     | Casting                      |
| A240 Type XM-27       | ASTM     | USA     | Plate, Sheet and Strip       |
| A276 XM-27            | ASTM     | USA     | Bar and Shapes               |
| S44627                | UNS      | USA     | Plate, Sheet and Strip       |
| SM-27                 | SAE      | USA     | Plate, Sheet and Strip       |
| SA-276 XM-27          | ASME     | USA     | Bar and Shapes               |
| A731 TP XM-27         | ASTM     | USA     | Casting                      |

For any further inquiries, please do not hesitate to contact us. You may visit our website at [AMTECH TECHNOCAST PVT. LTD.](http://AMTECH TECHNOCAST PVT. LTD.), call us at [+91 9879817994](tel:+919879817994), or email us at [manish@amtechtechnocast.com](mailto:manish@amtechtechnocast.com)

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