



## **IS 4990 : 2024 PLYWOOD FOR CONCRETE SHUTTERING WORKS - SPECIFICATION**

IS 4990 ; 2024 covered requirements of plywood used for shuttering work and formwork in construction. Plywood covered in scope of the standard is further classified in three types namely Plywood for concrete shuttering work (Plain) – CS, Plywood for concrete shuttering work with polymer coating (Coated) – CSC and Plywood for concrete shuttering work with suitable overlay (Film faced) – CSFF. Also considering formaldehyde content it is classified as E<sub>1</sub> and E<sub>2</sub> class. Plywood is engineered wood manufactured using veneers and adhesive under controlled selection of raw material and manufacturing process to meet various quality parameters desired from the product such as strength and reusability.

User of the product expect that plywood should be of desired dimensions, strength and safe for its use in concrete shuttering to take dead load of concrete during its life cycle. The plywood shall be reusable i.e. for more life cycle so that it will be economical. Also user may expect that it will be safe for user's health to have minimum or controlled formaldehyde release from the same.

Expectations of consumers is addressed in IS 4990, through proper selection of raw material and its quality such as veneers, preservative treatment to these veneers, quality and quantity of glue used in manufacturing of plywood, dimensional requirements, workmanship and finish. Also, manufacturing process controls are also addressed through testing of product for various requirements such as moisture content, glue shear strength, adhesion of plies etc.

Furthermore, testing protocols for testing of plywood for resistance to water, tensile strength, static bending strength, wet bending strength, retention of preservative, formaldehyde content test and steady-state formaldehyde test will ensure that plywood manufactured as per the standard meets expectation of consumer for quality, safety, strength and durability/reusability of the product.