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High Performance Insulation

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High Performance Insulation

Northwestern Ohio Foam Products –manufacturer of high quality building insulation products for over 20 years

123 S. Shoop Ave

Wauseon, OH 43567

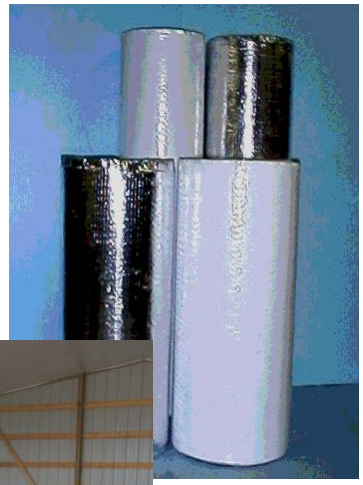
800-339-4850

Fax: 419-335-2380

sales@nofp.com

www.thebarrier.com

www.nofp.com



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- Product Overview

  - Microfoil –1/4” Reflective foil insulation
  - MicroLT –1/8” Reflective foil insulation
  - The Barrier –Under concrete insulation
  - BarrierXT –Under concrete insulation and back fill protection
  - RigidBoard –Reflective rigid insulation
  - MicroVent –Perforated Microfoil reflective foil insulation
  - Premier –Duct wrap
  - ACQ Barrier –Insulate ACQ treated lumber from metal siding or mechanicals
  - Custom EPS protective packaging products

The Barrier / BarrierXT Insulation

- Under Concrete Insulation / Vapor Barrier

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The Barrier / BarrierXT Insulation

- High performance under concrete insulation
  - Under concrete insulator and vapor barrier
    - First product specifically designed for under concrete insulation
  - Manufactured from
    - ⅜ ” and ¾” recycled flexible extruded expanded polystyrene core material
    - Two layers of 3 mil black polyethylene heavy duty film
  - Patented taping system
    - Double sided tape along one edge for quicker installation and for creating a vapor tight seal
  - Packaging
    - 4’x 60’ rolls packed in a bag or a box
    - Lay down 240 sq. ft. of of insulation/vapor barrier in less than a minute.

The Barrier Insulation

- High performance under concrete insulation cont'd
  - Physical Characteristics
    - Zero Water Permeability, exceeds ICBO Standpipe Water Pressure Test Sec. 4.6.1 and 4.6.2
    - Zero Vapor Permeability per Procedure B of ASTM E96
      - Zero permeance and Zero permeability
    - Independent Lab Certifications available per request

The Barrier Insulation

- High performance under concrete insulation cont'd
  - Company Performed Test
    - Performed January 25 and 26, 2003
    - 5x7x11 Concrete "Brick" - insulation sample - frozen earth
    - Barrier performed as well as 1" of Extruded Insulation
      - No change in temperature of Earth, remains at 30 degrees F during 6.5 hour test period
      - With extruded insulation you do not have the vapor barrier and you lose insulation performance as the rigid board breaks up during installation
    - Bubble/Foil/Bubble
      - 10 degree increase in temperature of Earth during 6.5 hour test period
      - The New Hydronics, November 2004, Volume 3, Issue 6, "The Bubble Bursts"
        - » Test bubble/foil/bubble along with rigid insulation
        - » Foil fails testing –article claims "bubble pack performance was similar in nature to uninsulated floor"
        - » U.S. Federal Trade Commission sent out warning letter to stop advertising reflective foil under concrete as everyone is aware that reflective foil insulation needs an airspace to be effective

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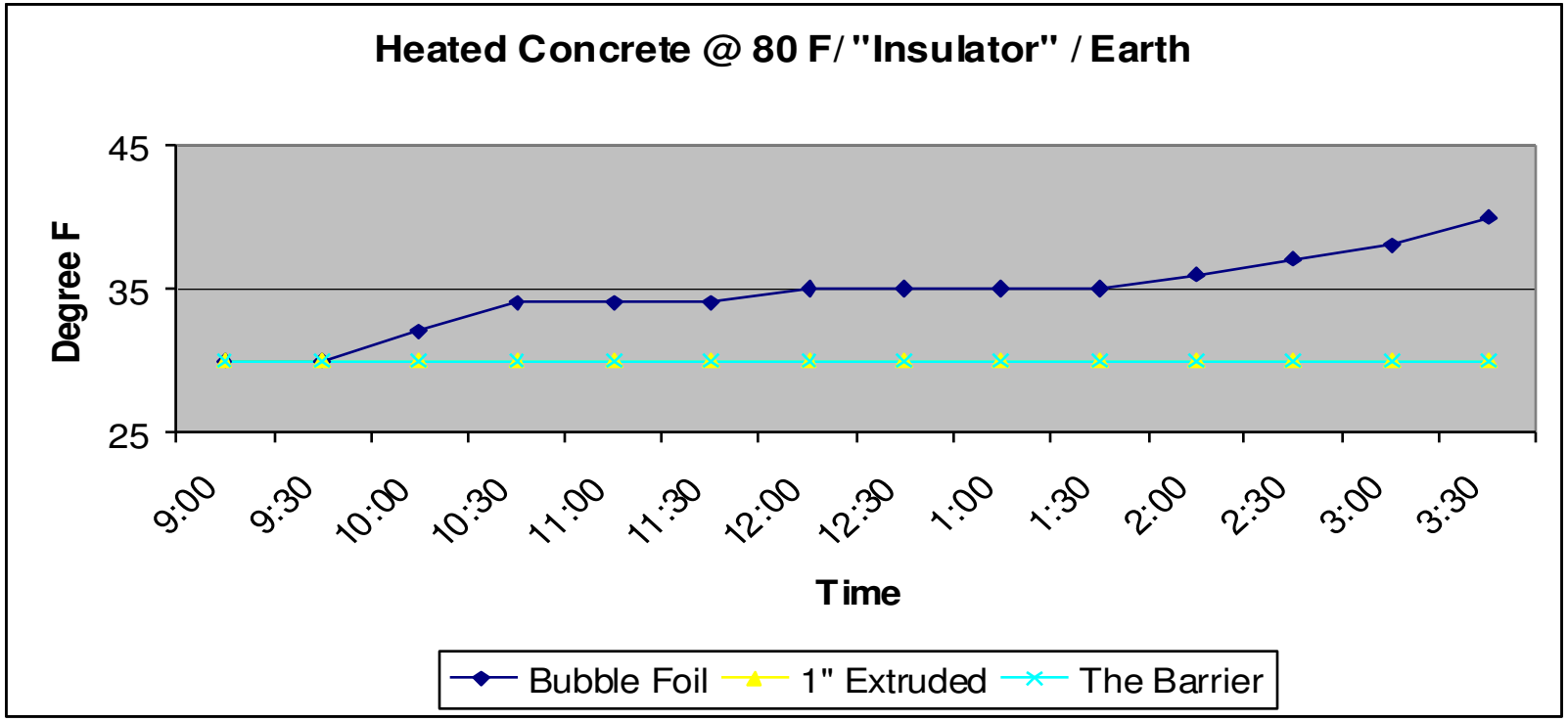
The Barrier Insulation

- High performance under concrete insulation cont'd
  - Company Performed Test
  - Temperature under Bubble Foil increased by +10 degrees F
  - 1" extruded insulation and The Barrier saw no heat penetration



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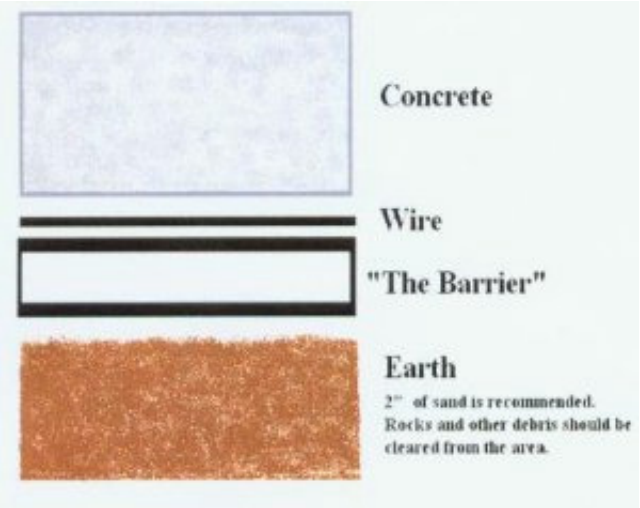
The Barrier Insulation

- Uses
  - Under Radiant Heat floors –stop heat from penetrating the earth
  - Backfill Protection –adds second layer of moisture-proofing and protects applied masonry waterproofing
  - Under Concrete Floors – to prevent concrete sweating
  - Under Sidewalks –prevent heaving or use for snow melt
  - Under Cement Driveways –prevents ice damage
  - Under Swimming Pool Liners –keeps pool water warmer
  - Under Mobile Homes –reduces heat loss under home
  - Animal Barns –keeps bedding dryer by reducing condensation, increase animal comfort

The Barrier Insulation

- Benefits
  - Fast installation –lay down 240 sq. ft. per roll
  - Flexible -walk on it –don't worry about losing insulation value by breaking it up such as you would with rigid board insulation
  - Won't blow away in construction site wind
  - Self taping seams
  - Stops heat loss into the ground –stop wasting energy
  - Helps reduce concrete sweating



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Easy to Install

- Base Material should be level as possible

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Unwind

- Unwind with tape edge up laying flat on base material, usually white film side up –with longest dimension parallel with the direction of the pour

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Expansion Joint

- Roll up the footer and/or cut to length –acts as expansion joint

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Seam

- It is important to make sure each layer is butted up tightly for continuous insulation.

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- Lay next roll down. Peel away the white tape backer compress overlap tab firmly over taped edge.

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Pour

- Pour concrete without the worry of breaking up the insulation.

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- Where would you rather have your crew spend their time?

- Extruded Sheets

  vs.

  Barrier Rolls

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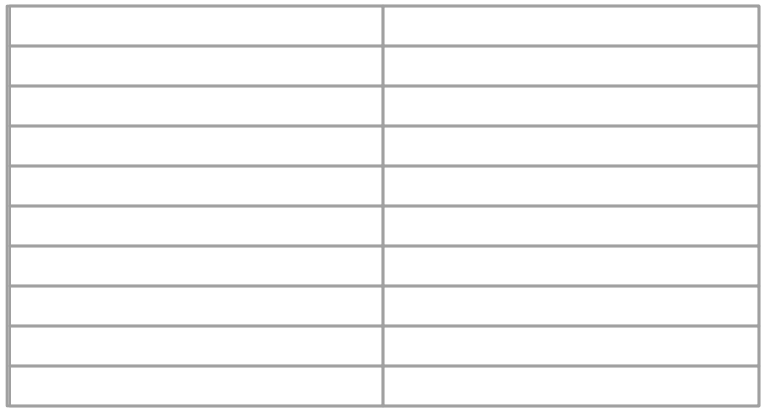
The Barrier vs. Rigid Sheet

- 40’ x 120’ Building Example

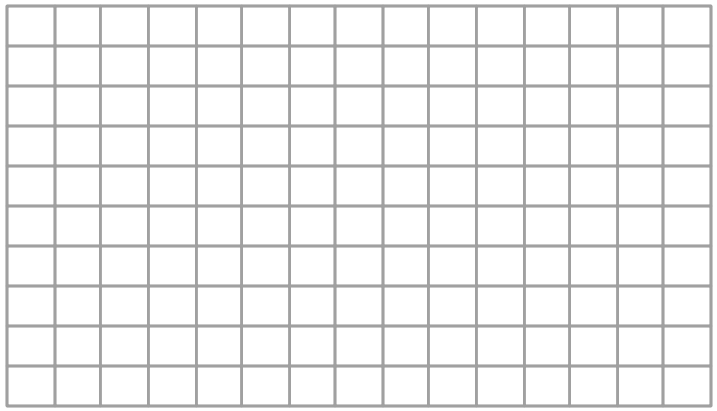
- The Barrier
  - 20 Light Weight Rolls
  - One 40’ seam
  - 2% of seams versus rigid insulation

- Rigid Sheets
  - 150 Cumbersome sheet
  - 4100 % more seams than Barrier
  - 1,640 lineal feet of seams



120’

40’



120’

- Where would you rather have your crew spend their time?

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- Installation Applications

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- Thank you for your time

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