

# POLYTHERM™

## Roofing Insulation for Modified Bitumen, BUR and Single-Ply Systems

### PRODUCT DESCRIPTION

**POLYTHERM™** is a high efficiency thermal insulation board composed of a rigid closed cell polyisocyanurate foam core bonded to glass fiber mat facers.

### APPLICATIONS

**POLYTHERM™** with glass fiber mat facers is a product for use with the many types of single ply membranes, built-up and modified bitumen membranes and metal panel roofing systems available.

**POLYTHERM™** is suitable for use in new roofing construction and appropriate retrofit, recover roof construction over non-combustible, and certain types of nailable roof decks. For details not covered herein please contact POLYGLASS®.

### MODIFIED BITUMEN SYSTEMS

**POLYTHERM™** is excellent for use under modified bitumen membrane systems. POLYGLASS® recommends that when **POLYTHERM™** is used under a hot bitumen adhered modified membrane system, it be protected by an overlay of mineral fiberboard, wood fiberboard, perlite, or a venting base sheet as specified in the NRCA "Technical Bulletin #9. Please note that POLYGLASS® requires a suitable overlay of mineral fiberboard, wood fiberboard, or perlite be applied to the insulation prior to application of a torch down modified bitumen system. For torch applications, the specific overlay material must provide a suitable substrate for direct torching [contact the manufacturer of the material to ensure suitability].

### BUILT-UP ROOF MEMBRANE SYSTEMS

**POLYTHERM™** is recommended for use under built-up bitumen, either asphalt or coal tar, membranes when the insulation is secured to the roof deck by industry accepted methods. POLYGLASS® recommends that when **POLYTHERM™** is used under a BUR membrane system, it be protected by an overlay of mineral fiberboard, wood fiberboard, perlite, or a venting base sheet as specified in the NRCA "Technical Bulletin # 9".

### FULLY ADHERED SINGLE-PLY ROOFING SYSTEMS

**POLYTHERM™** is suitable for use under fully adhered single ply membranes with the insulation secured to the roof deck with either mechanical fasteners or hot bitumen adhesive when approved by the membrane supplier.

### MECHANICALLY ATTACHED SINGLE-PLY SYSTEMS

Attach the **POLYTHERM™** to the roof deck with a minimum of four (4) FM approved mechanical fasteners per our foot by eight foot (4' x 8') sheet of insulation. Additional fasteners in the insulation may be required by the membrane supplier. Apply the mechanically attached membrane according to membrane supplier's specifications.

### BALLASTED SINGLE-PLY SYSTEMS

**POLYTHERM™** is laid in position on the roof deck without fastening or otherwise securing the insulation. The membrane and ballast are then installed according to the membrane supplier's specifications. Ballast, placed at the specified rate, restrains the entire roof system. Some membrane manufacturers may require fastening of the boards prior to installation of the membrane & ballast. Check with the individual manufacturer.

### ADESO™ DUAL COMPOUND SELF-ADHESIVE ROOFING

**POLYTHERM™** with a felt facer is acceptable for use in **ADESO™** dual compound self-adhesive roofing systems. Contact our Technical Services for any additional information.

### STANDING SEAM METAL ROOF SYSTEMS

**POLYTHERM™** is suitable for use under metal roof panel systems fastened through the insulation to a roof deck and structure below the insulation. Fastening clips and all other items required to secure and close the metal roof covering must be fastened securely to the roof deck and structure. Consult metal panel manufacturer/supplier for details.

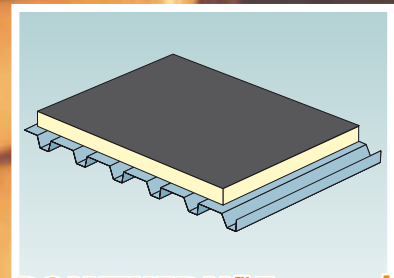
### STANDARDS

**FEDERAL SPECIFICATION:** HH-I-1972/2

**FACTORY MUTUAL:** Meets Class I Roof Insulation per FM Standard 4450.

**UNDERWRITERS LABORATORIES:**

Classified (Class A) Foamed Plastic as roof deck construction material. Meets UL Standards 790, 1256 and/or 283. Contact POLYGLASS® Customer Service for latest information.



**POLYTHERM™ Tapered & Tapered Composite**

*Also available*



WATERPROOFING MATERIALS AND INSULATING SYSTEMS

*Adds value!*

## PRODUCT THERMAL PROPERTIES & DATA

THICKNESS		LTTR-VALUE	RSI**	PCS/PKG	METAL DECK FLUTE SPANABILITY	
in	mm				in	mm
1.0	25	6.0	1.06	46	2.625	66.68
1.5	38	9.0	1.58	31	4.375	111.13
2.0	51	12.1	2.13	23	4.375	111.13
2.5	64	15.3	2.69	18	4.375	111.13
3.0	76	18.5	3.26	15	4.375	111.13
3.5	89	21.7	3.82	13	4.375	111.13
4.0	102	25.0	4.40	11	4.375	111.13

\*\* RSI is the metric expression of LTTR (m<sup>2</sup> • K/W)

## TYPICAL PHYSICAL PROPERTIES

PROPERTY	ASTM Test	RESULT
Density, Overall	D 1622	2 lb/cu.ft. (nominal)
Compressive Strength	D 1621	20 PSI (ave.)
Flame Spread, Core	E 84	25 or less
Moisture Vapor	E 96	< 2 perms
Dimensional Stability	D 2126	7 days, 158° 95% RH < 2% linear ∂
Service Temperature		-40°F to 250°F

## STANDARD SIZES AND PACKAGING

**WIDTH:** 48"

**LENGTH:** 48" or 96"

**THICKNESSES:** Refer to Thermal Properties Data above.

Bundles, approximately 48" high, are banded and covered with plastic bags for easy handling.

**NOTE:** All **POLYTHERM™** products must be tarped, placed on skids, and kept completely dry before and throughout construction. For metric size information contact your **POLYGLASS®** sales office.

## GENERAL CONDITIONS

Descriptions, specifications, and recommendations described herein are subject to change without notice. Consult with **POLYGLASS®** for the latest information. The design and construction of the roof deck, and supporting structure are the responsibility of the project architect, engineer, general contractor, and the building owner. The selection and use of **POLYGLASS®** insulation and other roofing system components to meet the requirements for a project is at the sole discretion of the owner or his designated agent or representative. **POLYGLASS®** will provide information that is requested by the designer to aid in this decision process. The selection and use of any **POLYGLASS®** product should be based on the quality of the product and on the specific requirements for the entire roof system rather than any economic considerations. Refer to the information contained in this brochure and to **POLYGLASS®** specific information on the use and installation of **POLYGLASS®** roofing insulations.

No warranty, expressed or implied, as to characteristics, physical properties, or performance under any variations from controlled conditions at time of manufacture is made. These provisions may not be altered in any way by a sales person, employee, agent, or any other representative of **POLYGLASS®**, except by a letter from an officer of **POLYGLASS®**. **POLYGLASS®** does not assume any responsibility or liability for the performance of any products other than those manufactured by **POLYGLASS®**.

## INSTALLATION

**POLYGLASS®** insulation is shipped in polyethylene wrapped and strapped bundles, approximately 48 inches high. These wrapping materials are not adequate for weather protection of the insulation. Stacked bundles shall be covered by a tarpaulin or suitable "breathable" protection cover. **DO NOT** use wet insulation products within a roofing assembly. Installation of wet insulation or other roofing system components shall cause the **POLYGLASS®** warranties to become void. **POLYGLASS®** insulation that has become wet may be applied in a roof system after it has been dried out thoroughly. All other roofing materials shall be stored as recommended by the supplier.

## VAPOR RETARDERS

Vapor retarders are recommended by **POLYGLASS®** for buildings where the average mean temperature in January will be 40 degrees F or lower, or when the occupancy of the building is such that the relative humidity of the interior will be 45% or greater. The decision to use a vapor retarder and the selection of the details of the vapor retarder construction is left to the building architect, designer, building owner, or their designated representative or agent.

## REROOFING

All existing roof surfaces must be swept clear of all gravel, dirt, dust, and other debris. Application of **POLYGLASS®** insulation products on loose or protruding gravel will crush the insulation product and damage the facers. This can cause the board to become dimensionally unstable and/or lose R-value. **POLYGLASS®** recommends that when the ballast surface of the old membrane is to be left in place, the ballast be covered with a minimum of 1/2" wood fiber board or perlite board prior to application of the insulation. Application of **POLYGLASS®** insulation products over wet roofing systems may cause dimensional instability and roof system failure.

## WARNING

Polyisocyanurate is an organic material which will burn when exposed to an ignition source of sufficient heat and intensity, and may contribute to flames spreading. Note: **POLYGLASS®** does not assume any responsibility or liability for the performance of any products other than those manufactured and sold by **POLYGLASS®**.



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