



High strength **ESSAR TMT** bars

Foundations of GROWTH

Quality that assures reliability



The Essar Edge

- Timely delivery
- Assured quality
- Automatic fixed-size bundling
- Value for money
- Service commitment

The Hallmark of Quality

Every TMT bar carries the Essar brand name at regular intervals along its length. **Essar TMT** is the registered trademark of Essar.

Essar TMT Bars:
Quality that raises the standards

Essar TMT bars are manufactured in the most advanced process plants in India, and are BIS-certified conforming to IS 1786 specifications for Fe 500 and higher grades. The product is tested and certified by SGS, and comes with the assurance of quality that is the hallmark of the Essar brand.

High Strength

Essar TMT bars offer higher yield strength and tensile strength compared to other rebars. It has been established that Essar TMT bars bring down the requirement of steel in construction which results in cost savings.



Bendability

The 'thermo mechanical treatment' ensures tempered martensite on the outer surface (making it tough) and an inner core of fine-grain ferrite-pearlite, which makes the bars bendable and ideal for any RCC construction.



Thermal Resistance

The uniform and dense layer of tempered martensitic ribs on the outer surface of the bars prevent strength loss at high temperatures.



Highest Quality Standards

Essar TMT bars are certified for quality by SGS and also carry the ISI mark. Every batch of Essar TMT bars undergoes rigorous tests and quality control checks.



Bond Strength with Concrete

Essar TMT bars are processed using Computerised Numeric Control (CNC) rib cutting machines, which ensure better bonding of steel with concrete.



Weldability

The low carbon content in Essar TMT bars offers superior weldability. It does not require pre-heating or post-warming in any welding process, be it welding, flash butt welding, gas shielded semi-automatic welding, gas pressure welding, or resistance welding



Earthquake Resistance

Alloy chemistry and process parameters of Essar TMT bars are controlled to achieve a high stress ratio (UTS/YS) at a high level of ductility. This enables them to absorb high in-elastic strain energy during cyclic loading in an earthquake, making them the right choice for a seismic design



Tried & Trusted

Essar TMT bars are the preferred choice of builders of industrial, infrastructure, and residential / commercial projects, and continues to win the trust of many with its inherent strengths.



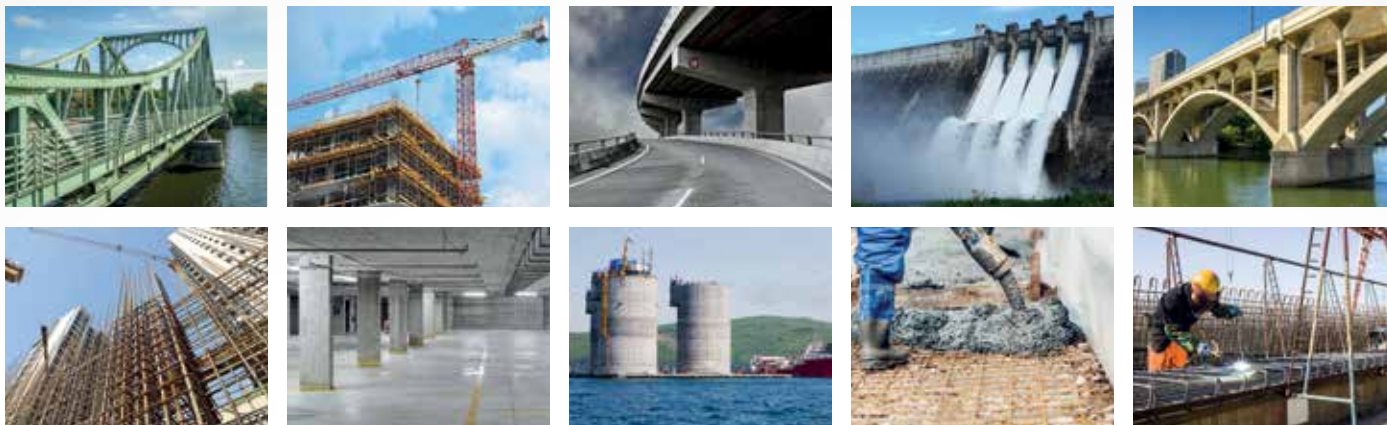
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Applications



Technical Parameters

Mechanical Properties

	ISI Grade Fe 500	Essar 500	ISI Grade Fe 500D	Essar 500D
Yield Strength, min.	500 N/mm ²	545 N/mm ²	500 N/mm ²	575 N/mm ²
Tensile Strength, min.	545 N/mm ²	595 N/mm ²	565 N/mm ²	630 N/mm ²
Elongation	12%	13% – 18%	16%	16% – 22%

Chemical Properties

	ISI Grade Fe 500	Essar 500	ISI Grade Fe 500D	Essar 500D
Carbon	0.30% Max.	~0.23%	0.25% Max.	~0.23%
Sulphur	0.055% Max.	~0.048%	0.040% Max.	~0.037%
Phosphorous	0.055% Max.	~0.050%	0.040% Max.	~0.037%
Sulphur & Phosphorous	0.105% Max.	~0.095%	0.075% Max.	~0.072%

Essar TMT customers



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