

Fe500 | Fe500 D | Fe550 | Fe550 D | CRS Using German Thermex Technology (TMX)

Sanjay Ferro Metal Private Limited, also known as SR TMX steel bars, is an ISO 9001:2015 certified manufacturing company established in 2021, part of the Sanjay Group of Industries involved in Iron & Steel products since 1976. The Group consists of a Foundry division manufacturing CI Castings, a Steel Division manufacturing MS Ingot, Trading Firm involved in all types of metal and alloys. Although SR TMX is a new brand in the TMT sector, the grassroots of the organization have been present for Decades.



### **SR TMX TMT Bars:**

Thermomechanical Tested bars are the most preferred reinforced bars globally. SR TMX uses the licensed H&K India Thermex (QST) system, The leading Quenching and self-tempering (QST) process that allows us to produce high-strength deformed bars. We produce rebars specifically designed to suit the customer's needs and rebar properties.



#### **Earthquake Resistance**

SR TMX bars consist of perfect seismic resistance properties making them an ideal choice in construction projects in earthquake-prone zones. The SR TMX steel bars are designed to offer superior grip and bond with the concrete to form a solid steel-cement bond. Its superior physical and chemical properties can withstand the forces of an earthquake and limit damage to the building structure.



SR TMX bars are manufactured as per IS 1786 standards making them high-quality bars with exceptional Bending and Re-bending properties. Thermex quenching system makes it resistant to cracks and easy to bend due to its hardened outer surface and ductile core.





### **Anti-Corrosion**

Using the leading state-of-the-art quenching process from Thermex H&K and superior chemical properties gives SR TMX an edge over the competition. SR TMX steel bars provide better physical protection against corrosion and increase the life of the structure.

#### **Better Weldability**

SR TMX bars offer better weldability than ordinary TMT due to their low carbon equivalent. Its excellent properties make it easier for Butt-welding or leap-welding to suit the need of the structure. It requires no additional heat treatment for manual arc welding.





# Chemical & Physical Mechanical

## Properties AS per IS 1786:2008 of SR TMX BAR

| MECHANICAL PROPERTIES            |       |                 |           |                 |           |                 |           |                 |           |                 |           |                 |           |
|----------------------------------|-------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|
| GRADE                            |       | Fe500           |           | Fe500D          |           | Fe550           |           | Fe550D          |           | CRS Fe500       |           | CRS Fe500D      |           |
|                                  | Unit  | IS<br>1786:2008 | SR<br>TMX |
| Yield Stress (min)               | N/mm2 | 500             | 530       | 500             | 530       | 550             | 570       | 550             | 570       | 500             | 530       | 500             | 530       |
| Ultimate Tensile Strenghth (min) | N/mm2 | 545             | 580       | 565             | 600       | 585             | 630       | 600             | 630       | 545             | 580       | 565             | 580       |
| TS\YS Ratio (min)                |       | 1.08            | 1.15      | 1.1             | 1.15      | 1.06            | 1.1       | 1.08            | 1.12      | 1.08            | 1.12      | 1.1             | 1.12      |
| Elongation (min)                 | %     | 12              | 16        | 16              | 18        | 10              | 16        | 14.5            | 16        | 12              | 16        | 16              | 18        |
| Total Elongation (min)           | %     |                 |           | 5               | 6         |                 |           | 5               | 6         |                 |           | 5               | 6         |

| CHEMICAL PROPERTIES |      |                 |           |                 |           |                 |           |                 |           |                 |            |                 |            |
|---------------------|------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|------------|-----------------|------------|
| GRADE               |      | Fe500           |           | Fe500D          |           | Fe550           |           | Fe550D          |           | CRS Fe500       |            | CRS Fe500D      |            |
|                     | Unit | IS<br>1786:2008 | SR<br>TMX  | IS<br>1786:2008 | SR<br>TMX  |
| Carbon (Max)        | %    | 0.30            | 0.25      | 0.25            | 0.23      | 0.30            | 0.25      | 0.25            | 0.23      | 0.15            | 0.15       | 0.15            | 0.15       |
| Sulphur (Max)       | %    | 0.055           | 0.050     | 0.040           | 0.040     | 0.055           | 0.050     | 0.040           | 0.040     | 0.055           | 0.05       | 0.04            | 0.04       |
| Phosphorus (Max)    | %    | 0.055           | 0.055     | 0.040           | 0.040     | 0.050           | 0.050     | 0.040           | 0.040     | 0.12            | 0.10       | 0.12            | 0.08       |
| S+P (Max)           | %    | 0.105           | 0.105     | 0.075           | 0.075     | 0.100           | 0.100     | 0.075           | 0.075     | 0.17            | 0.15       | 0.16            | 0.12       |
| Copper              | %    |                 |           |                 |           |                 |           |                 |           |                 | 0.22- 0.45 |                 | 0.10- 0.20 |
| Chromium            | %    |                 |           |                 |           |                 |           |                 |           |                 | 0.22- 0.45 |                 | 0.35- 0.45 |
| CE (Max)            | %    | 0.42            | 0.42      | 0.50            | 0.42      | 0.50            | 0.42      | 0.61            | 0.42      | 0.53            | 0.42       | 0.53            | 0.42       |
| ALLOY ELEMENT (Min) | %    |                 |           |                 |           |                 | **        |                 |           | 0.4             | 0.5        | 0.4             | 0.5        |

# Standard Size And Useful Data

|              | MECHANICAL PROPERTIES                     |   |  |  |   |  |  |  |  |  |  |
|--------------|---|---|--|--|---|--|--|--|--|--|--|
| SIZE<br>(MM) | ISI Standard<br>Nominal Weight<br>Kg./Mtr | SR TMX<br>Nominal<br>Weight<br>Kg./Mtr. | Tolerance<br>Limit as per<br>ISI<br>in Kg./ Mtr. | SR TMX<br>Tolerance<br>Limit<br>in Kg./ Mtr. | No. of<br>pieces<br>per bundle<br>12 Mtr. | Weight<br>per bundle<br>in kgs.<br>12 Mtr. |  |  |  |  |  |
| 8            | 0.395                                     | 0.370                                   | 0.367 - 0.423                                    | 0.370 - 0.385                                | 15  | 69   |  |  |  |  |  |
| 10           | 0.617                                     | 0.580                                   | 0.574 - 0.660                                    | 0.575 - 0.590                                | 10  | 71   |  |  |  |  |  |
| 12           | 0.888                                     | 0.852                                   | 0.844 - 0.932                                    | 0.845 - 0.860                                | 7   | 73   |  |  |  |  |  |
| 16           | 1.580                                     | 1.580                                   | 1.500 - 1.659                                    | 1.510 - 1.530                                | 4   | 74   |  |  |  |  |  |
| 20           | 2.470                                     | 2.410                                   | 2.395 - 2.544                                    | 2.400 -2 .425                                | 2   | 58   |  |  |  |  |  |
| 25           | 3.850                                     | 3.760                                   | 3.735 - 3.966                                    | 3.745 - 3.735                                | 1   | 45   |  |  |  |  |  |
| 32           | 6.310                                     | 6.210                                   | 6.121 - 6.499                                    | 6.190 - 6.300                                | 1   | 76   |  |  |  |  |  |















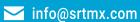


## **Contact Us**

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