

Tretford Cord Carpet Tiles and the Environment

Introduction

We believe that business should act in a responsible manner for the benefit of all its stakeholders. We consider our stakeholders to include not just our shareholders, our employees, our suppliers and our customers, but also the local society in which we operate and the global society from which we draw our raw materials and into which we sell our products.

This document outlines our approach to issues and practices of environmental concern.

It is not intended to be an exhaustive document but one which reflects an ever-evolving position and a desire to constantly improve.

It is also not a complete document because it concerns only our environmental policy. We acknowledge that an outwardly, environmentally-responsible business is not necessarily a responsible business if its environmental efforts are not consistent with or are undermined by policy decisions taken in other areas. We have been careful to adopt an integrated approach to the development of our environmental initiatives and policies so that they are net positive and sustainable.

We have considered the impact of both our manufacturing operations and the materials and products we consume and produce. Our Environmental Management Systems are continuously reviewed and up-dated and are integrated at all levels within our organization.

We examine, evaluate and review energy usage in our manufacturing processes and implement energy conservation programmes. New processes and cleaner technologies are investigated and used whenever possible. Waste avoidance and reduction and waste recycling initiatives are vigorously pursued and implemented. Raw materials are sourced from suppliers who share our commitment to environmental responsibility, and policies, objectives and targets are set to continuously ensure that the products we manufacture will not compromise nor, as far as is practical, damage the environment.

We aim to achieve the highest standards of environmental performance for all our stakeholders and to adhere to the principle of responsible care and continuous improvement in our business. **tretford**[®]'s environmental performance has proven to be exemplary. It is our committed intention to keep it that way.

We are happy to communicate openly regarding environmental issues relevant to our business and would welcome any feedback or queries.

Environmental Policy Statement

trefford[®] is committed to pollution prevention and environmental protection. We aim to achieve the highest standards of environmental performance in the interest of all our stakeholders: - employees, suppliers, customers, and also the local society in which we operate and the global society from which we draw our raw materials and into which we sell our products.

We are committed to complying with all environmental legislation and regulations that may apply to the industry and we will make every effort to comply with the requirements of our Integrated Pollution Control License Reg. No. 510. We will adhere to the principles of responsible care and we strive for continuous improvement in its implementation.

Raw materials are sourced from suppliers who share our commitment to environmental responsibility.

We have prepared and implement an Environmental Management System to continuously ensure that the products which we manufacture will not compromise nor damage the environment.

Our Environmental Management System and Environmental Aspects Register are reviewed annually and environmental objectives and targets are set accordingly in order to promote continual improvement.

We will examine and evaluate the environmental implications of any processes and products and cleaner technologies will be investigated and utilised where possible. We will encourage and actively pursue waste avoidance, reduction, re-use and recycling in the activities of the company and throughout the life cycle of our products.

We will continuously examine, evaluate and review energy usage in our manufacturing process and implement an energy conservation programme. We will ensure that adequate operational procedures and emergency plans are implemented and reviewed on an on-going basis. We will ensure that our employees receive adequate training in relation to our environmental policies and procedures and we will review these training needs as may be required.

We are committed to continuous improvement of our Environmental Management System and we will ensure that it shall be integrated at all levels within our organisation. We will strive for ever-improving environmental performance and we will strive to protect the environment for our employees, neighbours and all our other stakeholders.

We will adhere to the principal of responsible care and continuous improvement in our business.

Raw Materials - Eco-Preferred Content

trefford[®] cord carpet tiles are made from carefully selected, predominantly natural carpet fibres which are sourced from well managed and sustainable sources.

The principal fibre in **trefford**[®] cord carpet tiles is goat hair which constitutes 70% of the product's fibre content. The goat hair comes from the cashmere goat and is sourced in Inner Mongolia where the goats are farmed in large quantities. As the goats are clipped each year, goat hair is a renewable and harvestable resource. The hair is incredibly durable and hard wearing yet feels surprisingly soft to touch and is inherently anti-static. The hair is clipped, hand picked and sorted and then washed in a solution of mild soap. No chemicals are used and the waste water created is used to irrigate local farmland.

Three colours in the palette are made using undyed goat hair. To obtain the balance of the colours, the hair is dyed in Belgium and shipped to the **trefford**[®] factory in Wesel, Germany.

Nylon comprises up to 30% of **trefford**[®] cord carpet tiles face fibre content and is added to aid performance and ensure longevity of the carpet. Nylon is sourced from Germany where the highest environmental standards prevail.

trefford[®] cord carpet tiles are manufactured using a unique PVC fusion-bonding process and backed with high quality filled PVC. PVC bonding requires no water and so produces zero waste water effluent unlike other types of water-based bonding processes. This is one of the lesser known benefits of using a PVC bonding agent. The PVC used contains the highest quality plasticizers including DEHP and DINP and we strictly regulate the stabilizer content in accordance with EU guidelines. Only ingredients from the EU Positive List are used. DAP is not used. The pure PVC we use is non-carcinogenic, non-oestrogenic and is also non-bioaccumulative and virtually no dioxins are produced during its manufacture. It is completely inert and can be safely disposed via landfill or energy recovered via incineration at the end of its life.

All raw materials are sourced from suppliers who share our commitment to environmental responsibility. Our suppliers are regulated where required by their local environmental authorities.

As a percentage of total product weight, **trefford**[®] cord carpet tiles' eco-preferred content is in excess of 25%.

Manufacturing – Environmental Management System

Weseler Teppich GmbH & Co. KG's facility, where **trefford**[®] cord carpet tiles are manufactured operates to rigorous environmental regulations and is routinely monitored and audited.

ENVIRONMENTAL MANAGEMENT SYSTEM

We have an Environmental Management System in place which addresses the following issues related to the production of **trefford**[®] cord carpet tiles

- Emissions – gas, liquid and particulate emissions. (There are no detectable emissions from the manufacturing process.)
- Waste disposal – the waste disposal and recycling rates of all waste.
- Material minimisation– all product material inputs, including packaging.
- Energy reduction - the energy consumed during the product manufacturing process are measured recorded & reported. Weseler Teppich GmbH & Co KG monitor sections of the manufacturing process monthly as part of our Environmental Management System.

trefford[®] cord carpet tiles represent an energy efficient product. The energy cost of producing one unit of goat hair is fractional when compared with the energy cost of producing one unit of synthetic fibre. Nor do we bleach our goat hair prior to dyeing. In fact some of our carpet colours are the natural colours from the goat which are used and/or blended, undyed.

We continue to constantly examine and evaluate how to improve our manufacturing process to effect energy conservation. Examples of implemented strategies to maximise energy efficiencies are the cleaning and scouring of the goat hair in China before being shipped to reduce freight costs, i.e. we ship only clean input raw material.

In addition our goat hair is sorted by hand which reduces our total consumption of carbon-based fuels, leading to further energy efficiencies.

The water used at the goat hair cleaning plant is from groundwater and rain water supplies. The waste water at the end of the process is used to irrigate local farmland. This is feasible since the water has a low COD (Chemical Oxygen Demand); goat hair has a very low lanolin content compared with wool.

Similarly 90% of the water used in the dyeing process is from a local ground water supply and a further 10% is from a recycled water supply. Following the dyeing process the waste water is recycled off-site by a recycling company. The recycling company is licensed to discharge the recycled water to a local canal.

trefford[®] cord carpet tiles' unique fusion-bonding manufacturing process produces zero waste water.

On-going initiatives to achieve excellence in Quality Control ensure that there is minimal post industrial waste. Of the waste produced, off cuts are used for sampling.

Our policies, objectives and targets are continually monitored and set to consistently ensure that the product that we manufacture will not compromise nor, as far as is practically possible, damage the environment.

Installation – Designed For Disassembly

There are distinct and positive energy savings in the use of **trefford**[®] cord carpet tiles over other forms of carpet/carpet tile at the installation stage.

The pliable nature of the product results in easier handling/installation and its soft flexible backing reduces risk of damage to other materials at point of installation reducing the likely need for repair/rework.

US studies have shown that over 60% of installed carpet failures occur due to poor installation and that the greatest number of these failures occurs at the seams, i.e. seam breakdown. **trefford**[®] cord carpet tiles have non-ravel properties which mean that this cannot happen with **trefford**[®] cord carpet tiles.

trefford[®] cord carpet tiles' 50cm x 50cm format results in much lower wastage than broadloom and is significantly easier to transport and move around site, not requiring any specialist lifting (cranes) or transport equipment on site. It can be moved easily up stairways and in elevators.

In line with the latest work-place requirements we support the use of solvent-free adhesives with low VOC emissions.

An installation of **trefford**[®] cord carpet tiles can be easily “disassembled without the use of specialist tools and equipment”.

trefford[®] cord carpet tiles' unique construction also means that they can be cut in any direction without fraying.

In-Service - Durability

trefford[®] cord carpet tiles' predominantly goat hair face fibre is one of the toughest natural carpet fibres available resulting in a product which has a longer life. The highest quality PVC bonding agents used in manufacturing **trefford**[®] cord carpet tiles also mean no flaking, rotting, warping or peeling. Longer life means less frequent replacement which is better for the environment. **trefford**[®] is extremely hard wearing and, over the past 40 years, has become synonymous with durability in demanding environments.

trefford[®] cord carpet tiles' unique construction and the rigorous quality control applied during manufacture also ensure one of the lowest industry service failure rates. This reduces the incidence of failure requiring replacement to a level far below the industry average.

trefford[®] cord carpet tiles can be easily repaired or replaced if damaged.

Each of **trefford**[®] cord carpet tiles' 35 colours has a star-rating based on their soil hiding characteristics. 3-star colours are suitable for heavy soiling areas, 2-star for medium soiling and 1-star for low soil environments. This helps specifiers and end-users make the correct colour choice in the first instance.

The typical service life of **trefford**[®] cord carpet tiles is 15-20 years for residential applications and 7-10 years for commercial applications. However the lack of a regular and effective maintenance programme and appropriate entrance matting can negatively affect the service life of the carpet.

We assume responsibility for the constant evaluation (and re-evaluation) and promotion of the latest, most effective and most environmental-friendly, end-user maintenance systems. Currently, we recommend that **trefford**[®] cord carpet tiles be cleaned using a dry or low moisture cleaning system such as HOST[®]. Low moisture systems are suitable for both periodic and deep cleaning and are guaranteed not to promote mould or mildew growth. The HOST[®] system is safe and non-hazardous; virtually no VOCs are emitted from the organic biodegradable cleaning compounds. Cleaning with this system allows users to return their carpeted room to use immediately. Wet/steam cleaning is also an acceptable method of cleaning provided it is done properly. However it does not offer the same environmental benefits. Low moisture cleaning uses water at a rate of less than 1ml/m². Therefore, if a carpet is cleaned every six months over a 10 year period, less than 20ml/m² of water are used over the entire period on maintenance.

For Advice regarding the most appropriate carpet cleaning system for your facility; supplies of Carpet Cleaning Products; Spotting Kits and Carpet Maintenance Programmes - Call our Approved Service Partner – Beaver Floorcare 0800 0752021 www.beaverfloorcare.co.uk

Goat hair is a natural insulator which means energy savings. It has excellent acoustical properties further improving the in-door environment. And, of course, breathable natural fibres are now proven to positively affect in-door air quality (IAQ). **trefford**[®] cord carpet tiles act effectively as an air filter, reducing the level of airborne dust and allergens in the indoor air environment. Wind must blow at approximately 10 times higher velocity over **trefford**[®] cord carpet tiles than over smooth or resilient floorcoverings to raise equal levels of dust from the floor surface. This is a major positive for asthma sufferers. In-service carpet VOC's (in-door air quality indicators) have been routinely tested and the results for **trefford**[®] cord carpet tiles are so low, many are below detectable limits. Further information on any of the above is available on request.

trefford[®] cord carpet tiles carry a life-time warranty against edge ravel and fraying which guarantees that edges will never breakdown.

trefford[®] cord carpet tiles carry a standard 5yr wear warranty but this can be extended to 7yrs, 10yrs or even 15 yrs on request, subject to the colours chosen and the characteristics of the individual installation/project for which it has been specified. As a general guide, 3 star colours offer the best soil hiding and appearance retention characteristics and will generally qualify for longer wear warranties.

Please note that in offering our warranties, **trefford**[®] uniquely takes appearance retention into account. Typical warranties consider only percentage fibre weight loss over time so it is possible for a product that has been warranted for up to 15 years to require replacement after as little as 6 months due to the unacceptable state of the carpet's appearance.

Post Consumer

While **trefford**[®] cord carpet tiles are 95% non-reusable, they do not contain any toxic or proscribed constituents that limit their safe disposal in waste to energy facilities

Modularity

trefford[®] cord carpet tiles offer all of the advantages of modularity:

1. They are easily transported and require no specialist lifting or transportation equipment, e.g. cranes, in transit or on site.
2. They are easily man-handled during installation, reducing incidental damage to other finishes and therefore the need for rework.
3. They are easily installed and wastage is low (generally less than 3%).
4. Their modular format allows easy replacement of damaged, stained or worn areas without the need to replace the entire installation.

Certifications

An environmentally preferable product certified by:

