

## **Summary for IS 3502: 2009 - Steel Chequered Plates:**

### **Title and Standard Number:**

IS 3502: 2009 - Steel Chequered Plates

### **Scope:**

This standard specifies the requirements for hot-rolled steel chequered plates, commonly used in flooring, stair treads, walkways, and other slip-resistant applications. It includes details on the mechanical properties, surface finish, and dimensional tolerances necessary to ensure durability and safety.

### **Applications:**

Steel chequered plates are used in various industries where non-slip surfaces are essential, such as in industrial floors, staircases, and ramps. They are also widely applied in the construction of vehicles and structural platforms to improve grip and reduce the risk of slips.

### **Key Specifications:**

The standard outlines the following:

- **Pattern and Thickness:** Plates are produced with a raised chequered pattern on one side, which improves traction. Thickness generally ranges from 2 mm to 12 mm, with dimensional tolerances specified for consistency.
- **Material Grade:** The plates are primarily made from mild steel, ensuring a balance of strength and workability.
- **Mechanical Properties:** IS 3502 specifies a minimum yield strength of 250 MPa and tensile strength of at least 410 MPa, depending on the grade and thickness.

### **Physical and Technical Specifications:**

IS 3502 mandates certain technical characteristics:

- **Surface Finish:** The chequered pattern must be uniform to ensure effective slip resistance and aesthetic appearance.
- **Dimensional Tolerances:** Plate dimensions, including thickness, length, and width, must fall within strict tolerances to guarantee uniformity.
- **Testing:** Plates are tested for tensile strength, yield strength, and elongation to ensure they meet safety and performance standards.

### **Safety and Handling:**

The standard includes guidance on safe handling and installation, emphasizing the importance of using properly marked plates for load-bearing and safety-critical applications. Regular inspection for wear is recommended, particularly in high-traffic areas.

### **Marking and Packaging:**

Each plate must be marked with the manufacturer's details, material grade, and compliance with IS 3502. Plates are packaged to prevent surface damage and corrosion during transportation and storage.

### **Example of a Steel Chequered Plate Specification:**

For instance, a 6 mm thick chequered plate made from mild steel with a raised pattern and a yield strength of 250 MPa would meet IS 3502 specifications for slip-resistant applications in walkways and industrial flooring.

This summary covers the essential specifications, physical attributes, and safety aspects of steel chequered plates as defined in IS 3502: 2009, providing a reliable guide for industrial applications requiring durable, slip-resistant surfaces.