



The Carlisle Story

Carlisle has led the single-ply industry for over 45 years in product innovation, customer enthusiasm and system integrity. And now, we have achieved an industry milestone with the production of our 12 billionth square foot of single-ply membrane.

1960s

1970s


1980s

1990s

2000s

The Carlisle Story

The first single-ply membranes,
introduced commercially in the
1960s, were met with little
acceptance and the market
share significantly lagged behind
built-up and asphalt roofing
systems.

 The 1960s



The restaurant at O'Hare International Airport was one of Carlisle's earliest membrane roofing system installations. This 1961 application was simply the appetizer for today's Fully Adhered system.

The 1960s

in the beginning

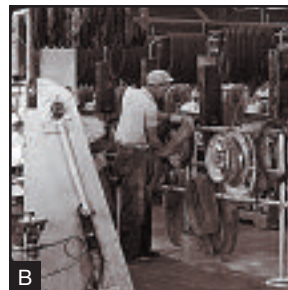
While The Beatles were making their inaugural steps onto U.S. soil and changing the music industry, Carlisle was introducing single-ply membranes to the roofing industry. They say it was a Revolution. And, when the country's second youngest presidential candidate (John Kennedy) was courting the public, the new single-ply membranes

were wooing conventional hot roofing system contractors. From inner tubes to water retention linings and below-grade waterproofing to horizontal silage covers and salt pit liners, single-ply membranes were taking new shape in the '60s. A brief blurb in **Carlisle's 1963 Annual Report** summarized the progress. Carlisle EPDM, a relatively

new construction material, is winning wide acceptance because of its outstanding qualities."

By the middle of the decade, Carlisle roofing membranes were being specified "on applications in some of the newest and largest buildings in the nation. Glamorous applications of Carlisle EPDM are found on such

structures as the Equitable Building, in Chicago and the Manhattan Towers, New York City" (as reported in **Carlisle's 50-year Anniversary Report, 1967**).



A Carlisle SynTec's founding company was housed in this building in Carlisle, PA, 1917.

B In 1927, the first commercial molded inner tubes were manufactured and sold by Montgomery Ward.

C While asphalt roofing was the commercial roofing system of choice, the '60s unveiled Carlisle's ability to produce wide widths of rubber sheeting.

Innovations

- In the '40s, the company installed the first Banbury Mixer and introduced synthetic rubber technology
- In the '50s, the first large elastomeric membrane sheets were produced and used for rainwater catchment basins in Utah and salt pit liners in Texas. These installations were legendary to the future of single-ply roofing as field seaming technology was invented.
- Ideas for usages of membrane sheeting flourished during the '60s. Linings for oil field ponds, waterproofing parking garages, potable water storage tanks along with conventional uses including roofing and pond linings, were investigated.

The 1970s

in these years

During the Arab oil embargo in the 1970s and the resulting shortages, the quality of asphalt available to the market diminished and the product escalated in price. Instantly, the demand for elastomeric membranes exceeded supply despite expanding The U.S. staggered awkwardly when Richard Nixon resigned after The Watergate hearings. In front of an estimated viewing audience of 40 million, tennis champion Billie Jean

King defeated Bobby Riggs in what was publicized as the Battle of the Sexes. And, an energy crisis in the late '70s was the turning point for single-ply's victory in the market. Asphalt roofing products shot up in price and quality went down. And, the positioning for EPDM membrane roofing systems couldn't have been better.

In the mid-1970s, Carlisle's Construction Materials Division grew by 80%.

Business jumped to **\$140 million in 1975**. Contractors were standing in line to obtain the product. Carlisle's then sole manufacturing facility in Carlisle, PA published an EPDM price list with special attention to its 26-week lead time for shipments.

From the Corporation's **1977 Annual Report**, "The company's custom-designed EPDM roofing systems, utilizing

elastomeric membranes, have become one of the fastest growing lines. The company has developed an extensive network of approved roofers and is marketing the line in Europe, North Africa and the Middle East. Because Carlisle roofing systems offer a number of advantages over conventional systems, they are expected to continue to capture an increasing share of the roofing market."



A From the early years until today, Carlisle's primary commercial and industrial market is for low-slope roofing applications.

B Carlisle's product offerings grew during the 1970s and as new roofing systems were introduced, so were complementing accessories for single-source purchasing.

C Carlisle initiated inspections conducted by Carlisle technicians.

Innovations

- Carlisle's production facility was expanded to 800,000 sf
- Automatic carbon black system and a 2-story mixing facility constructed
- New headquarters erected
- First single-ply manufacturer to provide installation inspection services conducted by Carlisle Technicians
- First manufacturer warranties issued
- Design and Review Department developed first installation specifications and details for EPDM single-ply roofing systems

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NRCA reported EPDM was the most popular low-slope commercial roofing material. Sheet size from 50' x 200' made industry headlines. SecurSeam, Carlisle's field seaming technology, was lauded for "best invention" by industry experts; white EPDM membranes provided the architectural community with color options for highly visible installations. And while the non-residential roofing market was in a decade of decline, Carlisle's single-ply roofing accounted for 40% of the total market.

The 1980s



At the 1982 World's Fair, Knoxville, TN, Carlisle membrane was selected to cover the Sunsphere's observation area and revolving restaurant, some 266' in the air.

The 1980s

in these years

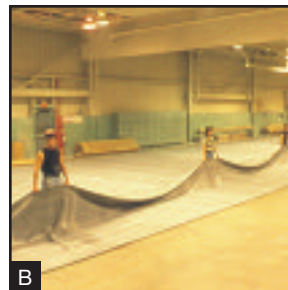
Addressing supply and demand, the Carlisle, PA production facility underwent a substantial expansion and a second manufacturing plant was constructed in Greenville, Illinois. **In 1982 and 1983**, Carlisle built a research and development facility solely dedicated to single-ply membranes, products and systems. **In 1986**, Carlisle's then



President reported, "with the amount of roofing we've installed, we could cover more than 12,000 football fields, including end zones."

The 1980s' explosion was partly due to roofing contractors recognizing the value-added benefits of EPDM membranes.

According to SPRI (Single-Ply Roofing Institute), the



reasons for the overwhelming reception included "material-, design-and installation-benefits, and manufacturer/supplier support and stability." Architects and building owners coined our tagline "There is No Equal" and added it to specifications. Carlisle roofing systems were an easy fit for most every slope and climatic



condition, and confidence in its longevity was high. During this decade, Carlisle introduced the first polyester-reinforced membranes for added system strength, durability, puncture- and tear-resistance and design options.

- A** In 1981, Carlisle was the fourth most active stock on the New York Stock Exchange.
- B** Phenomenal growth spurred changes to corporate structure and the Construction Materials Department became a separate operating division under the name Carlisle SynTec Systems.
- C** At the CajunDome in New Orleans, roofing crews assembled specially manufactured membrane panels to conform perfectly to the architect's specifications.

Innovations

- Carlisle's \$10 million dollar R&D facility was solely devoted to single-ply roofing product innovations
- To meet supply and demand, another EPDM sheet manufacturing plant opened in Greenville, IL. The plant produces large membrane sheeting
- Solely devoted to single-ply adhesives and sealants, a new production facility opens in Carlisle
- The 15-year warranty was introduced
- The Adhesives and Sealants Plant opened
- Nearly 800 authorized applicators were specially trained to install Carlisle single-ply systems

The Carlisle Story

In this decade, Carlisle acquired

Goodyear Tire & Rubber's

Versico business and Carlisle's

product line grew faster than

analysts predicted. And the

introduction of FleeceBACK

membranes enhanced

system offerings.

The 1990s



Carlisle's 75-mil membrane was used to protect the Bristol-Myers Squibb pharmaceutical research facility.

The 1990s

in these years

The '90s marked exponential Internet growth and O.J. Simpson's infamous L.A. freeway drive had Americans glued to their televisions.

At Carlisle, seaming glues were being replaced with splice tapes on talc-free membranes to improve performance and reduce the installed cost of EPDM roofing systems. **In 1996,**

a study documenting the historical performance of roofing assemblies in the United States revealed that EPDM roofing systems outperformed conventional asphalt built up roofs by more than four years. In addition, life-cycle costs of the EPDM roofing systems were determined to be 35% less than the asphalt BUR systems.

Gripping audiences across the globe, The Broadway production of Miss Saigon premiered early in the 1990 decade. Today, Miss Saigon and innovative introductions, like Carlisle's FleeceBACK® Roofing Systems, are still in high demand and still command much attention. FleeceBACK non-penetrating roofing systems use an

adhesive to adhere the membrane to the deck surface.

These product and system introductions, born in the '90s, are even stronger in the New Millennium.



A A new MGM hotel was constructed in the early 1990s. Architects for the resort specified Carlisle membrane roofing systems.

B Due to its heavy rooftop traffic, the roofer, consultant and architect chose a FleeceBACK System for Crestar Bank.

Innovations

- High performance splice tapes
- PRE-KLEENED EPDM Membranes
- FleeceBACK Membranes
- An interactive website
- Low VOC accessories addressing environmental sensitivity
- ENERGY STAR rating achievements

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In contrast with its single product focus more than 80 years ago, Carlisle now reaches out domestically from 21 manufacturing locations, 80 manufacturer and representative offices and eight regional sales offices to serve the non-residential single-ply roofing marketplace.

The 2000s



A recent study examined the long-term performance of membrane properties. And, when coupled with the advances in accessory technology, it is fair to assume that EPDM roofing systems installed today will provide protection for the structure for the extent of the warranty period and beyond.

The 2000s

in these years

As each decade can be symbolized by an event, milestone or trend in our country's culture, Carlisle is proud to be the pioneer of the roofing industry revolution that began more than four decades ago. By introducing innovative and revolutionary products and systems, we have changed the roofing industry forever. Today, Carlisle celebrates the completion of more than

200,000 projects involving more than 12 billion square feet of roofing membrane and looks forward to decades of innovation.

Choose Carlisle for your next single-ply roofing installation and receive more than 45 years of experience, innovation and reliability with every installation.

EXPERIENCE: Carlisle is committed to providing the best long-term single-ply

roofing systems, services and warranties in the commercial marketplace.

INNOVATION: While EPDM remains a constant of Carlisle's product line, the company is dedicated to meeting all your roofing needs. Over the years, this commitment has resulted in product line extensions with our FleeceBACK systems, pre-fabricated accessories and factory applied tape (FAT™)

RELIABILITY: From manufacturing EPDM to field experience, roof system designs and unsurpassed warranties, our mission is to provide the best roofing solutions for your applications.



A Carlisle introduced membranes manufactured with Factory-Applied Tape (FAT™) for seaming integrity and installation efficiency.

Innovations

- Hot Mopped Roofing System
- Ergonomic seaming equipment
- Pressure-sensitive accessories
- 30-year roofing system
- 90-mil EPDM membranes
- Factory-applied seam tapes
- GeoMembranes
- FleeceBACK and EPDM Membranes manufactured with FAT
- Building Owner Services Department initiated
- Acquisitions:
 - MiraDri
 - Hunter Panels
 - EcoStar
 - DynAir
 - Insulfoam
- More than 45 years in single-ply and 12 billion square feet of single-ply membrane manufactured

Carlisle's EPDM can help you save more money on your energy costs in a variety of locations

Roofing the World for Over 50 Years

Exclusive UK & Ireland distributors for Carlisle-Syntec and RubberBond EPDM

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