

**TATA STEEL**

**TATA  
TISCON**  
JOY OF BUILDING

**BRING HOME  
REVOLUTIONARY TECHNOLOGY**



DUAL PROTECTION WITH EPT | HIGHER ENDURANCE | BETTER BONDING

**TATA  
TISCON ULTIMA**  
PLASMA COATED REBARS

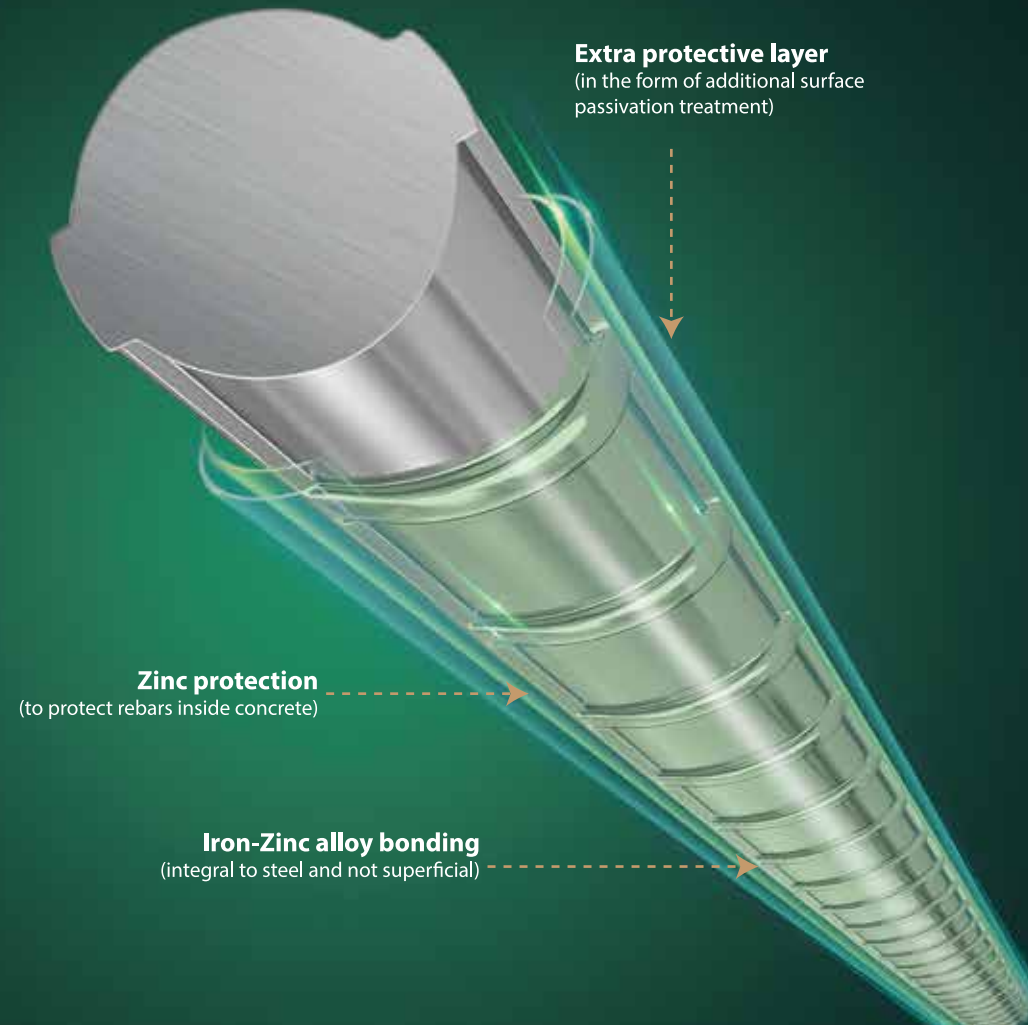
## THE ULTIMATE IN REBAR COATING TECHNOLOGY

Tata Tiscon Ultima introduces two superior coating options – 1) Zinc coating using exclusively patented Electrolytic Plasma Technology (EPT) and 2) Proprietary GFX coating. These coatings find applications on rebars and their downstream products-stirrups and footings. The coated product range of Tata Tiscon Ultima has a superior life, a strong visual appeal and branded packaging.

**TATA**  
**TISCON ULTIMA**  
PLASMA COATED REBARS

Tata Tiscon Ultima – Plasma Coated Rebars are coated with Zinc which in turn is passivated with a chemical to provide a protective layer. Hence, it offers a long lasting and double layer protection due to – a) zinc coating b) passivation, leading to superior life inside concrete medium. Zinc provides sacrificial protection which is superior to any other available coating option. Coating is achieved by patented Electrolytic Plasma Technology (EPT) which ensures superior corrosion performance at optimal coating thickness. The product has uniform coating thickness without any coating holiday.

Tata Steel Ltd. reserves the exclusive rights to produce Zinc coated and passivated rebars using EPT, which is the only technology of its kind available anywhere in the world.



## THE COATING PROCESS

Coating is applied on rebars by a patented Electrolytic Plasma Technology (EPT) which helps achieve an optimum coating thickness and alloy bonding with steel. The EPT process is broadly divided into four steps:



1. Combination of mechanical and chemical treatment to prepare the surface for plasma cleaning.
2. Plasma cleaning and surface modification for excellent coating adhesion.
3. Zinc coating under plasma atmosphere resulting in excellent alloy bonding of steel and zinc.
4. Proprietary passivation layer to protect the rebar in a concrete environment.

## QUALITY CONTROL

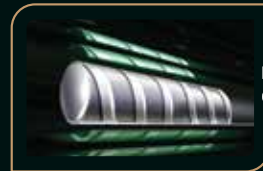
The following quality checks are placed to ensure quality assurance.

- Coating holiday and coating thickness tests
- Salt spray test (accelerated corrosion test)

## ADVANTAGES OF TATA TISCON ULTIMA



**Superior Rust Protection**  
(Salt spray life min. 100 hours in 5% NaCl solution)



**Dual Protection with EPT**  
(Zinc coating with Passivation)



**Better bond strength**  
of rebar with concrete



**Available in HDPE**  
micro bundles (60-80 kg)



**Coating does not peel off.**  
Bendability and Weldability equivalent to normal rebars



## APPLICATIONS OF TATA TISCON ULTIMA



Individual Houses



G+1



Individual Houses in coastal regions



Individual Houses in industrial areas





## PRODUCT RANGE AVAILABILITY

Tata Tiscon Ultima – with plasma zinc coating is available in 8mm, 10mm, 12mm, 16mm, 20mm and 25mm. Not only can Tata Tiscon Ultima be used in straight length form, it can also be easily bent to form stirrups and footings either using automated machines or manually on site without adversely affecting the coating performance.

There is a bending restriction in other coated rebars available in the market, however Plasma Coated Rebars have uniqueness in terms of bending and flexibility (bend radius greater than 6D; where D is rebar diameter).

As per ASTM780, coating damage (if any) can be rectified using a zinc rich paint.

## GENERAL TECHNICAL SPECIFICATIONS AND TOLERANCES

### Coating Specifications:

- Uniform and optimal coating thickness of zinc.
- Salt spray testing life: min 100hrs

### Chemical and Mechanical property specification:

Base rebar fully compliant to BIS-1786

## PERFORMANCE OF ULTIMA REBARS VIS-A-VIS ORDINARY REBARS

The salt spray test is a standardized and popular corrosion test method as per ASTM B117-11, used to check corrosion resistance of surface coating. Comparative salt spray testing (continuous exposure to 5% NaCl) of Tata Tiscon Ultima and ordinary rebars showed that there was no rust on Tata Tiscon Ultima even after 100 hours of exposure. On the other hand, uncoated ordinary rebars developed a complete superficial red oxide layer after 20 hours of exposure.



## CONSUMER TESTIMONIALS AND STORIES\*



“ I was looking for good steel to build my house. I researched on the internet and spoke to a friend who has recently built his home. He recommended to me Plasma Coated Rebars. This is amazing. It doesn't catch rust when left in open atmosphere . ”



“ When the dealer told me about Plasma Coated Rebars, I said I want to try this first. So I bought some rebars and left it in salty sand for two months. Nothing happened! No rust. No salt deposit. I built my entire bungalow with Plasma Coated Rebars. ”

\*To watch the full video scan the QR code on your mobile

## CONSUMER TESTIMONIALS AND STORIES\*



“ My home is being built. And after the foundation was built, work stopped due to the onset of the rainy season. But nothing happened to the exposed rebars. Any other rebar would have developed rust. But Plasma Coated Rebars stayed as is. ”



“ Tata Steel has always been a pioneer in quality. From Fe500D to Plasma Coated Rebars they have always been ahead of the market. In 2012 we started by selling around 10 tonnes a month. Today more and more customers are choosing Plasma Coated Rebars and our figures have gone as high as 60 tonnes a month. Home building is a one-time investment, customers value quality. ”

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## NORMS



It is advisable to store the material under shade by providing adequate dunnage underneath so that it is positively prevented against getting submerged (fully or partially) into the water puddle/muck/slushy soil.



The binding wires to be used should be GI wires.



A preferred usage of Tata Tiscon Ultima – Plasma Coated Rebars would be to avoid its contact with other uncoated rebars during storage and usage. It is best to use Tata Tiscon Ultima for all structural members of the construction such as: beams, columns, slabs and stirrups.

## TATA TISCON ULTIMA - HANDLING AT SITE

Rebar to be handled using sling (use of nylon rope/belt at each stage of handling is preferred) to avoid damage of packaging material.

It is advisable to store the material under shade by providing adequate dunnage underneath so that it is positively prevented against getting submerged (fully or partially) into the water puddle/muck/slushy soil.





During storage, plasma rebars have to be positively prevented against coming into contact with rebars of any other quality.

Surface damage to the rebars at any stage of construction must be avoided. Adequate measures need to be taken to make sure that bundles are not dragged on rough surfaces to make dents on the rebar surface.

Storage and transportation at all stages have to positively ensure that the plastic or any other packaging layer stays intact at all stages of storage and handling.

## **TATA STEEL Limited**

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