



Re-Ply™ Roofing Systems

Answers

What is "fluid-applied" roofing?

Does every problem roof require a tear-off?

Where and when should you consider fluid-applied systems?

How "Green" is fluid-applied cool roofing?

Why pay to replace your roof if you don't have to?



Re-Ply™ Roofing Systems

Perfecting Elastomeric Membranes Since 1986

What is fluid-applied roofing?

Can you avoid costly roofing tear-off with a fluid-applied roof?

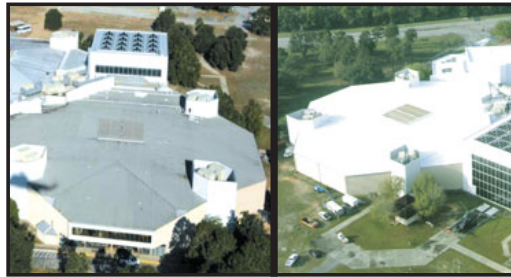
A fluid-applied roof is a multi-layered system that creates a seamless waterproof seal over an existing, qualified, substrate; eliminating the need for costly roofing tear-off and replacement.

Many roofs that are being torn off would qualify as substrates for conversion to sustainable, fluid-applied roofs, resulting in huge savings with the elimination of unnecessary expenses in facility downtime, reconstruction and disposal costs.

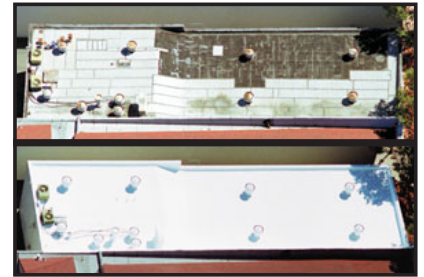
Don't let your roof waste your maintenance budget. Never pay to replace a roof you can convert to a sustainable (renewable) watertight roof.



Metal Substrate

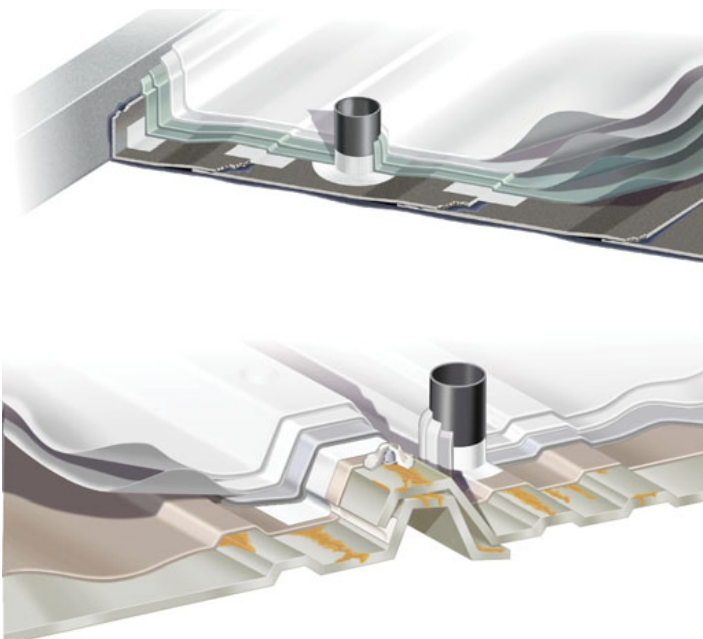


Single-Ply Substrate



Asphalt Substrate

What makes up a successful fluid-applied roofing system?



1) Qualification

Inspecting the existing roof is a basic requirement before you receive a proposal from any roof contractor. The thorough ASTEC® Re-Ply™ Systems roof survey, sometimes using infrared scanning, will determine if the existing roof substrate is qualified for a fluid-applied cool roof.

2) Repairs

Once an existing roof is qualified as a candidate for conversion to an ASTEC® Re-Ply™ roof, necessary repairs to that substrate roof may be needed. These include drains, gutters, flashings, skylights, replacing wet insulation, etc.

3) Specifications

Detailed application specifications, matched to each substrate roof, are essential to a successful long term project.

4) Quality products and systems

The renewable sustainability of fluid-applied roofing can only be achieved by using time-proven products and systems of consistently reliable quality.

5) Knowledgeable trained applicators

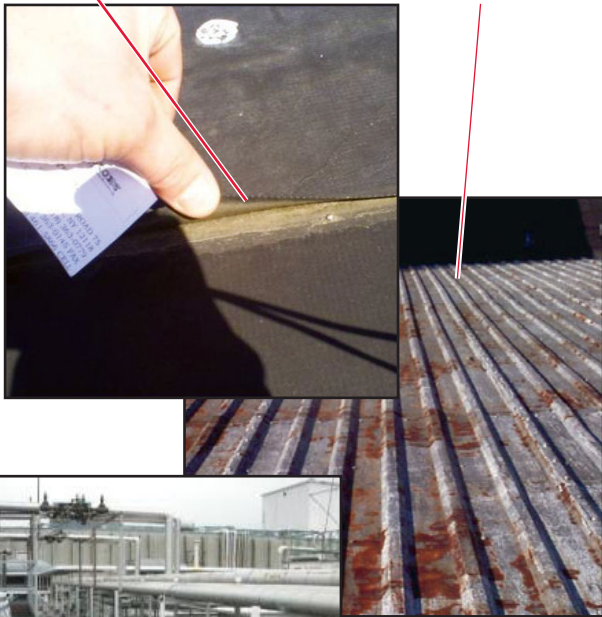
Even the best products can fail if poorly applied. Trained roof professionals, applying quality products, according to detailed system specifications, is the only way to insure a fluid-applied roof will perform and protect as it should.

How should an existing roof be evaluated?

(Not every roof qualifies for an ASTEC® Re-Ply™ System)

Separating seams and joints

Metal rust and corrosion



Restoring a roof with ASTEC fluid-applied membranes is not always possible or advisable. A thorough roof survey by an authorized ASTEC contractor is a critical first step.

- He will evaluate the entire roof including all drains, parapets, penetrations, etc.
- He will inspect for material, fastener, and mastic failure as well as wet insulation, and other hidden problems.
- He will note slopes, joints, soft spots, and old repairs of each roof to determine whether or not the roof qualifies for successful conversion to an ASTEC® Re-Ply™ Roof.

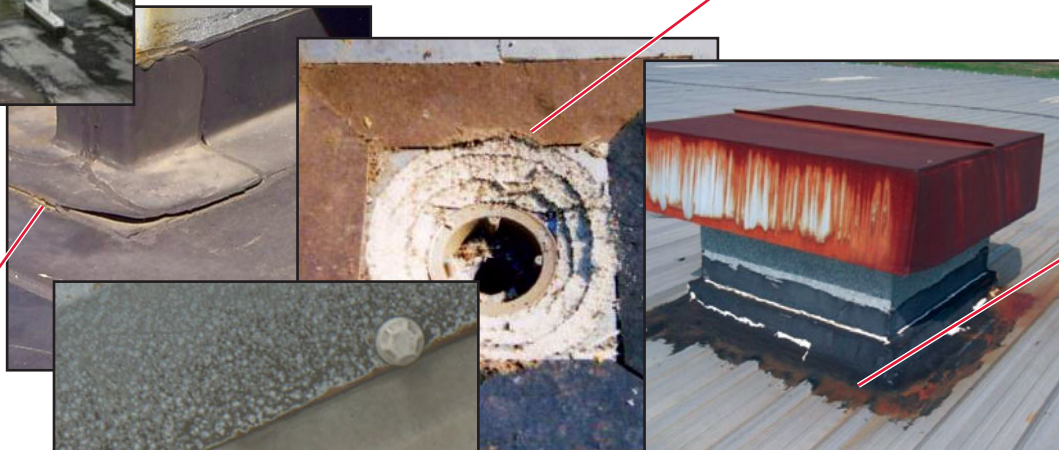
There is an ASTEC® Re-Ply™ System designed to convert most traditional roofing substrates. The high quality formulations and manufacturing standards (ISO 9001-2015) of Re-Ply products allows us to restore — and warranty — metal, asphalt, and single-ply roofs. Thoroughly evaluating each roof is critical to determining its compatibility with an ASTEC® Re-Ply™ fluid-applied system.

Every problem roof pictured here was solved using the appropriate ASTEC® Re-Ply™ System, and is currently sustained under an ASTEC Renewable™ Warranty.



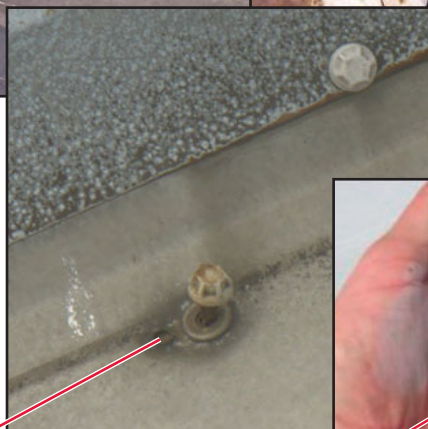
Drains with hidden problems

Multiple penetrations – ideal for fluid-applied roofing

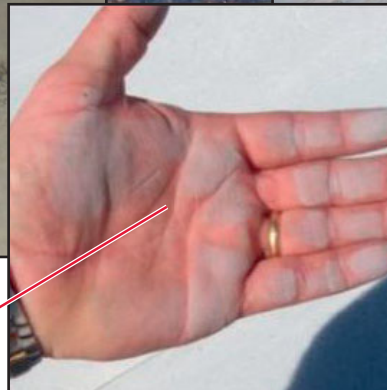


Failing repairs

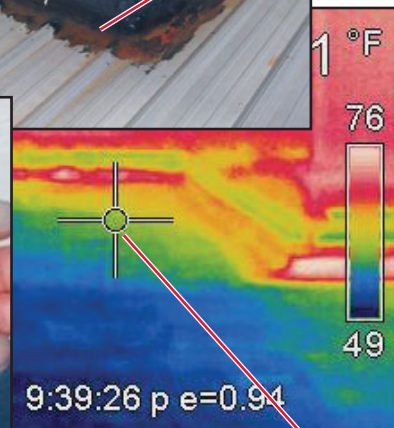
Failing boots and flashing



Loose fasteners



Substrate failures caused by cracking, splitting, chalking



Infrared scans detect hidden problems

What preparation does a qualified roof require before Re-Ply™ installation?

Repairing of failed substrate, underlayment, and insulation



Proper sealing of skylights and other penetrations



All substrates, depending on the original roofing material, have a specific ASTEC preparation procedure. This should be done by an Authorized ASTEC® Contractor.

Essential repairs are done first. Normally, this involves less than 10% of the roof area, but has been as high as 25%.

- Wet insulation replaced
- Loose material removed
- Failed substrate repaired
- Loose fasteners tightened or replaced
- Damaged drains, parapets, penetrations, etc. repaired

Substrate cleaning is very different for metal, asphalt, rubber, and the various surfaces to be converted. ASTEC provides specific rinses, rust controls, waterproofer and other products to clean and prepare each substrate.

Properly repairing, cleaning, flashing, and sealing each roof substrate is essential to the success of each ASTEC® Re-Ply™ roof.

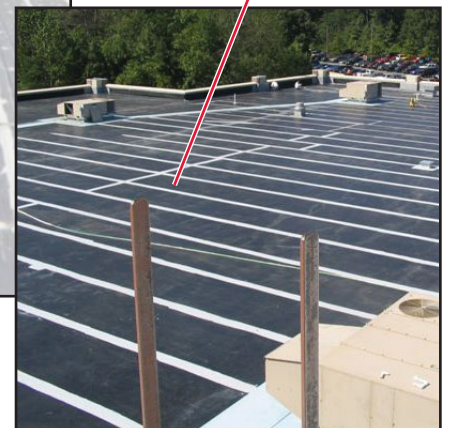


Fluid-applied seamless flashing is ideal for irregularly shaped penetrations



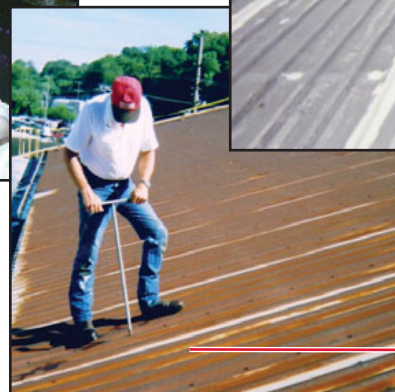
Sealing seams and fasteners on a metal substrate

Completely re-flash and seal all seams on all substrates



Proper cleaning to each substrate spec

Wet insulation replacement after infrared detection



All fasteners are tightened or replaced and sealed; rusty metal roofs are rust-primed

Can you Re-Ply™ a metal roof ?

Yes, we can.



Why?

Metal roofs are composed of lapped sheets and fasteners that are highly susceptible to corrosion, wind lift, and loosening from thermal shock damage leading to constant repair and costly replacement.

When?

Metal roofs with sound structure are prime candidates for an ASTEC® Re-Ply™ roofing conversion. When complete, the new seamless roof will be wind and watertight with thermal shock resistance, and sustainable, non-corrosive properties.

How?

Metal roofs are restored, cleaned, and professionally converted to ASTEC® Re-Ply™ roofs (see the system for metal opposite), using premium products, proven procedures, and ASTEC® Authorized Contractors.

What is the typical* ASTEC® Re-Ply™ System for restoring metal roofs?

* This is the typical system for metal roofs. Products and procedure may vary by roof type and condition. Please contact your ASTEC Representative for detailed application specifications.



1. PREPARING THE METAL SUBSTRATE

- Repair metal roofing substrate to **ASTEC Specifications**
- Tighten or replace all loose or missing fasteners
- Clean and power wash
- Neutralize rust with a layer of **ASTEC B-16-71 Rust Control**



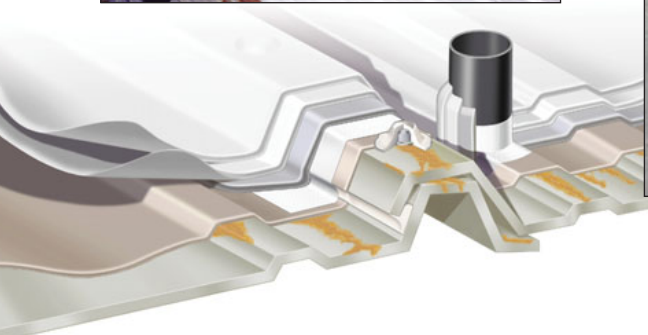
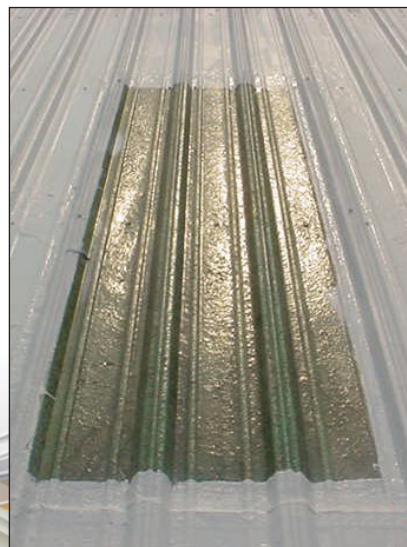
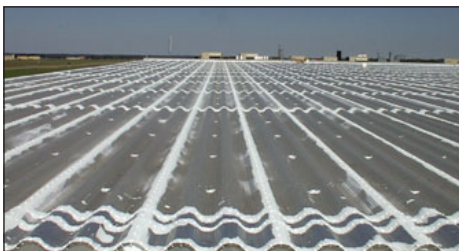
2. WATERPROOFING

- Recheck all fasteners and waterproof each with **ASTEC WPM #9**
- Use **ASTEC BBT Tape** or **Reinforcing Poly-Cloth** to waterproof all metal roof seams and roof penetrations including stacks, vents, skylights, and parapets
- Apply a heavy layer of **ASTEC WPM #9**, encapsulating the BBT or reinforcing cloth over all seams and penetrations in a seamless, waterproof seal



3. FINISHING FOR WARRANTY

- Reinspect the entire roof to assure ASTEC Waterproofing Specifications
- Apply first coat of **ASTEC® Re-Ply™ Finish**
- Apply additional layers of **ASTEC® Re-Ply™ Finish** to achieve **ASTEC Renewable™ Warranty Specifications** for Metal Substrate Systems



Can you Re-Ply™ a **single-ply** roof ?

Yes, we can.



Why?

Single-ply roofs are sheets attached to a subsurface and are susceptible to heat and UV degradation, chalking, shrinking, and separating leading to expensive repair and costly replacement.

When?

Single-ply roofs with sound underlayment and good adhesion can be readily converted to an ASTEC® Re-Ply™ roof. When complete, the new seamless surface will be wind and watertight while reflecting damaging sun rays for a cooler building and longer-lasting roof.

How?

Single-ply roofs are restored, cleaned, and converted to ASTEC® Re-Ply™ roofs (see the system for single ply opposite), using premium products, proven procedures, and ASTEC® Authorized Contractors.

What is the typical* ASTEC® Re-Ply™ System for restoring **single-ply** roofs?

* Typical system for single-ply (EPDM, TPO, PVC, Hypalon) roofs. Products and procedure may vary by roof type and condition. Please contact your ASTEC Representative for detailed application specifications.



1. PREPARING A SINGLE PLY SUBSTRATE

- Repair single-ply roofing substrate to **ASTEC Specifications**
- Neutralize chalking with **ASTEC EPDM Rinseable Primer**
- Clean and power wash surface
- Reinspect that the single-ply substrate is ready for Re-Ply installation



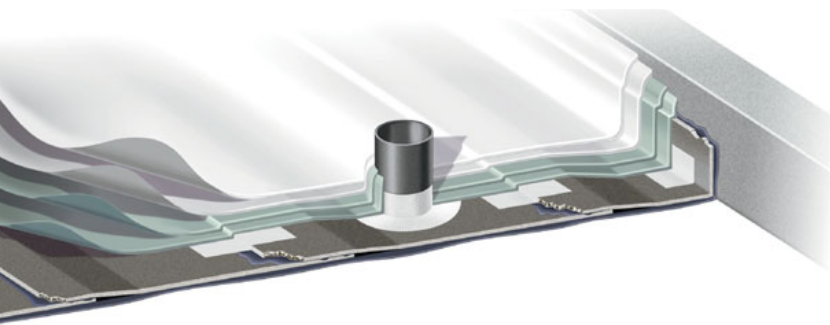
2. WATERPROOFING

- Use **ASTEC BBT Tape** or **Reinforcing Poly-Cloth** to waterproof all roof seams and roof penetrations including stacks, vents, stanchions, and parapets
- Coat all taping with **Base Sealer #8**
- Apply the first monolithic coating of **Base Sealer #8**
- Apply a second monolithic coating of **Base Sealer #8**



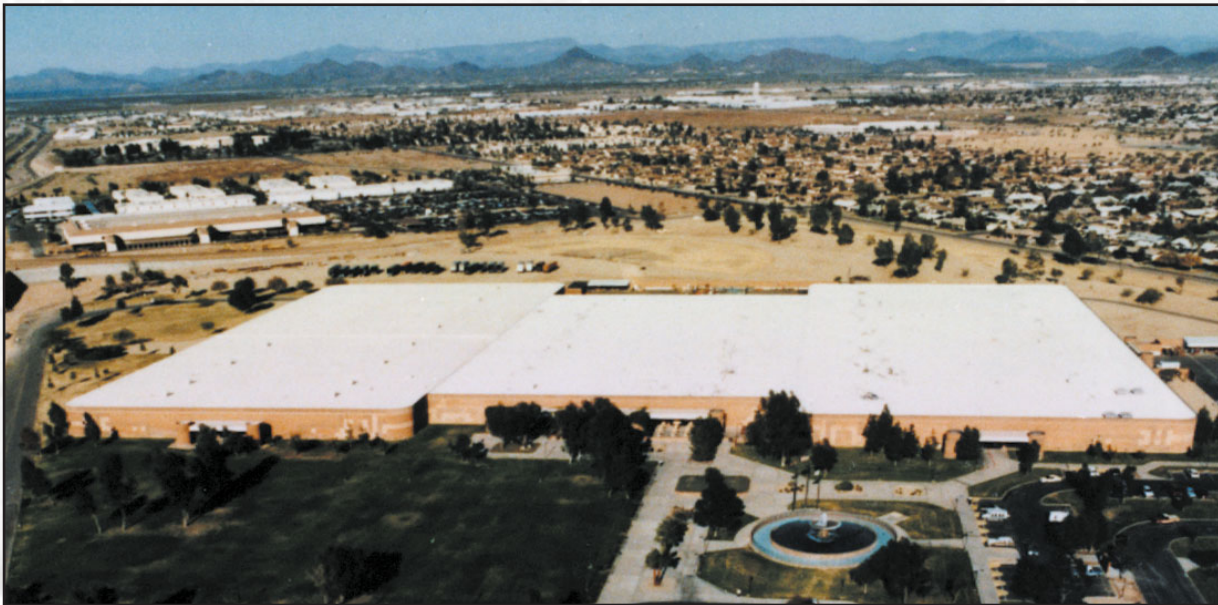
3. FINISHING FOR WARRANTY

- Reinspect the entire roof to assure **ASTEC Waterproofing Specifications**
- Apply first coat of **ASTEC® 2000 Re-Ply™ Finish**
- Apply additional layers of **ASTEC® 2000 Re-Ply™ Finish** to achieve **ASTEC Renewable™ Warranty Specifications** for Single-Ply Substrate Systems



Can you Re-Ply™ an asphalt roof ?

Yes, we can.



Why?

Asphalt roofing, modified bitumen, or rolled roofing are susceptible to heat and UV degradation, splitting, and cracking leading to constant repair and costly replacement.

When?

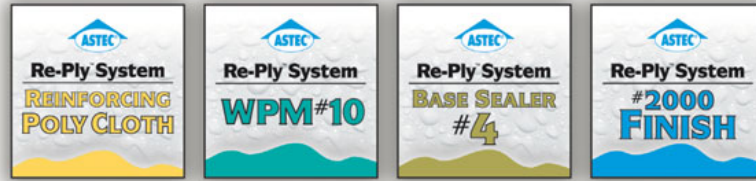
Asphalt roofs with sound underlayment, and repairable substrates, can be converted to ASTEC® Re-Ply™ roofs. When complete, the new seamless surface will be wind and watertight while reflecting damaging sun rays for a cooler building and longer-lasting roof.

How?

Asphalt roofs are restored, cleaned, and professionally converted to ASTEC® Re-Ply™ roofs (see the system for asphalt opposite), using premium products, proven procedures, and ASTEC® Authorized Contractors.

What is the typical ASTEC® Re-Ply™ System for restoring asphalt roofs?

** This is the general system for asphalt (BUR) roofs. Products and procedure may vary by roof type and condition. Please contact your ASTEC Representative for detailed application specifications.*



1. PREPARING THE ASPHALT SUBSTRATE

- Repair the asphalt roofing substrate to **ASTEC Specifications**
- Clean and power wash
- Reinspect that the asphalt substrate is ready for Re-Ply resurfacing

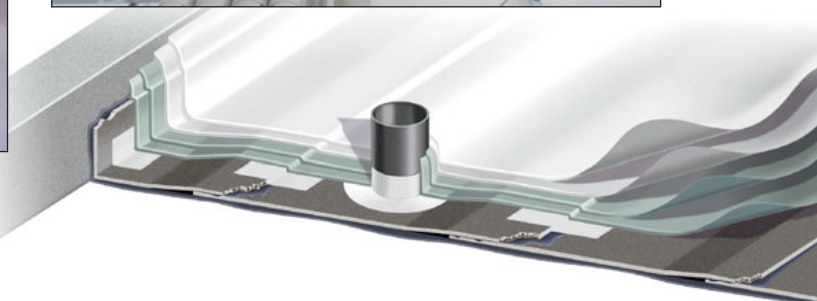
2. WATERPROOFING

- Use **Reinforcing Poly-Cloth** and/or **WPM #10** to waterproof all roof seams and roof penetrations including stacks, vents, stanchions, and parapets (Some asphalt roofs require full cloth reinforcement)
- Coat all taping with **ASTEC Base Sealer #4**
- Apply the first monolithic coating of **ASTEC Base Sealer #4**
- Apply a second monolithic coating of **ASTEC Base Sealer #4**



3. FINISHING FOR WARRANTY

- Reinspect the entire roof to assure ASTEC Waterproofing Specifications
- Apply first coat of **ASTEC® 2000 Re-Ply™ Finish**
- Apply additional layer of **ASTEC® 2000 Re-Ply™ Finish** to achieve **ASTEC Renewable™ Warranty Specifications** for Asphalt Substrate Systems



Are all fluid-applied roofs the same?

Absolutely not!

Fluid-applied roofing materials, formulations, preparation methods, and application systems vary greatly in performance among brands. In fact, some products are little more than a thin layer of reflective paint to temporarily ward off damaging UV sunlight. These thin-layered products are not intended to be waterproof, sustainable, or guaranteed to any standards or specifications.

ASTEC® Re-Ply™ Systems are multiple layers of superior reinforcement, corrosion inhibitors, waterproofing, and durable top finishes. All are applied to specifications for substrate type by ASTEC® Authorized Contractors.

Always ask:

- ✓ **Is it waterproof?**
- ✓ **Is there a roof system specific for my roof?**
- ✓ **Is it applied by an authorized contractor?**
- ✓ **What is the warranty?**
- ✓ **Is it sustainable/restorable?**
- ✓ **Is it Energy Star partnered?**
- ✓ **Is it "Green"?**
- ✓ **Is it LEED qualified?**
- ✓ **What are the tax advantages?**
- ✓ **Is the manufacturer ISO registered?**



Saving your roof. Saving money. Saving energy. Sustaining the planet.

Insulating Coatings Corporation is an enthusiastic partner in environmental conservation and protection — from material acquisition, through manufacturing, to installed ASTEC systems.



ENERGY STAR® is a dynamic government/industry partnership that offers businesses and consumers energy-efficient solutions, making it easy to save money while protecting the environment for future generations.



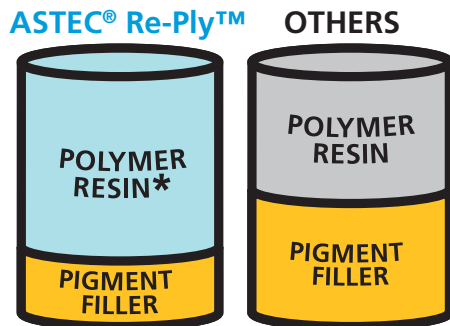
USGBC is a 501(c)(3) non profit organization that certifies sustainable businesses, homes, hospitals, schools, and neighborhoods. It is dedicated to expanding green building practices and education, and its **LEED®** (Leadership in Energy and Environmental Design) Green Building Rating System™.



Registered ISO Manufacturer

ISO International Organization for Standardization
The source of ISO 9000, ISO 14000 and more than 14,000 International Standards for business, government and society. A bridge between public and private sectors.

Why are ASTEC® Re-Ply™ "systems" the best choice for fluid-applied roofing?



More polymer, less pigment = high quality; sustainable roof.

Less polymer; more pigment = reduced roof sustainability.

Types and qualities of polymers vary greatly, as do pigments and other additives.

**ASTEC Re-Ply products are manufactured with a higher ratio of premium polymers-to-pigments; under strict ISO standards of consistency. The result is superior performance and long-term sustainability.*

ASTEC® Re-Ply™ products — quality and consistency

Having quality control, through ISO 9001-2015 Registered manufacturing standards, assures consistency batch after batch, year after year. Working with the finest grade ingredients assures the quality needed for a sustainable, long-term, renewable roof.



ASTEC® Re-Ply™ systems — substrate-specific specifications

In addition to superior products, ASTEC® Re-Ply™ Roof Systems are systematically applied, to time-tested specifications, using combinations of products specific to metal, asphalt, single ply, and other original roof substrates.

ASTEC® Authorized Contractors — experience and know-how

The best fluid-applied roofing products and systems are only as good as their installation. Some of the most skilled ASTEC trained and authorized contractors have been with us from the beginning in the mid 80's. Every new roof conversion is carefully considered, scheduled, and applied to strict ASTEC® Re-Ply™ specifications.

ASTEC® RENEWABLE™ Warranties — assuring sustainability

Quality products, knowledgeably applied, to warranty specification, allows Insulating Coatings Corporation to warranty the waterproof sustainability of ASTEC roofs with the only roof warranty trademarked as "Renewable" — in 10 and 15 year terms.

Many years of satisfied customers — hundreds of millions of sq. ft. worldwide

Quality and consistency from manufacturing, through installation, to warranty renewals, lead to very satisfied customers. ASTEC has earned many kudos from repeat and first-time customers continually surprised by the cost-to-return values of ASTEC roofs.

Keeping it simple for everyone

Economically, environmentally, and from every performance perspective, ASTEC® Re-Ply™ fluid-applied cool roofing has simply become the smart choice.



The ASTEC® RENEWABLE™ Warranty covers both materials and labor. Renewable is the definition of a sustainable roof.

An ASTEC® Re-Ply™ roof can be restored and the warranty renewed at big savings.

Are there other benefits from ASTEC® Re-Ply™ Cool Roof Systems?

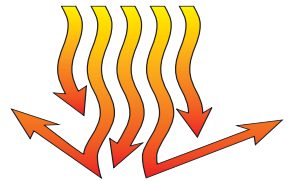


Installation savings up to 50% or more

ASTEC® Re-Ply™ fluid-applied roof systems can be installed directly over most traditional roof substrates. Tear-off, land-fill fees, reconstruction, and long facility disruptions are eliminated.

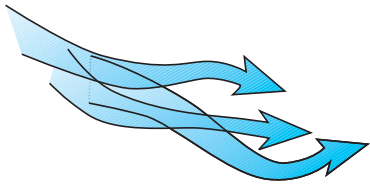
A UV solar shield

The ASTEC® Re-Ply™ Cool Roof Systems have superior resistance to UV degradation than most traditional roofing materials.



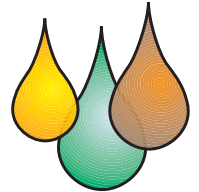
Seamless wind and weather protection

Once all the old joints, fasteners, and leaks are made watertight, seamless layers of ASTEC® Re-Ply™ waterproofing and finish coats are applied as monolithic systems — resulting in greater wind resistance.



A corrosion barrier

ASTEC® Re-Ply™ formulations are highly resistant to ocean salt spray, acid rain, and other airborne contaminants.



All-climate stability

Once cured, an ASTEC® Re-Ply™ surface retains its flexible, watertight superiority in extremes of heat or cold, and dry or wet conditions.



Reduces thermal shock damage

ASTEC® Re-Ply™ cool roof systems minimize the effects of varying coefficients of expansion and contraction within roofs that cause damaging shifts, cracking, and loosening conditions.



Provides Cool Roof / Green Roof Benefits

ASTEC® Re-Ply™ Systems meet or beat all known public and private standards for cool roof credits and incentives. Save installation costs. Save energy. Save the planet. ASTEC white is "Green".



The ASTEC® RENEWABLE™ Warranty

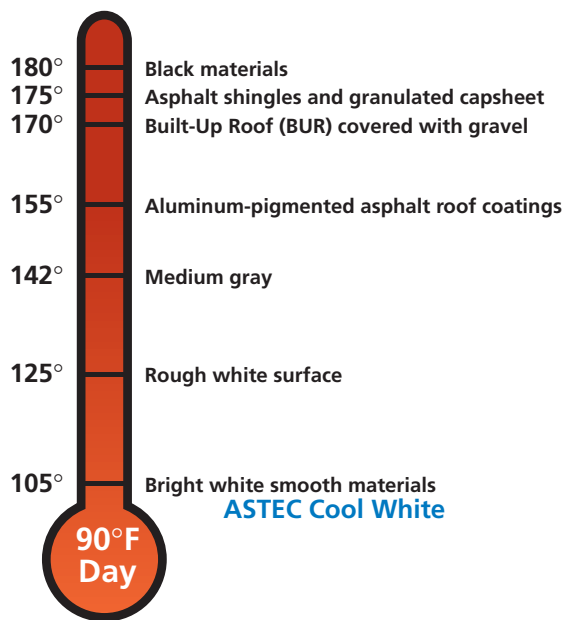
A professionally applied ASTEC® Re-Ply™ roof is warranted for 10 or 15 years — Material AND Labor. The roof can be renewed at warranty term for a fraction of original cost based on today's dollar value.



Never pay extra to tear-off a roof and replace it — if you can Re-Ply it — with long-term sustainability

How “cool” and how “green” are ASTEC® Re-Ply™ Cool Roof Systems?

Roof Heat Gain Comparison



(created from selected data from:
<http://www.eetd.lbl.gov/coolroof/how.htm>)

By converting existing roofing substrates to ASTEC® Re-Ply™ sustainable cool roofing, other “green” benefits are achieved:

- restoring and reusing existing roofing substrates
- eliminating tear-off costs
- reducing landfill
- extending roof and building longevity
- reducing energy consumption and carbon footprint

Building owners and managers with ASTEC Cool Roofing Systems point out the ability to increase occupant comfort and productivity while reducing their cooling budgets and HVAC equipment maintenance.



COOL ROOF / GREEN ROOF
SAVE MONEY & SAVE THE PLANET



Comparing “Cool” Roofing Options

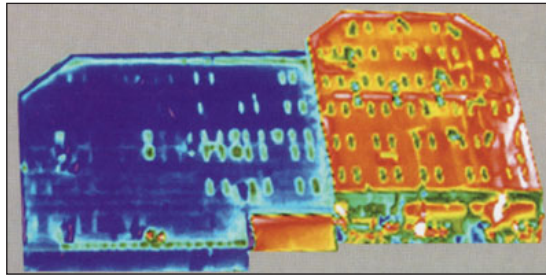
Features	“Silver” Coating	Asphalt	Uncoated Metal	Foam	PVC	Single-Ply White EPDM	ASTEC® Re-Ply™
Cost	\$	\$\$	\$\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$
Renewable Sustainability	NO	NO	NO	NO	NO	NO	YES
Waterproof	NO	YES	YES	YES	YES	YES	YES
Seamless Roofing	NO	NO	NO	YES	NO	NO	YES
Solar Reflectivity	.55	VARIABLES	.61	VARIABLES	.75	.69	.87
Thermal Emissivity	.53	VARIABLES	.25	VARIABLES	.91	.87	.91
Elongation (Elasticity)	NA	FAIR	POOR	POOR	GOOD	GOOD	EXCELS
Tensile (Tear-Resistance)	NA	FAIR	EXCELS	POOR	EXCELS	GOOD	GOOD
CRRC Cool Roof Compliant	NO	NO	NO	VARIABLES	YES	YES	YES

Never pay extra to tear-off a roof and replace it — if you can Re-Ply it for less — with top cool roof / green roof bonuses

Can we see some typical ASTEC® Re-Ply™ roofing conversions?

California
Food
Processing
Center

38,000 sq.ft.
Asphalt



ASTEC® Re-Ply™ converted roof sections prove to be as much as 65°F cooler.

Massachusetts
Utility Company

22,000 sq.ft.
Metal



Energy studies have proven air-conditioning energy savings, even in northern states, can outweigh any cool roofing "winter penalties".

Florida
Naval Air
Museum

200,000 sq.ft.
EPDM &
Asphalt



Installation can be less than half the estimate for replacement — without disposal problems, facility disruptions, or downtime costs.

Illinois
Food
Manufacturer

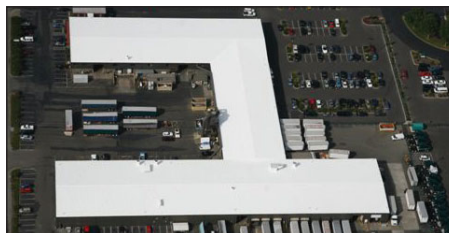
20,000 sq.ft.
Cap Sheet



When two roofing layers exist, building codes require tear-off... NOT with ASTEC® Re-Ply™ systems.

Washington
State
Manufacturer

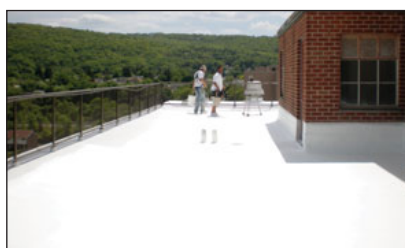
90,000 sq.ft.
Metal



ASTEC® Re-Ply™ roof conversions and renewals use a fraction of the time and cost of a tear-off; reducing maintenance budgets.

New York
Housing
Facility

40,000 sq.ft.
EPDM (Rubber)



High-rise roofing involving cranes and other costly urban problems are avoided by using an ASTEC® Re-Ply™ system.

*Texas
Manufacturing
Facility*

*1 Million+ sq.ft.
Metal*



ASTEC® Re-Ply™ systems permit building-by-building roof conversions as needs and budgets demand.

*New England
Food Store Chain
Facility*

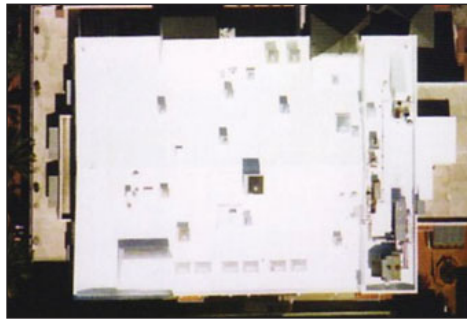
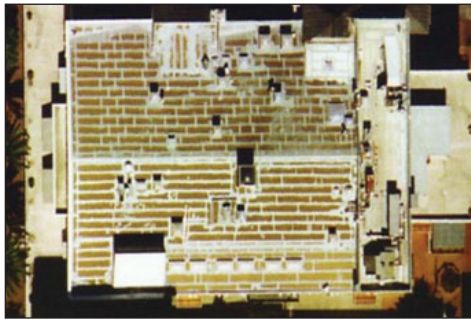
*100,000 sq.ft.
EPDM (Rubber)*



Prudent companies have tested one or two sites, in different climates, before launching a broader program to universally upgrade to sustainable ASTEC® Re-Ply™ roofing.

*California
Business
Park*

*40,000 sq.ft.
Asphalt*



Occupant comfort and productivity head lists including reduced HVAC maintenance, lower utility costs, and longer building life.

*New York
Air Cargo
Warehousing*

*140,000 sq.ft.
Metal*



Limited preparation costs reduce conversion expenses even further — gaining ASTEC® Re-Ply™ sustainability for long-term savings.

*West Virginia
Retail
Facility*

*40,000 sq.ft.
EPDM (Rubber)*



*Get a fair estimate of cool roof energy savings for your building using the Department of Energy (DOE) **Cool Roof Calculator** at their website.*

*Missouri
Food Processing
Facility*

*112,000 sq.ft.
Modified Asphalt*



Roof tops having multiple penetrations realize huge savings utilizing a seamless, watertight, fluid-applied roof.

Who should consider ASTEC® Re-Ply™ Roof conversions?

Architects and consultants whose clients' buildings have aging roofs of various materials, and who wish to eliminate costly tear-off while gaining the sustainability of a fluid-applied roof. Those clients will also benefit from ASTEC® Re-Ply™ cool roofing advantages.

- Proven roofing technology
- EPA Energy Star cool roofing performance
- Meets LEED green building guidelines
- Recognized leadership, dedicated to fluid-applied development
- ISO 9001:2015 registered manufacturer
- Detailed specifications and professional installation
- Knowledgeable regional ASTEC representatives
- ASTEC educational and technical support

Building owners and managers who wish to benefit from a long-term, sustainable, and renewable solution to costly roof tear-off.

- Eliminates tear-off and landfill expenses
- No building shutdowns or disruptions required
- Converts qualifying roofs to sustainable cool roofs
- Huge savings on multi-penetration roofs
- Reduces cooling costs
- Promotes occupant comfort
- Meets public and private energy consumption goals
- Qualifies for energy incentives
- Taxed as maintenance OR capital investment
- Reduces cooling equipment maintenance
- Reduces thermal shock and UV degradation
- Reduces building life cycle costs
- Long term sustainability under RENEWABLE™ Warranty

Contractors who join the authorized ASTEC® Re-Ply™ team can offer customers non-intrusive, lower cost conversion to sustainable, cool and green roofing technologies while working with a leading manufacturer of high quality, fluid-applied roofing systems.

- Regional ASTEC Authorized Contractor/Applicators
- Join with a manufacturer exclusively dedicated to fluid-applied roofing
- Over 30 years perfecting premium products
- Hundreds of millions of square feet in use
- Detailed specification writing assistance
- Technical in-house and field support
- Ideal for public agencies under direction to be energy conscious



If these answers about fluid-applied ASTEC® Re-Ply™ Roofing Systems make sense for you, let us introduce you to the ASTEC® Authorized Contractor in your region.

He will start by providing an onsite roof inspection and qualification leading to a customized proposal for your roof. He and his people will follow detailed specifications to meet the installation standards for the ASTEC® RENEWABLE™ Warranty.

In short, our independent ASTEC® Authorized Contractors represent the competence, integrity, and reliability that ASTEC® Re-Ply™ customers expect from the top down.



1.800.223.8494
info@icc-astec.com

How do we contact ASTEC® Re-Ply™ Roofing with our own questions?

By telephone: 1.800.223.8494

Business days from 8 to 5 EST, a live operator will take your call and direct you to the person or department best able to answer your questions. If you need a roof qualified, a national ASTEC® Re-Ply™ rep will assess your request and work with the appropriate ASTEC® Authorized Contractor to do the onsite roof analysis.

By e-mail: info@icc-astec.com

You will have an immediate e-mail receipt acknowledgement and a full response to your questions or needs within 24 hours.



Re-Ply™ Roofing Systems
Perfecting Elastomeric Membranes Since 1986

For additional information, contact: **Insulating Coatings Corporation**
Toll Free: 1.800.223.8494 Telephone: 607.723.1727 Fax: 607.723.1700
www.icc-astec.com

View a 3-minute presentation online at www.whyreplace.com



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