

Technical Bulletin

Use of James Hardie® Siding products on the exterior of Indoor Pool Buildings

January 2010



Scope: This technical bulletin addresses the use of James Hardie Siding products that are installed on the exterior of Indoor Pool Buildings or similar types of buildings.

Indoor pools can create an environment which could cause deleterious effects to the various building materials and components that comprise the structure.

It is the sole responsibility of the designer to identify moisture related risks associated with any particular building design and address them in the design and construction of said building. In the case of indoor pools the designer should:

1. Consider both the interior and exterior environments and their effect on managing moisture and water vapor. More specifically:
 - Properly assess the seasonal changes for the local climate and the intended repercussions for the wall construction design.
 - Address heat, air and moisture transport through the building enclosure, partition walls, and building materials.
 - A full psychrometric analysis on the wall assembly and materials is recommended for this building type.
 - Select building materials which meet the requirements of the design and can be installed per the manufacturer's instructions.
2. Design the building to encompass a means of regulating the indoor environment to a level acceptable for proper performance of the building and the materials it comprises. This would include managing the level of chemical concentrations in the indoor environment. Some suggested means are:
 - Natural and mechanical ventilation
 - Mechanical dehumidification
 - Indoor/Outdoor pressure difference

3. Accommodate for the anticipated activities of the occupants considering the intended use and design of the facilities.
 - Special care should be taken in the design and construction of penetrations (e.g. windows, vents, doors, etc.) in the building envelope. Penetrations are the leading cause for leaking air, moisture, and heat through a building enclosure.
4. Ensure the design is properly documented and communicated to the constructing party. Execution of the design and installation of the building materials will be the sole responsibility of the designer and constructing parties.

Common resources a designer should consult include, but are not limited to:

- ASHRAE Standard 62.1 – 2007
- ASHRAE Standard 90.1 – 2007
- ASHRAE Handbook – 2008
- International Mechanical Code - 2006
- HVAC Engineer with experience designing air quality systems for indoor pools
- Various texts on moisture control and building science design

Please be advised that James Hardie provides a limited transferable product warranty covering the product only. James Hardie is not responsible for system design or installation.

IMPORTANT: Failure to install and finish this product in accordance with applicable building codes and James Hardie written application instructions may affect system performance, violate local building codes, void the product-only warranty and lead to personal injury.

DESIGN ADVICE: Any information or assistance provided by James Hardie in relation to specific projects must be approved by the relevant specialists engaged for the project eg. builder, architect or engineer. James Hardie will not be responsible in connection with any such information or assistance.