THE SIKA SARNAFIL

SUSTAINABILITY PROMISE

PERFORMANCE THAT PAYS. SUSTAINABILITY THAT'S SMART

WHAT IT TAKES

SUSTAINABLE ROOFING SYSTEMS

Sarnafil

BUILDING TRUST

Sika®

What It Takes.

Sika Sarnafil is helping customers achieve their sustainability goals—and gain a positive return on their investment.

This guide is intended to help you in the assessment process by providing you with sustainable roofing evaluation criteria.

At the back of this guide you'll find a handy checklist for comparing roofing products. So when it comes time to choose the right roofing solution, you'll know what to look for—and what it takes to achieve your sustainability goals.

Sustainability.

Everyone agrees it's a good thing in theory, but what does it look like in practice? At Sika Sarnafil, it looks a lot like what we've been doing for 50 years: helping building owners meet their sustainability goals through long-lasting, energy-efficient roofing and waterproofing systems.

So, how do you begin to evaluate the sustainability of one roofing system over another?

Only by measuring roofing options across a common set of important criteria can you ensure an apples-to-apples comparison—not only of the products and how they are produced, but of the companies producing them.

TAKE OUR ROOFING CHALLENGE

The Sustainable Roofing Challenge

Choosing a sustainable roofing system will reduce your building's burden on the environment and save you money. Learn if your current roof is up to the challenge.

How sustainable is your roof? Answer the following questions to find out:

Can your roofing membrane supplier provide you with documented proof of the service life of their roofs?	❑ Yes ❑ No
Is the roofing membrane on your building being recycled at the end of its service life?	❑ Yes ❑ No
Does your roofing membrane supplier have a roof take-back and recycling program?	❑ Yes ❑ No
Does your roofing membrane supplier have a zero waste to landfill program for their roof membrane?	❑ Yes ❑ No
Does your building have a green (vegetated) roof? Or, if it is an exposed roof, is the roofing membrane listed by ENERGY STAR®?	❑ Yes ❑ No
Is your roof insulation rated at least a minimum R-Value of R-20?	❑ Yes ❑ No
Does your roofing membrane minimize the use of oil as a source of raw materials?	❑ Yes ❑ No
Can your membrane supplier provide you with a life cycle analysis of their roofing systems?	❑ Yes ❑ No
Has your roofing membrane supplier conducted carbon-emissions calculations to determine its carbon footprint?	❑ Yes ❑ No
Does your roofing membrane resist the spread of flame in the event of a fire?	❑ Yes ❑ No
Is your roofing membrane supplier ISO 14001 and Responsible Care certified?	❑ Yes ❑ No

If you answered "yes" to all of these questions, congratulations! Your roof is contributing to the sustainability of your building. In the following pages, you'll learn why each of these aspects of a roofing system is an important contributor to building sustainability.

THE SIKA SARNAFIL
SUSTAINABILITY
PROMISE

NOT EVERYTHING LASTS LIKE OUR ROOFS. (AND THAT'S O.K.)

Our time-tested membranes are proof that, when it comes to sustainable roofing, durability has the last word.

What It Takes: Performance Over Time

A long-lasting roof provides a sustainability edge over other less durable roofing systems. It's a simple formula. The longer your roof is performing, the lower the rate of roofing membrane going to landfill, or carbon emissions generated in the roof replacement process.

The best way to determine roof performance is to ask for proof. Ask for a list of projects that have lasted for twenty or more years in your climate. Warranty length is not an indication of how long the roof will last without problems. Warranty exclusions, including prorating to decrease the roofing asset value over time, limit the manufacturer's financial exposure and increase your risk. You want your roof to perform problem-free over its intended life. *Here's a partial list of Sika Sarnafil's oldest currently performing roofing systems:*

PARTIAL LIST OF SIKA SARNAFIL'S OLDEST ROOFING SYSTEMS		
BUILDING	**LOCATION**	**DATE INSTALLED**
Copps Coliseum	Hamilton, Ontario, Canada	1984
UC Davis, Robbins Hall	Davis, CA	1981
Southland Foods	Tyler, TX	1981
North Thurston High School	Lacey, WA	1982
Cutler School	Wenham, MA	1984
St. Luke's Hospital	Park Ridge, IL	1984
Hackensack Civic Center	Hackensack, NJ	1986
Saddledome	Calgary, Alberta, Canada	1982

What It Takes: Recycling

Recycling reduces the environmental impacts of producing new materials at the beginning of the lifecycle, and the burden on landfills at the end. Choosing a roofing material that is recyclable—from a roofing manufacturer that converts all of its raw materials into usable products, including recycling all production scrap and trimmings—will ensure that the membrane source is not contributing to the landfill. You can also make a positive environmental impact by selecting a manufacturer with an existing, proven post-consumer roof membrane recycling program that reuses membrane at the end of its useful life. Be sure to ask about the end use of the recycled vinyl membrane. By working with a manufacturer that recycles used membrane back into new roofing membrane products, you can rest assured that the material is being used in the same long-lasting, high-value product, not down-cycled into a short-lived, disposable application that will end up in a landfill.

Sika Sarnafil's Roof Recycling Program

Sika Sarnafil first started recycling vinyl roof membranes in Europe in 1994. In the U.S. the company has recycled more than 20 million pounds of pre-consumer vinyl and millions of square feet of post-consumer roofing membrane at the end of its useful life. Sika Sarnafil is setting the industry standard with a recycling program that takes back old vinyl roofs from anywhere in the U.S.—and as the only single-ply manufacturer that recycles old membrane back into long-lasting roofing membrane products. *Below is a partial list of Sika Sarnafil Roof Recycling Projects:*

PARTIAL LIST OF ROOF RECYCLING PROJECTS	
BUILDING	**LOCATION**
Marriott Long Wharf	**Boston, MA**
Target Stores	**Various Locations**
University of Iowa Carver-Hawkeye Arena	**Iowa City, IA**
Toro	**Riverside, CA**
General Motors	**Lansing, MI**

OUR FORMULA FOR ZERO LANDFILL? 100% RECYCLING.

When a Sika Sarnafil roof reaches the end of its service life, our innovative recycling program reprocesses used membranes into new, high-performance roofing products.

A ROOF THAT ALWAYS KEEPS ITS COOL.

Our highly reflective EnergySmart Roof® system works overtime to minimize heat flow into your building, reduce energy costs from cooling and improve occupant comfort.

What It Takes: Cool Roofing

Preventing solar radiation from elevating a building's internal temperature is an important strategy in reducing building cooling energy consumption. Cool roofs—defined as a roofing system that can deliver high solar reflectance (reflecting visible, ultraviolet and infrared wavelengths) and high thermal emittance (the ability to radiate absorbed solar energy), or green (vegetated) roofs, are accepted technologies to achieve this goal.

The EnergySmart Roof®

In a Lawrence Berkeley National Laboratory study commissioned by the U.S. DOE and the EPA, researchers compared the energy consumption in a 100,000 sq. ft. Texas facility over a two-year period—with a black rubber EPDM roof in use and then a Sika Sarnafil EnergySmart Roof. The EnergySmart Roof reduced peak summertime air-conditioning demand by 14 percent and resulted in an estimated savings of $7,200 (7.2 cents per sq. ft. per year).

Cool roofs are also an important strategy to improve urban air quality through the reduction of the urban heat island effect. Dark, low-reflecting surfaces absorb solar radiation and cause an increase in ambient air temperature in dense urban areas. The heat causes increased energy consumption for cooling, elevated emissions of air pollutants and compromised human health and comfort. Reducing the amount of low reflecting surfaces through the use of cool roofs helps to decrease the ambient air temperature and its associated ill effects.

Green roofs provide many of the advantages of highly reflective roofs with the added benefits of storm-water reduction, potentially improved waterproofing membrane life—and an aesthetically pleasing design.

What It Takes: Reducing Thermal Heat Flow

Thermal insulation on the roof helps to minimize the air flow between the interior and exterior of the building, reducing the amount of electricity consumed to cool the building on warm days and the amount of energy needed to heat the building on cool days. According to ASHRAE 90.1, the minimum R-Value of insulation above the deck on commercial buildings should be R-20 in all climate zones in the U.S.

The National Roofing Contractors Association recommends two layers of insulation with staggered seams to minimize the movement of air through the insulation.

What It Takes: Minimizing the Use of Oil

Now more than ever, decreasing the United State's, dependence on foreign oil is universally accepted as a national security and domestic policy priority. The environmental costs of oil drilling and production underscore the imperative to develop products that minimize our dependence on oil.

57% of vinyl resin is derived from salt. Less oil is consumed to produce vinyl than in the production of base materials for any other single-ply roofing membrane. Vinyl roofing membranes are the most resource-efficient roofing products because of their limited reliance on the hydrocarbon chain.

What It Takes: Life Cycle Analysis

A life cycle analysis provides an assessment of the environmental impacts of a product from raw material production to manufacture to distribution, use and disposal. The goal of this assessment is to compare the full range of environmental impacts assignable to products to be able to choose the least burdensome one.

A comparative Life Cycle Assessment (LCA) of commonly used low-slope roofing systems conducted by Carbotech, a leading European consulting firm, ranked Sika Sarnafil vinyl roofing systems highest in eco-efficiency, making the company the leading choice for environmentally preferable products.

A ROOF AS EARTH-FRIENDLY AS COMMON SALT.

Did you know that 57% of the molecular weight of vinyl resin comes from common salt, an abundant natural resource?

FIRE ISN'T SUSTAINABLE. OUR ROOFS ARE.

In test after test, vinyl roof membranes have proven to provide the best fire performance of any single-ply membrane.

What It Takes: Minimizing Carbon Emissions

Producing roofing materials of any type generates carbon dioxide. Sika Sarnafil's EnergySmart Roof offsets the carbon emissions from the membrane production process with CO_2 savings by substituting highly reflective membrane for low reflecting membrane. Carbotech, an environmental consulting firm, determined that, when averaged over time, the energy savings from the EnergySmart Roof would exceed the CO_2 generated during production in less than two years. Projected over an estimated average annual life of 25 years for the roofing membrane, the result is a net-negative carbon footprint for Sika Sarnafil.

What It Takes: Fire Safety

In addition to life and safety concerns, building fires leave a heavy environmental footprint. Smoke and carbon generation is caused by the destruction of fires. Additional environmental burdens are caused by the production and transportation of materials to rebuild what fire has destroyed.

Vinyl roof membrane has inherent fire-retardant properties that provide self-extinguishing characteristics that can significantly reduce flame spread in the event of a roof fire. Vinyl outperforms all other single-ply roofing materials when it comes to fire resistance.

Sarnafil® roof membranes have U.L. Class A fire ratings at four times the slope of TPO membranes over polyisocyanurate insulation, the most commonly used insulation on low-slope, non-residential buildings. Spread-of-flame fire tests conducted at U.L. confirm that EPDM and TPO membranes spread twice as far as Sarnafil membranes on like surfaces and slopes. Further, EPDM and TPO membranes will continue to burn after the flame source is removed, while Sarnafil membranes self-extinguish.

What It Takes: Responsible Care and ISO 14001:2004

Responsible Care and ISO 14001:2004 are two globally recognized standards designed to help companies maintain a safe and secure environment for employees, assure responsible environmental stewardship and promote harmony in the community.

Sika Sarnafil's production plant in Canton, MA—and seven other facilities across the country—are certified as compliant with these two important environmental and health and safety standards.


Sika
Sarnafil
Performance that pays. Sustainability that's smart.
Sustainability made Simple
Sustainable practices meet the needs of the present with an eye to the needs of future generations. Before the terms "sustainable" or "green" were commonplace, Sika Sarnafil has been designing solutions that perform to the highest standards, and are still performing after decades of service.
Sika Sarnafil delivers high-quality, energy-efficient roofing and waterproofing solutions that not only reduce environmental impact but save money by lowering maintenance and utility costs over time. Unparalleled performance—that results in higher ROI—makes Sika Sarnafil the choice for roofing consultants, architects, contractors and facility managers alike.
Discover how Sika Sarnafil is redefining sustainability with environmentally smart products that deliver higher ROI while helping you achieve your sustainability goals: energy efficiency, environmentally preferable products, greenhouse gas reduction and waste minimization.
Energy Efficiency
Environmentally Preferable Products
Greenhouse Gas Reduction
Waste Minimization
Proven Performance
Sustainability starts with products that deliver long-lasting value.
The Energylicious Roof
Learn how our cool roof system saves money and energy.
Vinyl Profile
Vinyl roofing products can reduce waste and environmental impact.
Learn More About Our Roof Recycling Program.
THE SIKA SARNAFIL
SUSTAINABILITY PROMISE
Learn what sets us apart

CRITERIA	THE SIKA SARNAFIL ADVANTAGE	COMPETITIVE ROOF SYSTEM #1	COMPETITIVE ROOF SYSTEM #2	COMPETITIVE ROOF SYSTEM #3
DOCUMENTED SERVICE LIFE	*Thermoplastic membrane with the longest track record in roofing and waterproofing*			
RECYCLABLE INTO NEW ROOFING MEMBRANE	*Vinyl membranes are readily recyclable into new membranes*			
ZERO WASTE TO LANDFILL MEMBRANE PROGRAM	*100% membrane production waste recycled*			
ROOF TAKE-BACK PROGRAM	*Established roof membrane recycling program*			
ENERGY STAR®-QUALIFIED	*The EnergySmart Roof® exceeds ENERGY STAR cool-roofing requirements*			
ROOF INSULATION MINIMUM OF R-20	*Sarnatherm insulation available in a wide variety of configurations to meet building-specific requirements*			
LESS THAN 50% OIL BASED	*57% of vinyl resin is derived from salt*			
LIFE CYCLE ANALYSIS	*Vinyl roofing membranes rated highest in eco-efficiency amongst competing products*			
CARBON OFFSETTING	*The energy savings resulting from the use of the EnergySmart Roof more than offset the carbon emissions caused by membrane production*			
RESIST SPREAD OF FIRE	*Vinyl membranes perform better in resisting spread of fire than other single ply membranes*			
ISO 14001 AND RESPONSIBLE CARE-CERTIFIED	*We take pride in our internationally recognized certifications*			