

HH-I-1972/3
August 12, 1981

FEDERAL SPECIFICATION

INSULATION BOARD, THERMAL, POLYURETHANE OR POLYISOCYANURATE
FACED WITH PERLITE INSULATION BOARD ON ONE SIDE
AND ASPHALT/ORGANIC FELT OR ASPHALT/GLASS FIBER
FELT ON THE OTHER SIDE OF THE FOAM

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

This specification forms a part of the latest issue of Federal Specification HH-I-1972/GEN.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers the requirements for faced thermal insulation boards composed of rigid cellular polyurethane or polyisocyanurate faced with perlite insulation board on one side of the foam and asphalt/organic felt or asphalt/glass fiber felt faced on the other side of the foam. This specification does not cover cryogenic applications. For intended use see 6.1 of HH-I-1972/GEN.

1.2 Classification. Unless otherwise specified (see 6.2 of HH-I-1972/GEN), the thermal insulation boards shall be of the following styles as specified.

- Style 1 - Faced with a perlite insulation board on one side and an asphalt/organic felt on the other side of the foam.
- Style 2 - Faced with a perlite insulation board on one side and an asphalt/glass fiber felt on the other side of the foam.

2. APPLICABLE DOCUMENTS

2.1 Latest issue of HH-I-1972/GEN and documents referenced therein.

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

FSC 5640

HH-I-1972/3

American Society for Testing and Materials (ASTM) Standards:

C728 - Perlite Thermal Insulation Board.

D226 - Asphalt-Saturated Organic Roofing Felt for Use in Membrane Waterproofing and Built-up Roofing.

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19102.)

3. REQUIREMENTS

3.1 Materials. The thermal insulation boards shall conform to the material requirements of the basic specification HH-I-1972/GEN and 3.1.1.

3.1.1 Facing materials. Unless otherwise specified (see 6.2 of HH-I-1972/GEN), the facing materials incorporated in the design of the faced thermal insulation board shall, at the manufacturer's option, be either perlite on one side of the foam and asphalt/organic felt on the other side of

the foam or perlite on one side of the foam and asphalt/glass fiber felt on the other side of the foam. The facing material shall meet the requirements of 3.1.1.1 through 3.1.1.3.

3.1.1.1 Perlite board. The perlite board shall conform to the material and physical properties requirements specified in ASTM C728.

3.1.1.2 Asphalt/organic felt. The asphalt/organic felt shall conform to the material and physical properties requirements specified in table I of ASTM D226 except that the minimum saturation level shall be 95 percent.

3.1.1.3 Asphalt/glass fiber felt. The asphalt/glass fiber felt shall consist of fibrous glass felt saturated with asphalt or asphalt emulsion.

3.2 First article (see HH-I-1972/GEN).

3.3 Physical properties. The thermal insulation boards, when conditioned and tested in accordance with 4.5 through 4.5.7 of HH-I-1972/GEN, shall meet the physical properties specified in table I

TABLE I. Physical properties

Property	Value	Test Reqmt. Para.
Compressive strength (psi) minimum	16.0	4.5.3
Dimensional stability (L)	2.0	4.5.4
at -40 deg F/ambient RH, (W)	2.0	
(percent change) maximum		
Dimensional stability (L)	4.0	4.5.4
at 158 deg F/97 % RH, (W)	4.0	
(percent change) maximum		
Dimensional stability (L)	4.0	4.5.4
at 200 deg F/ambient RH, (W)	4.0	
(percent change) maximum		

4. QUALITY ASSURANCE PROVISIONS (see HH-I-1972/GEN)

5. PREPARATION FOR DELIVERY (see HH-I-1972/GEN)

6. NOTES

6.1 Intended use. The insulation material covered by this specification is intended for use as thermal insulation boards in roofs, and other applications where the insulation will not be subjected to temperatures below

-40 deg F or above 200 deg F. The service temperature will vary depending on the application. This specification does not cover cryogenic applications. Consult manufacturer for recommendations and physical properties of faced polyurethane or polyisocyanurate insulation boards in cryogenic conditions.

6.2 Availability. Sizes - 3 feet by 4 feet and 4 feet by 4 feet
Thicknesses - 1.5 to 4 inches

CUSTODIANS:

CIVIL AGENCY COORDINATING ACTIVITIES:

Army - ME
Navy - YD
Air Force - 99

COM - NBS
GSA - FSS, PCD

Preparing activity:

Review activity:

Navy - YD

Army - CE

Project No. 5640-0281

Orders for this publication are to be placed with General Services Administration, acting as an agent for the Superintendent of Documents. See Section 2 of this specification to obtain extra copies and other documents referenced herein.

HH-I-1972/3
NOTICE 1
7 February 1991

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HH-I-1972/3, dated 12 August 1981, has been reviewed and determined to be valid for use in aquisition.

CUSTODIANS:

Army - ME
Navy - YD
Air Force - 99

CIVIL AGENCY COORDINATING ACTIVITIES:

COM - NIST
GSA - FSS/7FXE

Review activity:

Army - CE
Air Force - 84

Preparing activity:

Navy - YD