

EXTRAORDINARY EPS MOISTURE PERFORMANCE CLAIMS LACK ORDINARY EVIDENCE

INDEPENDENT-EXPERT REVIEW OF SCIENTIFIC EVIDENCE CLEARLY CONFIRMS *XPS* EXHIBITS SUPERIOR PERFORMANCE RELATIVE TO *EPS* IN BELOW-GROUND APPLICATIONS

Technical information from an EPS-industry commissioned study attempted to show the relative performance between extruded polystyrene (XPS) and expanded or molded polystyrene (EPS) insulation products used in below-ground applications. An independent-expert was hired to provide an exhaustive technical review of the study and its performance claims. The review included a comprehensive analysis of the following:

- National and International Scientific Literature Historically-available
- A statistical analysis of reported technical data on this subject to date
- A review of the new performance claims published by certain EPS manufacturers and their trade association—the Expanded Polystyrene Molders Association (EPSMA)

Contrary to current EPS-industry claims, the expert concluded that the at-large scientific evidence clearly shows a consistent trend of XPS exhibiting superior performance relative to EPS in below-ground applications.

The EPS-reported claims are based on a very limited study. This study has not been made publicly available nor has it been subjected to independent peer review. After three months and several requests for the underlying EPS technical study, EPSMA refused to disclose the entire report, including its test methodologies, sample-handling procedures and underlying data as they received it from Twin Cities. Without the entire report, proper technical analysis cannot be verified to determine whether there is any scientific merit in its conclusions. See [EPSMA's Response Letter denying review](#).

To inform the building and regulatory communities a technical bulletin was prepared by an independent expert who questions the validity and basis for these unfounded claims made by the EPS industry and EPSMA. This important technical bulletin is available for download here [Volume 3, Issue 1](#). The following two facts summarize the key findings:

- ***The International Code Council (ICC) Building Code and the ASCE 32-01 Standard Recognize that XPS Performs Better than EPS in Below-Ground Applications***
 - ASCE 32-01 consensus standard, referenced in Sec.1805.2.1 of the 2006 IBC, and Sec. R403.1.4.1 of the IRC, the nation's most utilized model building codes, recognize that XPS maintains a higher R-value retention in below-ground foundation insulation applications
 - IN FACT, the IRC includes an extra precaution prohibiting the use of EPS and only allowing XPS in horizontal applications (see IRC Table R403.3, footnote e).
 - Both the ASCE 32-01 and ICC codes follow consensus procedures engaging the public and a broad array of industry experts when establishing codes and standards.
- ***XPS Performs Better is Confirmed by a broad body of Recognized Scientific Literature***
 - ASCE 32-01 committee considered "numerous field studies" to properly characterize differences in performance of XPS and EPS and to establish appropriate thermal design properties for below-ground use. This broad body of data firmly contradicts the questionable EPS-commissioned industry study mentioned above.

SO, BEFORE YOU ACCEPT PRODUCT PERFORMANCE CLAIMS FROM ANY SINGLE STUDY, BE SURE TO GET ALL THE FACTS. EXTRAORDINARY CLAIMS THAT CONTRADICT ESTABLISHED AND DOCUMENTED CODES AND STANDARDS POSITIONS SHOULD BE SUPPORTED BY THIRD-PARTY PEER REVIEW AND FULLY-VETTED SCIENTIFIC EVIDENCE.