IS 3513 (Part 2):1989 SPECIFICATION FOR RESIN TREATED COMPRESSED WOOD LAMINATES (COMPREGS)- For Chemical Purposes

Resin-treated compressed wood laminates, or compregs, are strong, durable laminates made from thin wood layers bonded with thermosetting resins like phenol or cresol formaldehyde. These laminates offer excellent strength, moisture resistance, and stability, which makes them highly resistant to corrosion and termite damage. With good machinability, compregs come in a variety of shapes, such as sheets, rods, and molded forms, to meet a wide range of industrial needs.

Compregs play essential roles in challenging environments. They are often used for components like exhaust hoods, impellers, and shafts in chemical baths, filter plates and frames for chemical recovery, submerged bearings, filter trays, effluent grids, and chemical-resistant linings. Additionally, compregs are used in coal cleaning plants for screen hangers and connecting rods.

Compregs are graded based on how much resin is absorbed, the compression and density achieved during production, and the alignment of wood fibers. This grading creates specific types suited to either tensile (stretching) or compressive (squeezing) applications. Indian Standard IS 3513 Part 2 sets strict quality standards for chemical-grade compregs, defining requirements for material properties, manufacturing methods, and performance testing.

The standard includes two main types: Type V, designed for tensile strength with aligned grain, and Type VI, designed for compressive strength with multi-directional grain. Important properties, such as moisture content, density, impact resistance, and bending strength, are tested under regular and extended chemical exposure conditions to ensure durability and reliability.

To reinforce quality, the Department for Promotion of Industry and Internal Trade (DPIIT) has issued a Quality Control Order, making it mandatory for manufacturers to comply with IS 3513 Part 2. This regulation helps ensure that compregs remain a trusted, high-quality material for industrial applications.