# TOWN OF TYRINGHAM NOTICE OF BID: 1/23/2018

The Town of Tryingham is seeking bids for the entire unused inventory of Nail Board Insulation that is left over from the Library roofing project.

The Board of Selectmen are the awarding authority. Sealed bids will be accepted at the Selectmen's office until Tuesday, February 13, 2018 until 12 pm on that day where the bids will be opened and read aloud.

The Board of Selectmen reserves the right to accept or reject any and all bids in the best interest of the town. Specifications are available at the Selectmen's Office as well as the Town web site – WWW.TYRINGHAM-MA,GOV.

#### **SPECIFICATIONS:**

27 square (2,700 sq ft) of 4" Nailboard with 5/8 CDX plywood affixed. Sheets are 4'x8". Overall thickness 4.5". R Value is R21.1.

Please see <u>attached</u> specification page from the manufacture.

Please contact the Selectmen's office if you have any question.

James Consolati, Chairman

H-SHield NB Flat Polyisocyanurate Insulation Manufactured On-Line to Oriented Strand Board



#### H-Sheld NB

#### PRODUCT DESCRIPTION

H-Shield NB is a rigid roof insulation composite panel composed of a closed cell polyisocyanurate foam core manufactured on-line to a fiber reinforced facer on one side and either %s" or %" oriented strand board (OSB) on the other. H-Shield NB can also be manufactured off-line using a RM approved adhesive

#### FEATURES AND BENEFITS

- Manufactured with NexGen Chemistry, Contains no CFCs, HCFCs is Zero ODP, EPA Compliant, and has virtually no GWP
- A superior combination of high insulating properties and a nailable surface
- Suitable for new construction and re-roofing on both commercial and residential projects
- Incorporates APA-TECO Rated Exposure 1 038
- The edges of the wood panels are rabbeted to allow for expansion and contraction of the wood, the foam edges shall be installed tightly to achieve thermal integrity across the entire roof deck Also available as a non-rabbated panel upon special request only H-Shield NB is also available bonded to plywood in an off-line

Hail Rating 94-1

#### PANEL CHARACTERISTICS

- Available size is 47.5" x95.5" when rabbated on line in thicknesses of 1.5" (38mm) to 4.0" (102mm)
- Available in 4'x8' when non-rabbeted in thicknesses of 1.5" (38mm) to 4.0" (102mm)
- Available in two compressive strengths per ASTM C 1289
- Type V. Grade 2 (20 ps) or Grade 3 (25 ps)

  Available with FSC® Certified OSB or plywood (special order) When FSC wood is specified, H-Shield NB is manufactured with H-Shield CG
- Multiple Substrate Types Available

OSB: 1/6" or 1/6"

Plywood: 1/4" or 3/4" CDX

Fire-Treated

#### ROOFING APPLICATIONS

- H-Shield NB with 1/6" OSB is suitable for use with heavweight shingles and standing seam metal roof systems
- H-Shield NB with %" OSB is suitable for use with tile and state roof systems
- Single-Ply Roof Systems Ballasted, Mechanically Attached, Fully Adhered. (For high wind speed warranty - see individual Single-Ply manufacturer approvals and listings)

#### H-SHIELD NB THERMAL VALUES

			ii H	Ç,	( i	۷	1	ŝ	h	1)						F	₹.	L V		T L					s	P	F Al	L.I	J	1 E	_17	ΓY	•	
		31	į.	,				3	Ł	١							Ŀ		6	,	3	ij	1	ĭ.,	 		4	3	5/	8		F.		
		4	.(					5	1										C	)	2						4	3	3/	8	1			
		Ž	Ę					6	4			-					,		2	(	Ō	1				11.	4	(	3/	8'				
			(				Û	7	E			3						: **		۱, د	≂.		24.				4	•	3/	8	•			
1			. 6	•				8	٤	***	•		-		70.4	 ar oc	e e e e e e e e e e e e e e e e e e e		le	) (	0	ry lea		- 17			•	-	у	8	t.			ć
	(	4	Ç					C	2					X		Y.	/ :	2	. 1		1						4	Ž	<b>,</b> /	8			X	*

"NEVAL CARA TERM TAXAMINA Resistance Values are passed on ASTM-C 1269 effective 11 2014 which provides updated 15 year time weighted averages.

When H. Shield NB with a loam thickness greater than 3.5" is specified. Hurster Panets recommands the installation of a two layer system With staggered joints

> "Thickness is calculated with 7/16" OSB UPDATED July 2014

#### Codes and Compliances

- ASTM C 1289 Type V, Grade 2 (20 ps) or Grade 3 (25 ps)
- International Building Code (IBC) Chapter 25
- State of Horida Product Approval Number RL 5968
  - Miami Dade County Product Control Approved

Underwriters Laboratories Inc Classifications

UL 1256

Insulated Metal Deck Construction Assemblies - No. 120, 123 UL 790

UL 263 Hourly Rated P Saries Roof Assemblies

#### UL Classified for use in Canada

Refer to UL Directory of Products Certified for Canada for details

Factory Mutual Approvals

- FM 4450. FM 4470
- Approved for Class I insulated steel deck constructions. Refer to FM Approval's RoofNav for details on specific systems.

LEED Potential Credits for Polyiso Use.

Energy and Atmosphere

Optimize Energy Performance Measurement & Verification

Materials & Resources

- Construction Waste Management Material Reuse
- Recycled Content Local and Regional Materials
- Certified Wood

Innovation and Design



### HUNTER PANELS ENERGY SMART POLYISO

#### TYPICAL PHYSICAL PROPERTY DATA CHART. PER ASTM C 1289 - POLYISO FOAM CORE ONLY

(SKOPERIY	TEST METHOD	VALUE
Compressive Strength	ASTM D 1621	20 ps* (138kPa, Grade 2)
Dimensional Stability	ASTM D 2126	2% linear change (7 days)
Moisture Vapor Transmission	ASTM E96	< 1 perm (57.5ng/ (Par.sr.m <sup>-</sup> ))
Water Absorption	ASTM C 209	< 1% volume
Rame Spread**	ASTM E84	<i>≤7</i> 5
Smoke Developed**	ASTM E84	<450
Service Temperature		-100° to 250° F (-73° C to 122° C)

<sup>\*</sup>Also available in 25 ps. Grade 3 Meets the requirements of the IBC code. For specific Rame Spread or Smoke Developed Ratings - please contact the Hunter Panels Technical Department

#### INSTALLATION

Shingles, Tiles, Slate, Metal and Membrane Roofing

H-Shield NB is installed, wood side up, over metal, wood or structural roof decks. Hunter SP NB Panel Fasteners are required to secure the H-Shield NB to the roof deck. Wood blocking, if necessary, should be equal in thickness to the H-Shield NB and should be installed along the eaves and rake edges of the roof. The roofing system is then installed according to the manufacturer's recommendations.

H-Shield NB may be adhered to a properly prepared cementitious deck (with a full mopping of Type III or Type IV asphalt or a low rise adhesive) only when manufactured online. All H-Shield NB manufactured off-line must be mechanically attached.

#### The Use of Synthetic Underlayments

The use of synthetic underlayments is becoming an inclusiry norm (for steep stope applications). Hunter Panels strongly suggests the use of a synthetic underlayment under asphalt shingles unless otherwise specified by the shingle manufacturer. Synthetic underlayments provide excellent water resistance and absorb no moisture.

#### Vapor Retarders

The incorporation of a vapor barrier or retarder within the roofing assembly is highly recommended when the project is located in Zones 4 - 8 as determined by the international Code Council Dept. of Energy NW National Lab of the United States (map located at www.polyiso.org). Consult a licensed design professional, architect or engineer to establish whether or not a vapor barrier is necessary and to specify its type and location within the system. This is especially important during the construction phase when excessive moisture

drive is present. Hunter Panels recommends that a dew point calculation be performed prior to the installation of any product. This calculation is based on the buildings interior relative humidity, interior temperature conditions and outside temperature. Excessive moisture migration and temperature fluctuations during construction will potentially damage the system and cause unwanted condensation and aesthetic anomalies.

#### Fastening Guidelines

Hunter Panels requires the use of the Hunter Panels SIP SD Panel Fastener for steel deck applications and the SIP WD for wood deck applications. See Fastening Pattern Guide for recommended fastening patterns.

When H-Shield NB with a foam thickness greater than 3.5" is specified. Hunter Panels recommends the installation of a two layer system with staggered joints.

## HUNT ER

HUNTERPANELSCOM

15 FRANKLIN STREET, PORTLAND, ME 04101 - 888 746 1114 FAX: 877 775 1769





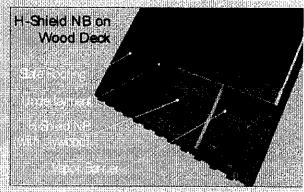


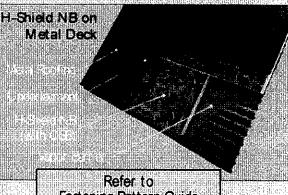


#### WARNINGS AND LIMITATIONS

Insulation must be protected from open flame and kept dry at all times. Install only as much insulation as can be covered the same day by completed roof covering material. Hunter Panels will not be responsible for specific building and roof design by others for deficiences in construction or workmanship, for dangerous conditions on the job site or for improper storage and handling. Technical specifications shown in this literature are intended to be used as general guidelines only and are subject to change without notice. For more information refer to the Storage and Handling Technical Bulletin at www.hpanels.com, or refer

to PIMA Technical Bulletin No. 109: Sorage & Handling Recommendations for Folyso Roof insulation at www.polyso.org





Fastening Pattern Guide for application specific installation instructions & fastener information