



SUSTAINABILITY

Respect for the environment

*Milliken*TM

Sustainability

Sustainability is at the core of Milliken's philosophy to 'do good' for the world. We believe that a healthy enterprise and a healthy earth are vitally linked and we hold ourselves accountable to the highest ethical standards. We derive greatest satisfaction from the development of products and services that make a positive impact on the world. Our innovation process is centred on 'doing good', creating products and services that add value to people's daily lives, improve health and safety and help to make the world more sustainable.

Over 100 Years of Environmental Stewardship

Milliken has been a leader in sustainability for more than a century. In fact, Milliken's first recycling policy was established in 1900, and we began investing in renewable energy in 1912. By 1960, Milliken had formal policies in place to protect natural resources. We have been tracking wastewater and energy use since 1971 and we introduced the first PVC free cushion backed carpet tile in 1986.

We have made great progress toward achieving our goals to reduce our environmental footprint but the journey to sustainability is constantly evolving. We continually challenge ourselves not only to improve, but also to be transparent and fully accountable to all our stakeholders and communities. Progress and measurements are reported through our Annual Sustainability Report.



Products

Milliken uses Life Cycle Assessment (LCA) methodologies, including BRE Environmental Profiles and Environmental Product Declarations (EPDs), to design products that minimise their environmental impact. Our product development process is focused on designing innovative products that are not only greener but also improve workplace productivity by making the workplace healthier and safer.

Products with Maximum Recycled Content

To reduce our environmental impact, wherever possible, we develop products using locally sourced raw materials with recycled content. To achieve the greatest environmental benefit, we have used LCA methodologies to prioritise the use of recycled materials to substitute oil based components.

Recycled yarns

Milliken now offers over 500 design and colour options using Econyl® 100% regenerated nylon, featuring 50% post-industrial and 50% post-consumer recycled content.

Collections featuring Econyl include; Clerkenwell, Consequence 2.0, Dissident 2.0, Light Trails, Naturally Drawn, Out of the Shadows and Urban Collective.

Recycled backing materials

Comfort Plus®, Milliken's innovative cushion backing, includes 90% recycled polyurethane, providing a light weight backing solution that is not only environmentally sound but also enhances performance in use.



Top—Naturally Drawn, Drawing In Ink and Watercolour Lesson /
Lower—Light Trails, Night Life

Naturally Drawn and Light Trails are produced using ECONYL yarn with 100% REGENERATED NYLON and featuring 90% recycled content cushion backing. Both collections achieve a BRE environmental profile A+ rating.

ECONYL[®]
Made with 100% Regenerated Nylon

By understanding the Life Cycle impact of our products, we are able to develop collections that not only minimise waste in usage but also maximise their useful life.

Products that Minimise Waste

Omni®

Omni is a patented design concept that allows Milliken modular carpet patterns to be totally non directional and therefore installed completely randomly on the floor. This reduces installation waste as no pattern matching is required. A typical modular carpet installation averages 4% wastage and a typical broadloom installation averages 10% wastage. With Omni, wastage is estimated at less than 1%. Also, with no directional arrows to follow, Omni carpet is quicker and easier to install, saving installation time and cost.

TractionBack® adhesive-free installation

TractionBack not only reduces the raw materials used during installation, it also reduces installation time and cost. Indoor Air Quality is also improved through the elimination of VOCs associated with adhesive.

Optimising face-weight for performance

Milliken ensures that products are not wastefully over-engineered and are designed with the optimum face weight for their budgetary and performance requirement.

Products that Maximise Their Useful Life

Comfort Plus® cushion backing

Comfort Plus protects the face of the carpet from the effects of traffic and wear and in doing so can extend the life of the carpet by up to 40%. This allows Milliken to offer carpet collections with impressive 12 and 15 Year Wear Guarantees.

Entrance matting solutions

Carpet is one of the most abused elements of a building and studies show 90% of dirt can be kept off the flooring with effective entrance matting systems. Milliken offers a highly effective system of modular matting solutions designed to provide a primary barrier for dirt entering a building. Not only does this keep the carpet clean, it increases its longevity and improves indoor air quality.

SUSTAINABILITY



Responsible Manufacturing

The way products are manufactured also has a significant impact on their environmental footprint. Milliken's production processes go beyond regulatory compliance. We are continually focused on the reduction of all forms of emissions waste and pollution.

Milliken's European carpet production facility is located in Wigan, in the north west of England. The Wigan plant operates using the following principles of environmental efficiency:

- **ISO14001** - the highest standard for efficient and environmentally responsible manufacture
- **ISO9001** - the highest standard for quality
- **ISO 14006** - design for environment guidance, ensuring that the best practice of **ISO 14001 and 9001** is considered at the design stage
- **LEAN** manufacturing principles for efficiency

Resource Consumption

Reducing Milliken's resource consumption is a vital component in our sustainability journey. We purchase electricity from renewable sources and recycle production waste. Wherever practical, raw materials are sourced locally, from ethically and environmentally approved suppliers. These efficiencies are reflected in our BRE ratings which show the continued reduction in environmental impact.

Over the past 10 years:

- **Gas Consumption: 61% reduction/m²**
- **Water Consumption: 36% reduction/m²**
- **Electricity Consumption: 40% reduction/m²**

Milliken's operational success means that our facilities are now benchmarked by 1000s of companies worldwide.

End of Life

Keeping unnecessary waste out of landfill is a key part of Milliken’s environmental commitment. The **Milliken Carpet Take Back** programme provides a non-landfill disposal solution and ensures that used carpet is recovered and managed in the most environmentally, socially and financially responsible way.

Wherever possible carpet is re-used to capture its full value. In 2008 Milliken became a founder member of Carpet Recycling UK (CRUK). We now work with CRUK partners and other organisations across Europe to refurbish returned carpet tiles for use in voluntary sector organisations, small businesses and schools. In other cases, carpet is downcycled into construction products and plastic composites. Another option, to further reduce global fossil fuel consumption, is to convert the carpet into a fuel source for use in other industries.

MOST FAVOURED OPTION

Reduce	Lowering the amount of waste produced
Reuse	Using materials repeatedly
Recycle	Using materials to make new products
Recovery	Recovering energy from waste
Landfill	Safe disposal of waste to landfill

LEAST FAVOURED OPTION

Transparency and Certifications

The goal of our sustainability efforts is to 'do good,' and 'doing good' starts with communicating in an honest, credible and transparent manner. Milliken works with key industry groups and certification organisations to ensure full disclosure and complete transparency around our products and their components. Key third party certifications include:

1. Indoor Air Quality (IAQ) Certification

Milliken carpets meet the highest standards for IAQ. Innovations such as Comfort Plus® cushion backing, TractionBack® adhesive free installation and Milliken entrance matting solutions, allow Milliken products to meet the highest industry standards, including CRI Green Label Plus, DiBT "U" label and the French interiors standard.

2. Environmental Product Declarations (EPD®)

All Milliken carpet tile products carry EPDs. An EPD is an independently verified and registered document that communicates transparent and comparable information about the life-cycle environmental impact of a product.

3. Leadership in Energy and Environmental Design (LEED) Certification

Milliken carpet contributes to a range of credits under both the LEED 2009 and V4 schemes. These include meeting Materials credits and Indoor Air Quality credits in the following ways:

- Recycled content specified for each style
- Milliken Carpet Take Back program
- LCA and EPDs available for most products
- Declare label provides ingredients disclosure
- Health Product Declarations (HPDs) available
- Annual Sustainability Report, in accordance with Global Reporting Initiative (GRI) sustainability reporting framework

- ISO 14001 supplier engagement
- CRI Green Label Plus certified for IAQ requirements
- TractionBack® for adhesive free installation and LEED innovation credit

4. Building Research Establishment Environmental Assessment Methodology (BREEAM®)

BREEAM evaluates the procurement, design, construction and operation of a building.

The majority of our latest introductions achieve BREEAM A+ certification.

5. SKA Rating®

SKA rating is an environmental assessment method, benchmark and standard for office and retail fit-out projects. All Milliken carpets with an EPD qualify for Ska rating.

6. Inclusion in the Ethisphere® Institutes World's Most Ethical Company® list for 9 Consecutive Years

The World's Most Ethical Companies designation recognises organisations that have had a material impact on the way business is conducted by fostering a culture of ethics and transparency at every level of the company. Milliken is one of only 15 companies in the world that can claim this consecutive distinction.





Environmental Timeline

- 1900** Milliken's first recycling policy documented
- 1912** Milliken's first hydroelectric plant opens using renewable energy
- 1976** Milliken establishes formal worldwide environmental management system
- 1989** Comfort Plus® cushion backing developed for Milliken carpet tiles, to enhance appearance retention and extend the product life
- 1990** Milliken establishes formal corporate environmental policy
- 1990** Milliken becomes first and founding UK carpet manufacturer to join GuT, the European carpet industry environmental body
- 1995** Earth Square® carpet re-processing developed to give Milliken carpet tiles a second lifetime of use
- 1997** Milliken becomes the first textile plant to achieve ISO 14001 Environmental Management System
- 2001** Milliken achieves the first BRE LCA profile for soft floor covering
- 2002** Milliken becomes founder member of CARE, adopts 'No Carpet to Landfill' policy
- 2005** TractionBack®, adhesive free installation introduced
- 2005** Milliken becomes first carpet manufacturer to utilise methane from landfill in its operations
- 2008** Milliken becomes founder member of Carpet Recycling UK (CRUK)
- 2011** Milliken listed in the Sunday Times Green List for third consecutive year
- 2011** Milliken launches first collection using, ECONYL® 100% regenerated nylon
- 2014** Milliken introduces Environmental Product Declarations (EPDs)
- 2015** ECONYL® regenerated yarn is expanded to over 500 design and colour options
- 2015** Milliken listed in Ethisphere's World's Most Ethical Companies List for the 9th consecutive year

150 years of innovation
Design-led technology
Respect for the environment
Products that inspire

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