	Title: YALE OFFICE OF FACILITIES PROCEDURE MANUAL Chapter: 01 - Yale Design Standard Division: 07 00 00 Thermal and Moisture Protection	Section: 07 21 00 Requirements for Thermal Insulation
		Date: December 2023
		Author: Office of Facilities

PART 1 - INTRODUCTION

1.1 PURPOSE

This section provides general design criteria for the specification of thermal insulation.

PART 2 - GENERAL DESIGN REQUIREMENTS

2.1 SYSTEM DESIGN AND PERFORMANCE REQUIREMENTS

Due to the evolving nature of the building industry, Yale University encourages, and will review, alternative methods of thermal insulation. Provide minimum insulation values that meet or exceed project program, code, or Yale University design standards.

2.2 MATERIALS

Thermal insulation materials must conform to the following standards.

A. Glass Fiber Blanket or Batt Type Insulation

Provide the following types of glass fiber blanket or batt insulation manufactured by Owens Corning Fiberglass Corp—or an approved equivalent:

1. Unfaced
2. Paper-faced (vapor barrier)
3. Foil-faced (vapor barrier)

B. Board Type Insulation


Provide extruded, polystyrene insulation—Styrofoam manufactured by Dow Chemical, Formular insulation manufactured by UC Industries, or an approved equivalent, with the following compressive strengths.

1. 20 psi at foundations and under slab-on-grade
2. 60 psi at decks
3. 100 psi under heavy vehicular traffic

C. Loose Fill Type Insulation

At masonry block cavities, provide granular perlite or vermiculite insulation, treated against vermin and insects.

D. Roof and Deck Insulation

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1. Provide insulation that is compatible with the roof membrane and is recommended by the manufacturer to maintain a system warranty.
2. Install at least two staggered layers of insulation.
3. Expanded polystyrene and lightweight concrete fill are not acceptable unless approved.

E. Vapor/Air Barrier

On the warm side of the exterior wall, install flame retardant polyethylene sheets of 4-mil minimum thickness. Seal the sheet joints with flame-retardant, self-adhering, polyethylene tape, with a 2" minimum width.

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