



IS 1838 (Part 3) : 2011

**PREFORMED FILLERS FOR EXPANSION JOINTS IN CONCRETE PAVEMENTS
AND STRUCTURES (NON-EXTRUDING AND RESILIENT TYPE)**

PART 3 POLYMER BASED

Joints are required in concrete pavements, roads, runways, floor and roof slabs in buildings to relieve stresses developed due to temperature shrinkage, creep, relaxation, vibration, etc. To provide an even surface these joints must be filled and at the same time the materials used for filling should permit expansion and contraction of the concrete member. The joint filler is a strip of compressible material used to form and fill the expansion joints in structures. The chief function of the joint filler is to permit the joint to expand without developing stresses. Joint fillers are produced from a variety of materials such as bitumen impregnated fibre, cork strips, sponge or synthetic rubber, expanded plastics, epoxy, coconut pith and CNSL resin. To make the joints effective, it is also necessary to prevent the ingress of water or grit down the joint. This is achieved by using a sealing compound over the joint filler.

IS 1838 (Part 3) specifies requirements for preformed fillers of polymer-based, non-extruding, and resilient type for expansion joints in concrete pavements and structures. The fillers may be used for filling expansion joints such as in buildings, concrete pavements and other structures.

The standard prescribes the material, manufacture, dimensions and tolerances, physical requirements, installation, packing, marking and sampling requirements.

The physical requirements addressed in the standard such as Resistance to handling, Recovery, Compression, Extrusion, Water absorption, Density and Weathering ensure **product reliability, durability and longevity of concrete structures, prevents water infiltration and damage while maintaining structural integrity and enhancing safety and comfort.**

By adhering to IS 1838 (Part 3): 2011, manufacturers and users can ensure **effective sealing of expansion joints, maintaining the structural integrity and longevity of concrete pavements and structures.** The other benefits of complying with this standard are **Resistance to extreme temperatures, safety, cost-effective and easy installation, low maintenance and improved structural performance.**