



INDUSTRIAL PRODUCT GUIDE

Insulation Outlook Magazine is continuing its special product series with the following Industrial Product Guide. While the magazine typically discusses projects and products in general terms, we created this guide to help our readers learn more about available products. The information in this guide comes directly from insulation manufacturers and distributors.

In this issue, we asked companies to submit their most popular, commonly requested products for industrial use. We hope these guides make your research easier and help you on your next project.

If you have missed one of our recent reader guides, they are posted online at www.insulation.org/io/columns.

**Disclaimer: NIA is an insulation trade association and does not test or endorse products or companies. The information included in this section is based on submissions from NIA member companies and NIA cannot verify their accuracy. This section includes both free listings, and enhanced listings paid for by the manufacturers. These listings are provided for educational purposes. Readers should always verify that any products they are considering meet the unique needs of their systems and that the claims stated by the manufacturers are accurate.*

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- Specialty Products & Insulation: Pamrod HATS®

Product Name: Aerocel Insulation

Type of Insulation Material: Elastomeric EPDM insulation and accessory items: tapes, coatings, support systems, fitting covers, and fitting insulation

Recommended Application: Acoustical, commercial, refrigeration, industrial, LNG, marine, OEM, and HVAC duct systems

Description: Aeroflex USA provides EPDM elastomeric insulation for preformed tubes, sheets and rolls, and fittings. Accessory items of adhesives, insulation tapes, protective coatings, and hanger inserts.

Company Name: Aeroflex Insulation USA, Inc.

Product Name: Pyrogel

Type of Insulation Material: Flexible aerogel blanket

Recommended Application: Hydrocarbon, chemical processing, and steam distribution

Description: Pyrogel's class-leading thermal performance and mechanical toughness delivers advantages through its speed of application, reusability, and space savings. Pyrogel's versatile format provides superior resistance to water and unmatched CUI defense.

Company Name: Aspen Aerogels

Product Name: Panel Insulation Systems

Type of Insulation Material: Fully encapsulated closed cell foam

Recommended Application: All industrial applications

Description: Panel Insulation Systems provide a fast and easy 3-step installation process for tanks, vessels, or systems requiring reliable thermal and CUI protection. The durability, waterproof, and chemical properties of the panels ensure optimized performance to lower overall cost of ownership.

Company Name: Dragon Jacket Insulation

Product Name: Vinaflex® Noise Barrier

Type of Insulation Material: Acoustical barrier

Recommended Application: LNG, HVAC, mechanical piping

Description: Designed to meet the physical and performance requirements of virtually any acoustical application. The Vinaflex™ line is a flexible, mass loaded vinyl barrier engineered for efficient sound isolation.

Company Name: GLT Products

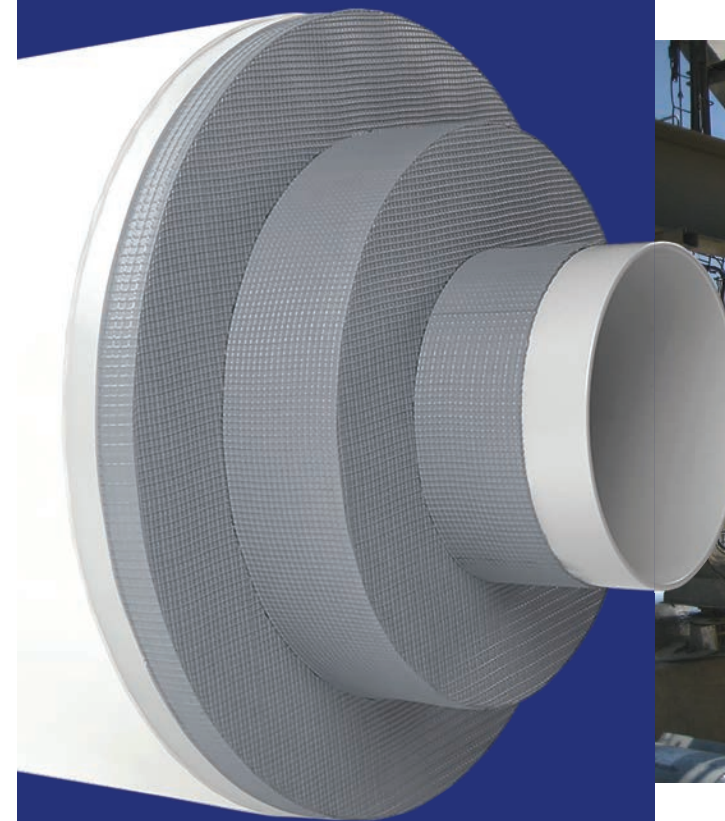


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- Extremely Low Permeance
- Use at temperatures down to -320°F



Visit www.fosterproducts.com/io for more information

Product Name: Foster® 95-50 FLEXTRA® Sealant

Type of Insulation Material: Vapor barrier sealant

Recommended Application: Below-ambient insulation systems

Description: Foster® 95-50 FLEXTRA® Sealant has continually been the trusted choice of engineers and insulation contractors for use as the vapor barrier sealant on all types of insulation materials to prevent the migration of water vapor into the insulation system.

Company Name: H.B. Fuller Construction Products Inc.

Product Name: Goodtemp Thermal Insulation

Type of Insulation Material: Expanded perlite pipe cover and block

Recommended Application: Thermal insulation for LNG, petrochem, power generation

Description: Goodtemp is the preferred hydrophobic thermal insulation in LNG terminals, petrochem, and power generation due to its effectiveness in combating corrosion for over 30 years.

Company Name: Howred Corp.

Product Name: TRYMER® PIR

Type of Insulation Material: Polyisocyanurate

Recommended Application: Industrial and commercial pipe, vessel, equipment, and duct applications

Description: TRYMER® PIR features one of the lowest k-factors among pipe insulations: 0.19 BTU-in/hr-ft²-°F at 75°F mean temperature and can be used over a broad temperature range from -297°F to 300°F.

Company Name: ITW Insulation Systems

Product Name: Thermo-1200™

Type of Insulation Material: Calcium silicate

Recommended Application: High-temperature pipe and equipment in chemical processing, power generation, steam distribution, and petroleum refining

Description: Thermo-1200™ is a high-temperature, water-resistant Type I calcium silicate designed to inhibit water absorption and contains XOX Corrosion Inhibitor®, a proprietary corrosion inhibiting formula that helps prevent corrosion under insulation.

Company Name: Johns Manville Industrial Insulation Group

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Product Name: CLAF Reinforced Metallized Products

Type of Insulation Material: Polyethylene/polypropylene reinforced reflective insulation

Recommended Application: Radiant barrier, insulation backing, building products

Description: CLAF reinforced metallized fabrics are lightweight options for many different applications. CLAF PE mesh is laminated to PET, OPP, and LDPE films and is also available as a stand-alone metallized mesh.

Company Name: JX Nippon ANCI, Inc.

Product Name: K-FONIK Industrial Acoustic System

Type of Insulation Material: Elastomeric

Recommended Application: Cold-service acoustic systems

Description: The K-FONIK Industrial ISO 15665-compliant sound control system is designed to minimize risk of CUI and reduce noise generated by pipes, valves, compressors, pumps, and flanges.

Company Name: K-FLEX USA

Product Name: Knauf Elevated Temperature Board 1000°



Type of Insulation Material: Fiber glass

Recommended Application: Knauf Insulation Elevated Temperature Board 1000° with ECOSE Technology is used for boiler walls, hot precipitators, hot ductwork, cylindrical tanks, prefabricated panel systems towers, stacks, and industrial ovens.

Description: Knauf Insulation Elevated Temperature Board 1000° with ECOSE Technology is a lightweight insulation (2.8 PCF, 44.9 kg/m) bonded with ECOSE Technology. The product is manufactured as a semi-rigid board form, which provides superior handling properties and insulating effectiveness at minimum cost.

ECOSE Technology is a revolutionary binder chemistry that enhances the sustainability of our products. The "binder" is the bond that holds our fiber glass product together and gives the product its shape and brown color. ECOSE Technology is a plant-based, sustainable chemistry that replaces the phenol/formaldehyde (PF) binder traditionally used in fiber glass products. Products using ECOSE Technology are formaldehyde-free and have reduced global warming potential.

PRODUCT FEATURES

- Reduces operating costs
- Lightweight, easy to fabricate
- Packaging is damage resistant
- Compact packaging reduces storage space
- Maintains integrity at elevated temperatures



- Low emitting for indoor air quality considerations

SUSTAINABILITY

Knauf Insulation's products used for thermal insulating purposes recover the energy that it took to make them in just hours or days, depending on the application. Once installed, the product continues to save energy and reduce carbon generation as long as it is in place.

Fiber glass insulation with ECOSE Technology contains 3 key ingredients:

- Recycled glass content, verified annually by UL Environment;
- Sand, one of the world's most abundant resources; and
- Our green chemistry initiative ECOSE Technology, which is validated to be formaldehyde-free.

Temperature Range and Physical Property information:

Knauf Elevated Temperature Board 1000° is suitable for systems operating at temperatures from 0°F to 1000°F (-18°C to 538°C).

Company Name: Knauf Insulation

Website: <http://www.knaufinsulation.us/en>



Sometimes the best amenities are the ones you don't see

For nearly 40 years, our fire-rated enclosure systems have been providing peace of mind, while quietly protecting lives and investments. From our DryerWrap products - extensively used throughout multi-family housing ductwork - to our FastWrap XL products - for commercial kitchen exhaust and ventilation ducts - more people trust the FireMaster® family of products to hold the line.

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- Fire rated up to 2192°F (1200°C)
- 1 to 2-hour UL rated for kitchen exhaust ducts
- Won't age, become brittle, or shrink
- Zero clearance to combustibles
- Meets ASTM E84 smoke/flame rating
- FastDoor™ XL panel provides liquid-tight grease duct access for easy maintenance

DryerWrap™



- UL and ULC listed for 1-hour protection inside rated wood frame construction
- Flexible, 1/2-inch thick optimizes installation costs and space
- Tested on 30 gauge, 7-inch round and 26 gauge 10- x 4-inch rectangular duct
- Improved safety with applications specific testing



Product Name: Manson Alley-K 1000° Pipe Insulation

Type of Insulation Material: Fiber glass

Recommended Application: Plumbing, HVAC, and process piping. Alley-K applications include domestic hot and cold water, roof drain leaders, sanitary drains, heating, hot-water heating, chilled water, process hot, cold, and dual temperature, steam, steam condensate, and refrigerated lines operating up to 1000°F.

Description: Alley-K is a preformed insulation product composed of high quality glass fibers bonded together with a thermosetting resin. The ASJ jacket is reinforced with glass fibers and comes with a factory-applied, self-sealing lap closure system (SSL).

Company Name: Manson Insulation

Product Name: RIDGLOK® Panel Insulation System

Type of Insulation Material: Polyisocyanurate, mineral wool, fiber glass

Recommended Application: Fire protection, agricultural, petrochemical, renewable energy, wastewater, chemical, food and beverage, power, commercial, municipalities, military

Description: The RIDGLOK® Vertical Standing Seam Panel Insulation System is custom manufactured for above-ground storage tanks. All structural connections are internal to the system and protected from weather by a double-fold standing seam for a strong water-tight connection.

Company Name: MC&I, Inc.

Product Name: SureShotII Pin Welding System

Type of Insulation Material: Used in conjunction with/fastening of fiber glass, mineral wool, ceramic fiber, duct-board, and various “flat” materials

Recommended Application: Wherever positive, mechanical, welded fastening is required

Description: Ultra-light, pin/stud welding system; dual power: 110 volt or 220 volt; application of weld studs, insulation nails, duct pins, and more. For use on steel, stainless, and aluminum. Three-year warranty included.

Company Name: MIDWEST Fasteners, Inc.

Product Name: FireMaster® DryerWrap

Type of Insulation Material: Encapsulated Fiber Duct Wrap

Recommended Application: DryerWrap insulation for multifamily housing

Description: A flexible wrap system developed for dryer venting ducting in multi-unit housing where dryer exhaust ducting passes through multiple fire-rated compartments before venting to outside the building.

Company Name: Morgan Advanced Materials – Thermal Ceramics



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1. ASJ Max Jacket does not support mold growth when tested in accordance with ASTM C1338.
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Product Name: FOAMGLAS® Insulation

Type of Insulation Material: Cellular glass

Recommended Application: Chilled water, district energy systems

Description: FOAMGLAS® insulation is a high-performance, long-lasting solution for chilled water and district energy systems. Impermeable to water and water vapor. Provides constant thermal efficiency throughout the life of the system, greatly reducing long-term energy consumption.

Company Name: Owens Corning FOAMGLAS®

Product Name: Owens Corning® Thermafiber® Industrial Board

Type of Insulation Material: Mineral wool

Recommended Application: Boilers, furnaces, vessels, tanks, and precipitators.

Description: Thermafiber® Industrial Board is an economical, rigid, mineral wool insulation that offers excellent thermal and acoustical performance. It is used in continuous service up to 1200°F.

Company Name: Thermafiber, Inc. (an Owens Corning Company)

Product Name: RG 2400 LT Anti-Corrosion Gel

Type of Insulation Material: Gel designed to prevent CUI

Recommended Application: Ammonia refrigeration piping

Description: RG 2400 LT prevents corrosion under insulation on below-ambient piping. It is the product being used by most of the leading food and beverage manufacturers in North America on ammonia piping systems.

Company Name: Polyguard Products

FOAMGLAS® INSULATION

FOR COMMERCIAL AND INDUSTRIAL APPLICATIONS



FOAMGLAS®

INSULATION PROPERTIES

- 100% Moisture Impermeable
- Constant Thermal Efficiency
- Resistant to Fire – Will Not Burn
- Mold and Mildew Resistant
- No Toxic Blowing Agents
- Superior Compressive Strength

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- Jobsite & Start-Up Support
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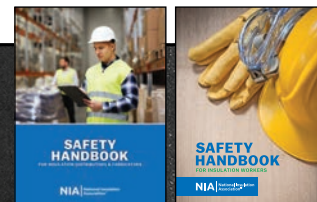
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NIA SAFETY HANDBOOKS

To review all of NIA's Resources, visit our online bookstore at www.insulation.org/products



Safety Handbook for Distributors and Fabricators

This pocket-sized handbook, produced by NIA, offers practical tips for maintaining a safe environment for distributor and fabricator workers. This handbook contains both English and Spanish versions of the text. Topics include general safety rules, compressed gases, hand and power tools, lockout/tagout, tar pot safety, and much more. An employee acknowledgement form makes it appropriate for use in a company safety program.

Members: 1-25 copies, \$4.00 each; 26+ copies, \$3.00 each
Non-members: 1-25 copies, \$8.00 each;
26+ copies, \$6.00 each

Safety Handbook for Insulation Workers

Newly updated, this pocket-sized handbook, produced by NIA, offers practical tips for workers looking to maintain a safe working environment. The handbook contains both English and Spanish versions of the text. New sections include heat-illness prevention, fall protection, and distracted driving. An employee acknowledgement form makes it appropriate for use in a company safety program.

Members: 1-25 copies, \$4.00 each; 26+ copies, \$3.00 each
Non-members: 1-25 copies, \$8.00 each;
26+ copies, \$6.00 each



Product Name: Microtherm

Promat

Type of Insulation Material: Microporous flexible insulation

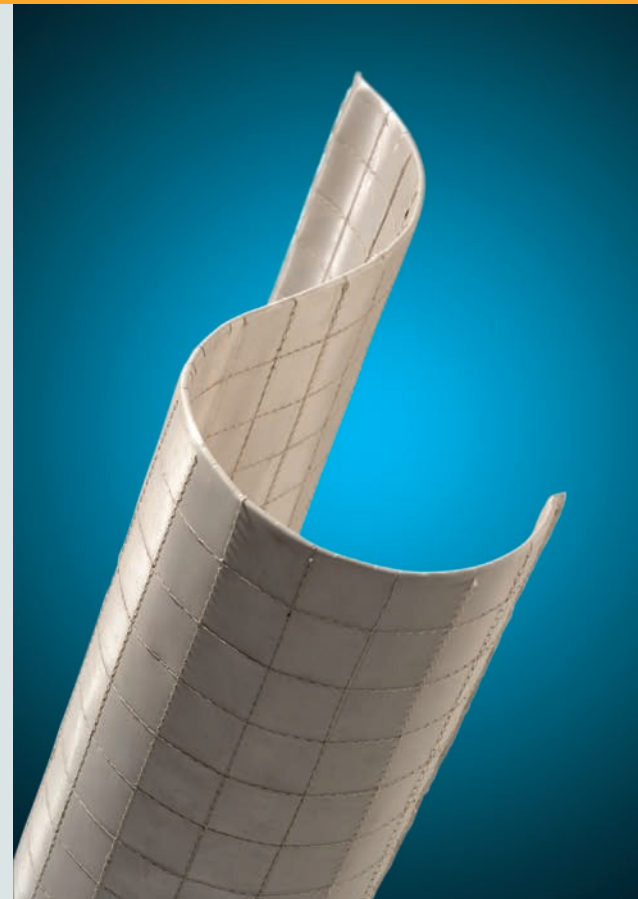
Recommended Application: High-temperature process piping

Description: Microtherm microporous insulation is inorganic, non-combustible, with remarkably low thermal conductivity at high temperatures. These properties make flexible versions of Microtherm, such as Overstitched and Floppy Panels, ideally suited to consistently deliver superior performance in process piping applications year after year.

Two examples quickly show its long-term durability and high thermal resistance.

First, Microtherm Floppy Panel has been installed in subsea pipe-in-pipe flowlines for over 20 years. The Microtherm has not degraded over time and continues to keep the crude oil hot and pumpable while bearing the high pressures of a subsea line. The Microtherm does this without the separate load bearing spacers required by other materials. Microtherm has proven durability to perform for decades.

Second, a producer of specialty pigments had wondered why one of the plants in Eastern Europe seemed to consistently obtain higher yields in their production process. During a revamp they tore out a large heat return duct and found that it had Microtherm on the inner most layers. Because the Microtherm retained more heat in the process, the return gas was much



more consistent in temperature. This produced a more fine-tuned process and better overall yields. Now they are using Microtherm Overstitched on the same ducts in other plants worldwide. Consistent temperatures produce a more consistent process with Microtherm.

Temperature Range: Microtherm offers an extremely low thermal conductivity over a wide range of temperatures, from cryogenic to 1200°C (2192°F), and is the preferred choice in a multitude of applications when a large temperature reduction is required within a limited space, or when strict heat loss or surface temperature requirements are specified.

Company Name: Promat Inc.

Website: www.promat.us

Product Name: ProRox® MA 960 NA (formerly known as ENERWRAP® 80)

ROCKWOOL™

Type of Insulation Material: Stone wool

Recommended Application: Round and irregularly shaped equipment in intermediate to high temperature ranges—towers, vessels, columns, boilers, and large diameter pipe.

Description:

ProRox® MA 960 NA is a rolled and faced mineral wool (stone wool) insulation wrap/mat designed for high temperature industrial applications where flexibility is required. The product is ideal for large diameter piping, vessels, ducts, columns, towers, and equipment subject to light mechanical loads and high temperatures.

PROROX® MA 960 NA:

- Excellent thermal and acoustic insulation
- Water repellent yet vapor permeable
- Fire resistant (non-combustible)
- Easy to handle and install
- Available with a black fibrous scrim or reinforced foil facing

Maximum service temperature: 1200°F

ROCKWOOL offers high-performance stone wool insulation products for demanding industrial and mechanical applications where high temperature, mechanical loads and moisture resistance are concerns. ProRox® products, made from natural stone and recycled content, are engineered to provide superior thermal and acoustical performance and are fire resistant, water repellent, non-corrosive, and resistant to mold. The low thermal conductivity of ProRox products results in energy savings where it's needed most.

Company Name: ROCKWOOL Technical Insulation

Website: www.rockwool-rti.com



Product Name: ProRox® SL 960 NA



Type of Insulation Material: Stone wool

Recommended Application: ProRox® SL 960 is a rigid mineral wool (stone wool) insulation board for high temperature industrial applications, such as tank tops, columns, vessels, filters, stacks, chimneys, towers, bag houses, precipitators, breechings, exhaust systems, silencers, scrubbers, fan housings, and economizers.

Description:

ProRox® SL 960 NA is a rigid mineral wool (stone wool) insulation board for high temperature industrial applications subject to light mechanical loads. This high-performance stone wool insulation is made from natural and recycled materials, and is easy to cut, strong and durable, and provides excellent acoustical properties. ProRox® SL 960 boards (slabs) fully comply with the requirements as set by internationally recognized standards, including EN14303, CINI 2.2.01, and ASTM C612 Type IA and IB.

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Company Name: ROCKWOOL Technical Insulation

Website: www.rockwool-rti.com



ProRox® with WR-Tech™ stone wool insulation is water repellent to mitigate the risk of corrosion under insulation.

Don't let water take hold of your pipes.



TECHNICAL INSULATION



rockwool.com

Product Name: Pamrod HATS®

Type of Insulation Material: Fabricated with a range of insulation materials

Recommended Application: Vessel and tank heads

Description: Precision engineered tank insulation head segments provide superior thermal performance and substantial labor savings. Machined segments yield a superior fit on single or multilayered systems. Sidewall segments and jacketing also supplied.

Company Name: Specialty Products & Insulation

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