SABIC® EPS 650FF

EXPANDABLE POLYSTYRENE FIRE RETARDANT

DESCRIPTION

Fire retardant expanded Polystyrene SABIC® EPS650FF is manufactured by the suspension polymerization of styrene monomer. The polymerization is generally carried out in a batch process. SABIC® EPS650FF is supplied in free flowing beads, containing pentane (CFC free) as a foaming agent. It is used for fast cycle low density block molding applications with good surface finish.

TYPICAL APPLICATIONS

SABIC® EPS650FF grade is used for articles with large shape molding block molding with medium density for thermal insulation in construction industry. It has retarded ignitability and the moldings made from it will conform to the requirement of DIN 53438 class K1 and K2.

TYPICAL PROPERTY VALUES

Revision 20181219

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
TYPICAL DATA			
Bead Distribution	0.9 – 1.4	mm	SABIC 020
Minimum Density [1]	15	kg/m³	SABIC 027
Normal Density Range	15 – 25	kg/m³	SABIC 027

(1) One pre-expansion, lower density can be achieved by multiple pre-expansions

PROCESSING CONDITIONS

SABIC® EPS650FF is processed in three steps:

Pre-expansion, Maturation and Molding

SABIC® EPS650FF is heated by steam at 100°C in a pre-expander. The foaming agent present in the polystyrene beads vaporizes and mixes with steam. The gas mixture so produced subsequently softens the beads and expands them to 30-40 times to its initial size. In maturation process the foaming agent and steam condense in the cells of the pre-foamed beads causing partial vacuum, which is compensated by the diffusion of air into the beads. The maturation period could be between 3 and 24 hours. In the molding process the matured pre-foamed beads can further be processed by direct steam to the desired shape molding

STORAGE AND HANDLING

SABIC® EPS650FF is supplied in 1 MT semi bulk cardboard containers (octabins).

SABIC® EPS650FF contains flammable foaming agent, pentane, which can form explosive mixture with air. Hence, expandable polystyrene should be stored in closed containers below 25°C. Storage and processing areas should be adequately ventilated. Source of ignition like smoking, sparks, welding and naked flame should be strictly avoided. Should fire occur, the processor should use dry powder or carbon dioxide extinguishers, particularly in the area of hot wire cutting machines.

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