

TECHNICAL BULLETIN

OBJECT : EXPANDED OR EXTRUDED POLYSTYRENE INSULATION BOARDS

Over the last few years, Soprema had to deal with important issues related to roofing systems with polystyrene insulation boards.

Indeed, wrinkling on the membrane was regularly observed on the running surface of various roofs, as well as the withdrawal of insulating material down a parapet. Exploratory cuts have shown the material moves under the waterproofing system, and these displacements have caused permanent deformations of all the system components. We also found that the insulation material had deteriorated where hot bitumen had been used as an adhesive.

When we read the evaluation reports of the National Research Council of Canada (NRC)¹ on boards of different polystyrene manufacturers, we find that the operating temperature for this type of product may not exceed 75 °C (167 °F) for an extended period. This limitation on operating temperatures could explain the problems described in the previous paragraph, which involve the movement of materials and the deterioration of insulation.

Therefore, Soprema has decided to add two new requirements, applicable only to Platinum warranties, to its General Conditions for Roofing Warranties to better regulate the use of polystyrene:

- 1) Boards of expanded and extruded polystyrene must be covered with a board of polyisocyanurate or mineral fibers (rock wool) of a minimum thickness of 50 mm (2 in), approved by Soprema²;
- 2) The use of base sheets adhered with hot bitumen is not permitted in a waterproofing system with insulation boards of expanded or extruded polystyrene.

¹NRC: National Research Council Canada

²This clause does not include EPS crickets/backslope.