

550 SD  
TMT BARS

USA  
TECHNOLOGY

AANDAVAR 550 SD

  
**AANDAVAR**  
550 SD TMT



## SALIENT FEATURES

- ✓ Uniform strength and ductility throughout each bar unlike other TMT's whose properties vary from meter to meter.
- ✓ Due to higher yield stress and better UTS ratio, saving on steel and the cost is there.
- ✓ The sophisticated computerized quenching process combined with the purity of steel makes **Aandavar 550 SD TMT** Bars stronger than others.
- ✓ Optimal combination of elongation and proof stress to ensure strong bonding with concrete in earthquake conditions.
- ✓ The protective oxide layer on the surface gives better corrosion resistance.
- ✓ Fire resistance ability.
- ✓ Easier to weld. No pre-warming or post-heating is required.
- ✓ Available in a range from 8mm to 32mm.
- ✓ A mark of "**Aandavar 550 SD TMT**" at every meter along with size.
- ✓ **Aandavar 550 SD TMT** Bars have excellent bendability which is achieved by a unique combination of tempered martensite.
- ✓ Automatic bending for perfect and uniform bend of all the bundles.
- ✓ Online weighing facilities for stringent weight control.

## UNIQUE SPECIFICATION

**Aandavar 550 SD TMT** Bars, if cut and washed with acid, would give a view of "Three Layers" which provides its supreme merits. That makes **Aandavar 550 SD TMT** Bars most trustworthy and makes the best construction.







## ABOUT THE PRODUCT

The new product, made with an improved mix of carbon, sulphur, phosphorous and other alloying elements as well as post-rolling treatment, promises stronger and more flexible rebar for the construction industry and other customers. **Aandavar 550 SD** also offers more energy-absorption capacity to the building's structure and, therefore, a higher evacuation time in case of earthquakes and other calamities. The new **Aandavar 550 SD TMT** possesses the strength of higher-grade steel and best-in-class ductility. The rebars can easily carry more load without any structural cracks. It helps customers save on steel, as designs made using the product leads to reduced product consumption.

- ✓ **Chemistry:** **Aandavar 550 SD TMT** bars are made with a controlled chemistry of carbon, sulphur, phosphorous and \_ other alloying elements. Carbon equivalent is maintained in a lower range to facilitate good weldability.
- ✓ **Rolling:** The billets are rolled in most advanced mills with all PLC controlled drives for maintaining a very narrow range of temperatures minimum rolling time and other rolling parameters which are critical in making the rebars super ductile.
- ✓ **Thermo Mechanical Treatment:** The ThermexTMT online quenching process is adopted after rolling with automated control of water pressure, nozzle angle and the rate of water flow. For super ductile rebars, it is important to have a critical balance between chemistry and quenching parameters, essential in developing the desired grade with strength and ductility.



## EXCELLENT SPECIFICATION

### CHEMICAL COMPOSITIONS (IS 1786 : 2008)

Element	Indian Standard (IS 1786)	Aandavar 550 SD MT
Grade	550D	550SD
Carbon Max	0.25	0.25%
Sulphur, Max	0.040	0.040%
Phosphorus, Max	0.040	0.040%
S+P, Max	0.075	0.075%
Carbon Equivalent		0.61% max

### MECHANICAL PROPERTIES (IS 1786 : 2008)

Quality Points	B.I.S Fe 550D	Aandavar Fe 550 SD
Yield Strength (N/mm <sup>2</sup> )	550	560-570
Ultimate Tensile	600	620
TS/YS Ratio	1.08	1.08
Elongation, Min (%)	14.5	16.5
Total Elongation	5	5.5 to 6.5

### SECTION WEIGHT (IS 1786 : 2008)

Normal Size* (mm)	Nominal section WT. (kg/m)	Section Weight (Range) (Kg/M)	Aandavar 550 SD TMT avg WT	Total No. of bars per bundle
8	0.395	0.367-0.423	0.370-0.400	10
10	0.617	0.574-0.660	0.580-0.620	7
12	0.888	0.844-0.932	0.850-0.890	5
16	1.580	1.500-1.659	1.550-1.590	3
20	2.470	2.395-2.544	2.430-2.480	2
25	3.850	3.730-3.965	3.800-3.860	1
28	4.830	4.685-4.975	4.750-4.840	1
32	6.310	6.121-6.499	6.250-6.320	1



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