

for earthquake, hurricane, and tornado resistance are required.

07540 Thermoplastic Membrane Roofing

Single-ply roofing membranes, typically used on large commercial buildings, are occasionally used on homes and light-commercial buildings for low-slope roof areas and beneath upper-floor walk-out decks. They can be ballasted, mechanically fastened, or fully adhered. Thermoplastic membranes can be heat-welded at seams, minimizing use of solvent-based adhesives. PVC has long been the most common thermoplastic membrane material. For roof membranes, PVC requires plasticizers for flexibility; these chemicals, which may dissipate over time and cause brittleness, are a major cause of membrane failure. PVC is targeted by some environmental groups for its chlorine content and the risk of dioxin production in the event of an unintentional fire or during improperly controlled incineration. Phthalate plasticizers, commonly used with PVC, also may mimic natural hormones in humans and other animals, causing health problems. Concerns about the environmental and health impacts and performance characteristics of PVC have led to the development of thermoplastic olefin (TPO) membranes. Polyolefins are a class of polymers that includes polyethylene and polypropylene. These materials obtain their flexibility through the copolymers rather than plasticizers; however, without the addition of fire retardants, some do not pass necessary fire tests for unballasted applications. (See feature article EBN Vol. 7, No. 10.)

Stevens EP

Stevens Roofing Systems
9 Sullivan Rd.
Holyoke, MA 01040
Toll-free: 800-621-7663
Phone: 413-533-8100
Fax: 413-522-1070
www.stevensroofing.com

Stevens Roofing Systems is one of the world's largest TPO producers. The Stevens EP family of nonhalogenated TPO membranes uses hydrated mineral salts as a fire retardant. Stevens EP membranes are available in nominal 45-, 60-, and 80-mil thickness, and in standard 76.5"-wide rolls. No solvents or adhesives are required, and no known toxins are released if the product is incinerated. The material is available in many colors and can be installed using several attachment methods. White Stevens EP is highly reflective, reducing energy loads and avoiding contributions to the urban heat island effect. It also meets the EPA ENERGY STAR Roof Products guidelines.

07550 Modified Bituminous Membrane Roofing

Conventional built-up roofing (BUR) is made from multiple layers of asphalt-impregnated felt alternated with layers of hot-mopped bitumen. Material use is relatively high, and considerable waste is generated during reroofing—both from the BUR and from the foam insulation, which is typically ripped off and land-filled at the same time. Recycled-content modified bituminous products can reduce overall environmental impacts—as can use of membrane roofing in a protected-membrane (inverted) roof system. Modified bitumen roofing cap sheets come in rolls, may be cold-installed with low-VOC adhesives, and can offer cool roof performance. (See feature article EBN Vol. 7, No. 10.)

MM6125-EV

American Hydrotech, Inc.
303 E. Ohio St., Ste. 2700
Chicago, IL 60611
Toll-free: 800-877-6125
Phone: 312-337-4998
Fax: 312-661-0731
www.hydrotechusa.com

MM6125-EV is a roofing membrane with a recycled content consisting of reclaimed rubber and recycled oil. This membrane is most often used in an insulated roof membrane assembly (IRMA).

Derbigum DerbiBrite

Performance Roof Systems, Inc. **New**
4800 Blue Pkwy.
Kansas City, MO 64130
Toll-free: 800-727-9872
Phone: 816-921-0221
Fax: 816-921-5007
www.derbigum.com

Available in the European marketplace since 1996, DerbiBrite® is a polymer-modified bitumen roofing cap sheet with polyester and fiberglass reinforcement. An integral bright white acrylic surface meets ENERGY STAR® reflectivity and Cool Roof Rating Council emissivity requirements. According to the manufacturer, recoating is not needed to maintain cool roof performance (though an annual pressure-washing is). The product is installed without kettles or melting chemicals using relatively low-VOC (185 g/l) Permastic® Cold Process Adhesive, available in reusable tanks and drums. The system offers Class A fire ratings over combustible and noncombustible roof decks.

07555 Green Roof Systems

Green roof systems for low-slope roofs protect the roof membrane, reduce stormwater flows, and help green the built environment through rooftop plantings. Green roofs, which are more common in Europe, can detain over 50% of rainwater from a typical storm: stormwater detention reduces the loads placed on storm sewers, making it a particularly attractive system in urban areas that have combined sewer overflow (CSO) events during heavy rains. Multilayered green roof systems are thicker than conventional roofs, and additional structural support is typically required. A green roof includes drainage, geotextile, soil, and vegetation layers; sedums or a thick sod of native grasses interspersed with wildflowers can be a wonderful architectural element which helps to reduce building heat gain and the urban heat island effect. Plantings also absorb CO₂. (See feature articles EBN Vol. 7, No. 10 & Vol. 10, No. 11.)

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UltraPly TPO

Firestone Building Products Company
310 E. 96th St.
Indianapolis, IN 46240
Toll-free: 800-428-4442
Phone: 317-575-7000
Fax: 317-575-7100
www.firestonebpco.com

Firestone's UltraPly TPO is a heat-weldable, solar-reflective roofing material that meets fire codes without chlorine or other halogenated fire-retardants. This prevents the release of hydrochloric acid (HCl), dioxins, or related compounds in the event of fire.

Most recently mentioned in EBN 8:5

Garden Roof Assembly

American Hydrotech, Inc.
303 E. Ohio St., Ste. 2700
Chicago, IL 60611

Toll-free: 800-877-6125
Phone: 312-337-4998
Fax: 312-661-0731
www.hydrotechusa.com

American Hydrotech's Garden Roof® Assembly combines the MM 6125®-EV waterproofing membrane (minimum 25% recycled content), a root barrier, water drainage/retention devices engineered specifically for landscaped roofs, and optional rigid foam insulation. The assembly is lightweight and able to accommodate a wide variety of vegetation and soil depths.

Most recently mentioned in EBN 7:10 & 10:11

AMERGREEN Roof Garden System

American Wick Drain Corporation
1209 Airport Rd.
Monroe, NC 28110

Toll-free: 800-242-9425
Phone: 704-238-9200
Fax: 704-296-0690
www.americanwick.com

The Amergreen™ Roof Garden System consists of a needle-punched, nonwoven polypropylene geotextile filter fabric with an optional copper hydroxide root-barrier coating, a polystyrene "drain core" with water-storing cones that also provides airflow, and another polypropylene geotextile separation layer. Their 5ORS system has a 7/16"-deep drain core, while the 10ORS has a 1" core. American Wick Drain also manufactures products appropriate for reducing hydrostatic pressure on earth-sheltered homes.

Green Roof-Roofscape

Barrett Company
33 Stonehouse Rd.
Millington, NJ 07946

Toll-free: 800-647-0100
Phone: 908-647-0100
Fax: 908-647-0278
www.barrettroofs.com

Barrett's Green Roof-Roofscape is comprised of their RAM Tough 250 membrane, a root barrier, insulation, a drainage/aeration/hydration layer, geotextile, soil medium, and vegetation. Systems are either Low or High Profile. Low Profile are considered low-maintenance with planting media 6" thick or less, while High Profile are considered high-maintenance with soil depths in excess of 6". Soil and plant specifications are to be provided by a landscape architect

or horticulturist.

Most recently mentioned in EBN 10:11

EnviroTech Roof System

Building Logics, Inc.
3213 Virginia Beach Blvd.
Virginia Beach, VA 23452
Phone: 757-431-3170
Fax: 757-431-3172
www.buildinglogics.com

Using the Famogreen name, Building Logics, Inc. supplies green roof systems with the German FAMOS APAO modified bitumen membrane and vegetation mats. Specialized versions of the membrane are available with a copper-impregnated spun-polyester root barrier and/or a lightweight hydrogel to retain water. Technical support for the design and specification of soil mixes and plants is available.

Most recently mentioned in EBN 10:11

Green Roof Systems

Carlisle SynTec Incorporated
P.O. Box 7000
Carlisle, PA 17013
Toll-free: 800-479-6832
Phone: 717-245-7000
Fax: 717-245-7143
www.carlisle-syntec.com

Carlisle SynTec, with 8 billion ft² of roofing membrane installed over the past four decades, has entered the living roof arena with its Roof Garden Waterproofing Systems. The systems incorporate a variety of waterproofing options and accessories for shallow, medium, and deep assemblies. These systems are warranted for a minimum of 15 years (longer with material upgrades).

GEOdren Roof Garden Units

Geoproducts Corp. **New**
11-110 Jardin Dr.
Concord, ON L4K 4R4 Canada
Toll-free: 877-436-8823
Phone: 905-760-2256
Fax: 905-760-0491
www.geoproducts.ca

GEOdren, made from recycled polypropylene, is a modular system for creating green roofs. The interlocking trays combine water retention, drainage, and aeration, and are strong enough to withstand the weight of mini-excavators or small forklifts. Rounded feet allow the trays to be placed directly on the roof's waterproof liner without damage. The trays are intended to be filled with pumice or other porous drainage material, then overlaid with geotextile and covered with planting media.

GreenTech Roof Garden System

GreenTech, Inc.
470 Clubfield Dr.
Roswell, GA 30075
Phone: 804-363-5048
Fax: 770-587-2445
www.greentechitm.com

The GreenTech® Roof Garden System utilizes HDPE plastic containers that are 46" wide x 46" long x a minimum of 8" deep. The modular units, which can be preplanted and readily reconfigured or replaced, have perforated bottoms and folding sides that can be customized for greater soil depths. Channels below the modules displace soil, reducing weight and enhancing drainage and air circulation, while further discouraging root penetration of the waterproofing membrane by air pruning. Foot locator pads are used to provide consistent positioning and interlocking of the trays. The containers may also be used to create drainage planes for athletic fields, playgrounds, and pathways. When filled with sand and other filtration media, they may be incorporated into graywater treatment systems.

Roofmeadow

Roofscapes, Inc.SM
7114 McCallum St.
Philadelphia, PA 19119
Phone: 215-247-8784
Fax: 215-247-4659
www.roofmeadow.com

Roofscapes, Inc.SM is a design and consulting firm that specializes in lightweight green roofs. Services offered include design and consulting, installation, construction inspection, and service and maintenance. Roofscapes is affiliated with Optigreen (Optigrüen International AG), a German company with over 30 years of green roof experience.

Most recently mentioned in EBN 10:11

Green Roof Blocks

Saint Louis Metalworks
Company **New**
11701 New Halls Ferry Rd.
Florissant, MO 63033
Phone: 314-972-8010
Fax: 314-972-8182
www.greenroofblocks.com

Green Roof Blocks are ready-to-install 22-gauge anodized aluminum 2' x 2' planters with 4", 8", or 12" depths that are placed on a rooftop to create a living roof. Saturated unit weights range from 17 to 51 lbs/sf. Live plants and growth media are included. Pads at each corner and in the center of the

07000
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planters elevate them from the roof surface, allowing drainage and airflow. Green Roof Blocks are made with 15% recycled metal and 50% recycled rubber. The self contained units are portable, facilitating roof work and aesthetic rearrangement.

SopraNature

Soprema USA, Inc.
310 Quadral Dr.
Wadsworth, OH 44281
Toll-free: 800-356-3521
Phone: 330-334-0066
Fax: 330-334-4289
www.sopremaworld.com

This French green roof system relies on a two-ply SBS modified bitumen membrane that does not require torches, kettles, or hazardous solvents. Installed over the membrane is a drainage composite that retains rainwater for the plantings and includes a built-in root barrier. Several classes of growing medium are available. The Soprema system available in the U.S. can be installed over a concrete deck or on lightweight and sloped decks able to accept the weight. SopraNature has been used on several high-profile projects in Canada and is now available in the U.S.

Most recently mentioned in EBN 10:11

Green Shield Green Roof System

The Garland Company, Inc.
3800 E. 91st St.
Cleveland, OH 44105
Toll-free: 800-321-9336
Phone: 216-641-7500
Fax: 216-641-0633
www.garlandco.com

Garland produces a fairly simple green roof system with a multi-ply SBS-modified bitumen membrane, a plastic drainage layer above the membrane, and a layer of soil media on top of that. At one time Garland was using the FAMOS green roof system (and the company is an investor in FAMOS), but there is no product relationship between the two companies today. Technical support for the design and specification of soil mixes and plants is available.

Most recently mentioned in EBN 10:11

Green Roof Systems

W. P. Hickman
30700 Solon Industrial Pkwy.
Solon, OH 44139
Phone: 440-248-7760
Fax: 440-248-6524
www.wphickman.com

W. P. Hickman supplies a number of green roof systems using liquid-applied materials and modified bitumen sheet goods (Pika Ply GR). Membranes are customized to the needs and requirements of the specific job. Technical support for design and specification of soil mixes and plants is available.

Most recently mentioned in EBN 10:11

GreenGrid System

Weston Solutions, Inc.
20 N. Wacker Dr.
Chicago, IL 60606
Phone: 312-424-3319
Fax: 312-424-3330
www.greengridroofs.com

The GreenGrid® System was introduced in August 2001 as a modular green roofing system that can be installed over almost any low-slope roof—even older roofs. Modular 2' x 4', 4"- or 8"-deep "pans" made from 100% post-consumer recycled HDPE plastic are sold with drainage, soil media, and plantings. Also available in 2' by 2' modular pans either 2-1/2" or 4" deep and 40" by 40" modular pans 4" deep. Units in other sizes may be available on request.

Most recently mentioned in EBN 10:11

07560 Fluid-Applied Roofing

Look for green features such as low-VOC emissions, recycled content, and reflective surfaces to reduce heat gain. (See feature article EBN Vol. 7, No. 10.)

Astec Coatings

Insulating Coatings Corp. (ICC)
103 Main St.
Binghamton, NY 13905
Toll-free: 800-223-8494
Phone: 607-723-1727
Fax: 607-723-1700
www.icc-astec.com

Astec Coatings are water-based ceramic, elastomeric building coatings with superior energy performance. White Astec coatings reflect solar radiation, as does the ceramic radiant barrier within the coating. ICC products are applied with a paint roller or spray equipment.

Metacrylics

Metacrylics
142 N. 27th St.
San Jose, CA 95116
Toll-free: 800-660-6950
Phone: 408-280-7733
Fax: 408-280-6329
www.metacrylics.com

Metacrylics is an elastomeric acrylic and stitchbond polyester roofing system. The water-based, UV-resistant acrylic coating can be applied to a large number of materials, including tar and gravel and corrugated metal, walking decks, exterior walls, and below-grade waterproofing. Available in 65 colors, white is the heat-reflective option for which Metacrylics qualifies as an ENERGY STAR® Certified Roofs product. According to the manufacturer, Metacrylics had one of the highest Cool Roof Rating combination of any product (Solar Reflectance: 87 and Thermal Emittance: 90) and is ICC ES listed. The company offers a 10-year limited warranty that can be reinstated indefinitely with reapplication of the topcoat.

Acryshield Reflective Roof Coatings

New

National Coatings Corp.
1201 Calle Suerte
Camarillo, CA 93012
Toll-free: 800-423-9557
Fax: 805-388-8140
www.nationalcoatings.com

The Acryshield® line of acrylic elastomeric roof coatings includes several zero-VOC products with high reflectivity (0.83 to 0.86) and high emissivity (up to 0.94), including the following coatings: A400, a multi-purpose coating for use over various substrates with special asphalt bleed-blocking; A500 coating for sprayed polyurethane foam and all single ply roofing; A550, a multipurpose coating with extra toughness for foot traffic and physical abuse; and A600, a fast-setting multipurpose coating.

WetSuit & Reflex Roof Coating System

New

Neptune Coatings, LLC
972 Golden Gate Ter.
Grass Valley, CA 95945
Phone: 530-477-4312
Fax: 530-477-4316
www.wetsuitsystem.com

WetSuit® is a seamless, spray-applied, water-based roof coating that can be applied over almost any substrate to any mil thickness in one pass (60-80 mils recommended) with a nearly instant cure. The UV-stable, Class A fire-rated, asphaltic neoprene rubber is a

07000
Thermal &
Moisture
Protection