Engineered Roofing & Waterproofing Systems

With you every step of the way.

Parapro Roof Membrane provides an excellent solution for the area surrounding the air handlers on this Paradiene 20 TG/ 30 FR TG roof.

When you're challenged with providing a roofing or waterproofing solution, what's the first thing you consider? Most likely, it's the use of the building, because that immediately informs many of the complicated decisions ahead.

- What does this roof protect?
- What is the owner's tolerance for water intrusion?
- How long will the owner occupy the facility?
- What will happen on this roof under both normal, and unusual, circumstances?
- Can the roof help achieve goals beyond protection from water intrusion?

With a clear understanding of the expectations the roof will have to meet, you begin the search for solutions you can recommend with absolute confidence. It's a difficult task. Wouldn't it be great to have a partner you can trust to provide:

- Honest, thoughtful assistance identifying the right solution for the project.
- Diligent review of proposed assemblies.
- Field technical assistance dedicated to best practices.
- Commitment to helping ensure system performance throughout its service life.

That partner is Siplast. Because regardless of the size or scope of the job, the first thing we build is an effective partnership. We thrive on enduring relationships forged by working together with our customers to solve problems.

Siplast will be with you every step of the way.

Engineered Roof Systems for low slope and steep slope commercial roofing applications.

- Multi-Ply SBS-Modified Bitumen.
- PMMA Liquid-Applied.
- PVC KEE Single-Ply and Hybrid.

Waterproofing Systems for plaza deck and green roof applications, and vehicular traffic parking deck applications.

- SBS-Modified Bitumen.
- PMMA Liquid-Applied.

Roofing and Waterproofing System Accessories.

- Insulation systems.
- Flashing.
- Roof perimeter systems.
- Green roof components.
- VOC-compliant and solvent-free adhesives, primers, and cements.

Asphalt and Concrete Restoration and Protection Systems for pedestrian plazas, playgrounds, store entrances, community areas, and parking lots.

- 2-component waterborne epoxy-modified acrylic coating.

A History of Innovation

The Siplast story of uncompromising quality and commitment to our customers begins over half a century ago with an innovation that would change the commercial roofing and waterproofing industry. In the late 1960s, Siplast Research and Development, working in conjunction with Shell Chemical of Europe, developed SBS (styrene-butadiene-styrene) modified bitumens. We found that by properly modifying asphalt with SBS, we could produce a highly durable elastomeric blend with exceptional elongation/recovery properties over a wide range of temperatures.

To meet the high performance needs of the critical Alachua County 911 Center, the time-proven, two-ply Siplast SBS-modified bitumen Paradiene 20/30 Eco-Activ® System was chosen. In addition, reusable Siplast NVS Lightweight Insulating Concrete roof insulation was installed on the project.

Your Challenge: Protect critical assets and processes with a robust, redundant roof system.

Solution: Siplast SBS-Modified Bitumen Multi-Ply Systems.

Paradiene 20/30 Granule-Surfaced Systems

When the building itself is mission-critical to the business, a roof failure can mean much more than a cost or a setback. That's when owners rely on the redundant, robust, proven Paradiene 20/30 System. This highly flexible membrane is designed to retain its elasticity through severe solar load, ultraviolet rays, thermal shocks, random ponding water, and extreme low temperature. Both Paradiene's top and base plies consist of an elastomeric asphalt blend – a unique formulation of SBS and high quality proprietary asphalt – reinforced with a fiberglass mat. The workhorse Paradiene 20 base ply absorbs roof stresses while the granule-surfaced top ply, Paradiene 30, shields the base from the elements and mechanical abuse. The granule surface eliminates labor-intensive application of gravel or coatings, gives it a light installed weight of approximately 200 pounds per square, and makes inspection and repair easier.

The Parapro Roof Membrane System

When a roof is subjected to regular washing and foot traffic, has excessive or odd-shaped penetrations, or difficult access, liquid-applied Parapro Roof Membrane is an efficient, high performance option. The seamless, fully reinforced Parapro Roof Membrane System is used in conjunction with a Siplast Paradiene 20 P base ply as a stand-alone alternative to more traditional roofing plies. The Parapro Roof Membrane System is built on advanced polymethyl methacrylate (PMMA) technology developed for demanding applications. The science of PMMA gives Parapro Roof Membrane numerous advantages over other flame-free systems, including dramatically faster cure times than liquid-applied polyester and polyurethane products and solvent-based cold adhesives. Additionally, PMMA's chemical resistance properties make Parapro a smart choice for roof areas requiring resistance to vegetable oils, animal fats, and other substances that can negatively affect more traditional products.

A Depolluting Roof

For building owners looking for a proactive way to support environmental responsibility, Siplast offers the innovative Eco-Activ Depolluting Roof Membrane. Eco-Activ cap sheets are surfaced with Noxite® Depolluting Granules. Noxite is a photocatalyst. When sunlight hits an Eco-Activ roof, Noxite absorbs UV light and – like a photovoltaic cell – generates electrical charges that accelerate the transformation of harmful nitrogen oxide molecules into water, carbon dioxide and nitrates. Rain then washes these harmless molecules away. Eco-Activ Roof Membranes require no maintenance beyond standard, responsible roof management, and Noxite's depolluting functionality works throughout the life of the roof.

1,100 squares of Siplast's depolluting Eco-Activ Roof Membrane were installed to replace the PVC single ply roof on the signature dome of Maple Leaf Gardens in Toronto.

Parasolo PVC KEE Roof Systems

Building owners looking for a synthetic membrane for applications with little foot traffic, such as warehouses, office space, or retail facilities, can now consider a premium PVC membrane from Siplast – Parasolo KEE. For projects requiring the assurance of a second ply, Parasolo KEE can also be installed in a multi-ply hybrid application. In either case, building owners can enjoy the same partnership approach to roofing that has been the Siplast standard for decades.

Parasolo KEE incorporates Elvaloy®[1] copolymer with various formulation advancements to achieve superior results for weathering, algae, and chemical resistance[2]. Mechanically-attached, Adhered, and RhinoBond systems are available.

Parasolo PVC KEE brings the Siplast service level and commitment to projects appropriate for single-ply applications. Consistent heat welding and rolling seams helps ensure a successful application.

What it means to be Select

Siplast Roofing, Waterproofing, and Lightweight Insulating Concrete Systems are installed exclusively by Siplast Select Contractors. These independent professionals have met the qualifications of the toughest contractor certification program in the industry – ours. Their proven skill and dedication have demonstrated time and again that they regard themselves as members of a team dedicated to installing great roofs for building owners.

Precision and Transparency

Consistent with Siplast's philosophy of product quality transparency, the thickness of Parasolo KEE sheets matches their designations – not the 10% variation allowed by ASTM standards

1. Elvaloy® is a registered trademark of DuPont™

2. For information regarding the chemical resistance of Parasolo KEE, contact Siplast Technical Services.

Your Challenge: Balance the waterproofing and aesthetic demands of plaza deck and green roofing without compromising either.

Solution: Siplast Teranap SBS-Modified Bitumen Plaza Deck and Green Roof Systems.

The Teranap Waterproofing System

Plaza decks and green roofs add aesthetic appeal, utility, and environmental friendliness to a building project, but they also create significant waterproofing challenges. Siplast Teranap meets the needs of these demanding applications. The torch-applied, two-ply Teranap System is based on proven roof membrane design. The elastomeric base ply, Paradiene 20 TG, is engineered to retain its elasticity through the rigors of deck movement. The top ply, Teranap, consists of a nonwoven polyester mat impregnated and coated with SBS-modified bitumen. The Teranap Waterproofing System can be specified with a wide variety of surfacings for plaza deck applications, including pedestals and pavers, poured concrete, mortar and pavers, and paving asphalt. Green roof applications can be specified with many landscape options, including both extensive green and intensive green assemblies.

Siplast Lightweight Insulating Concrete, Teranap, and pavers create a beautiful and functional plaza deck on this mixed use building in Florida.

Your Challenge: Protect both the beauty and the integrity of exposed structural elements.

Solution: Siplast PMMA Waterproofing and Surfacing Systems.

Terapro Waterproofing and Surfacing Systems

Balconies, terraces, and walkways require protection from weathering, water ingress, and environmental damage. Since these areas are highly visible, they have significant aesthetic requirements. The Terapro Waterproofing and Surfacing System – a liquid-applied, layered system – was designed specifically for these challenges. The Terapro system consists of one coat of primer, one or more waterproofing layers, a wearing layer, a hard-wearing surfacing aggregate, and a pigmented finish layer. Reinforced systems include a polyester fleece fabric for additional protection over occupied interior conditioned spaces. Each of the liquid-applied layers is comprised of a specially formulated, catalyzed polymethyl methacrylate (PMMA) resin. The completed high-mil thickness application is resilient, monolithic, seamless, durable, and resistant to UV, foot traffic, mechanical abuse, and many environmental contaminants. Terapro Systems can be finished with Pro Natural Quartz or Pro Texture Beads, and Pro Color Finish with or without Pro Accent Chips. These surfacing options offer skid resistance, enhanced wearing, and numerous color choices.

Your Challenge: Defend a parking deck from emissions, weathering, and traffic while protecting the customer's first impression.

Solution: Siplast PMMA Vehicular Traffic Systems.

Terapro VTS Waterproofing Systems

A parking garage must withstand damaging emissions, and endure cyclic weathering and mechanical damage while providing a favorable first impression for customers. Siplast has a solution: Terapro VTS. The Terapro VTS System is a liquid-applied, layered application consisting of one coat of primer, a filled waterproofing layer, a hard-wearing quartz surfacing, and a durable pigmented finish layer. Each liquid-applied layer is comprised of a catalyzed PMMA resin. The completed Terapro VTS application is monolithic, seamless, and more than twice the thickness of other products marketed for use in parking deck applications. The properties of PMMA allow Terapro VTS to achieve both a bond to the substrate and an interlaminar bond that are tenacious. This adhesion results in improved resistance to disbonding under the loads imposed by heavy vehicular traffic. Terapro VTS bond strength, together with the tough crystal quartz surfacing, lends a level of durability to the system that is not found in standard parking deck coatings.

The Terapro VTS System provides a high performance solution to the demanding waterproofing challenges of parking deck applications.

PMMA: Done in a Day

Waterproofing applications benefit from the numerous advantages PMMA resins have over other liquid-applied waterproofing systems. But perhaps the most dramatic application advantage PMMA offers over other liquid-applied, layered systems is application speed. Terapro and Terapro VTS Systems can be applied and trafficked within an 8-hour day. By comparison, polyurethane and polyester liquid-applied systems require a cure time of up to three days.

The Terapro VTS System can meet the unique waterproofing challenges of the parking deck environment.

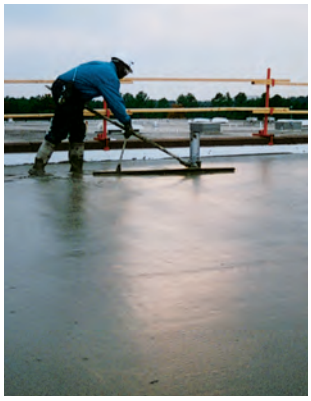
Your Challenge: Be sure that your system and accessories all work together.

Solution: Siplast Roofing and Waterproofing Accessories.

The one thing Siplast values as much as product quality is working effectively together. That's why our roofing and waterproofing solutions include all of the accessory components necessary to build a great system. Whether it's insulation, perimeter edge metal, roofing fasteners, adhesives, or sealant, you can be assured that Siplast accessories have been designed and manufactured to work with Siplast roofing and waterproofing systems.

Siplast Roofing and Waterproofing Accessories include:

- Lightweight insulating concrete roof insulation systems.
- Polyisocyanurate roof insulation board.
- Cover boards.
- Roof perimeter systems.
- PMMA liquid-applied flashing.
- Base sheets.
- Protective walk pads.
- Adhesives.
- Primers.
- Mastics and flashing cements.
- Elastomeric sealant.
- Roofing fasteners.
- Elastomeric roof coating.
- Components for vegetated roof systems.



Siplast Lightweight Insulating Concrete is screeded to a smooth, durable, monolithic surface ideal for roofing application.

Siplast Lightweight Insulating Concrete Roof Insulation Systems

Lightweight Insulating Concrete systems combine the unique properties of lightweight insulating concrete and Insulperm premium expanded polystyrene foam insulation board. The four Siplast lightweight insulating concrete mix designs: ZIC, NVS, Insulcel, and Zonocel, represent a range of compressive and tensile strengths. Each design encapsulates Insulperm Board in insulating concrete. This process provides fire protection, prevents air infiltration, and bonds the total insulation system to the substrate. Insulperm Board can be installed in thicknesses necessary for high insulation values, and in stairstep fashion to form a slope-to-drain contour. The finished monolithic surface of insulating concrete allows nailed attachment of the roof membrane, providing superior wind resistance to the completed assembly.

The relatively high density of Siplast Lightweight Insulating Concrete can positively affect membrane life by impeding extreme temperature fluctuations and the resulting thermal stresses that can cause membrane fatigue. And, since Siplast Lightweight Insulating Concrete Systems are reroofable, significant cost savings over the life of the building can be realized while eliminating the burden of rigid insulation tear-off and transportation to landfills.

A Siplast Lightweight Insulating Concrete System and Paradiene 20/30 FR Roof System were installed on this Nevada hospital.

The Parapro 123 Flashing System

The liquid-applied Parapro 123 Flashing System is the optimum solution for situations where conventional flashing methods would be labor intensive and cost prohibitive to install, or application would be difficult due to accessibility. The Parapro 123 Flashing System is a layered application that encapsulates a polyester fleece reinforcement within two layers of catalyzed polymethyl methacrylate (PMMA) resin, creating a finished application that is seamless, fully reinforced, resilient, and exceptionally durable. Parapro adheres to Siplast SBS-Modified Bitumen, Parapro, and PVC KEE Roof Systems as well as conventional construction materials. Optionally, Parapro can be surfaced with mineral granules or a liquid-applied color finish to suit a wide range of aesthetic requirements.

Paraguard Roof Perimeter Systems

Specifically engineered for use with Siplast Roof Systems, multi-component Paraguard Roof Perimeter Systems are designed for easy installation. The roof edge features a galvanized steel waterdam/cant that can be installed at the start of a Siplast membrane application, allowing phased construction of the roof system. The fascia component is installed after the roofing is completed. Paraguard Coping has a galvanized steel anchor cleat plate with pre-punched nailing holes and a specially designed guttered splice plate for smoother finish lines. Paraguard is available in 27 standard colors in both prefinished aluminum and galvanized steel. Custom colors can be matched individually.

Liquid-applied Parapro Roof Membrane provided an efficient solution for this crowded roof.

Liquid-applied Parapro PMMA Roof Membrane solved logistical challenges associated with reroofing this downtown highrise.

Your Challenge: Protect asphalt surfaces from degradation while adding beauty and functionality.

Solution: Siplast StreetBond Pavement Coatings.

StreetBond Pavement Coatings

StreetBond Pavement Coatings bond to both asphalt and concrete surfaces to provide a durable, attractive finish that helps protect pavement from degradation. Use StreetBond to create a more welcoming store entrance, enhance safety, or transform the look of a playground or open community area. The StreetBond color palette includes a wide range of traditional colors, as well as utility colors like Cycle Lane Greens and Solar Reflective Colors, as well as custom Signature Colors for use on flatwork, asphalt, or concrete.

Looking for a cost-effective alternative to decorative pavers? StreetBond StreetPrint asphalt imprinting adds dimension to asphalt surfaces, transforming them to replicate the look of bricks, pavers, cobblestones, and a wide range of other design options.

DuraShield Pavement Coating

DuraShield is a two-component waterborne epoxy-modified acrylic pavement coating available in black and gray, formulated for use as a maintenance coating for parking lot applications. It is water-based, low VOC, fully recyclable with asphalt, and creates no unpleasant odors during installation. DuraShield has excellent adhesion characteristics, cures hard, and does not track after curing. Its durability typically allows a reduction in the frequency of recoating, reducing business disruption and maintenance.

Encouraging Play

Studies show that kids are more active in brightly colored spaces. With StreetBond, schools and communities can create bright playgrounds with solar reflective surfaces. StreetBond's extensive color palette allows creation of game courts, markings, and other designs that invite and encourage play.

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Cover Photo:
For the newly constructed Swedish Issaquah Hospital in Washington, a variety of roofing and waterproofing assemblies were installed under a tight construction schedule, including: Paradiene 20/30 FR TG, Paradiene 20/20 and pavers, Teranap Waterproofing for a vegetated roof, and Parapro 123 Flashing.

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