

# A History of Carpet Tile

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## PREFACE

The following article has been researched by the author via the simple means of Google and by the recalling of his own experiences in the Carpet tile Industry over the past 25-30 years. During this time he worked for DuPont (Australia) at a time when the Milliken PVC/Fibreglass carpet tile was introduced into Australia under the name of Feltex Modular Carpets, he then was head-hunted to work for Feltex Modular, and witnessed the growth of their great competitor, Interface. Today, he is joint owner of the agency for Carpets Inter/Tai Ping, the inventors of EcoSoft carpet tile backing, a backing that promises to take the carpet tile industry into a future of greatly enhanced sustainability and social responsibility.

He unapologetically reprints a large portion of a blog (<http://blog.focusfloors.com/blog/a-brief-history-of-carpet-tiles>) which succinctly describes the evolution of this product in Europe and the US. The description seems to accord pretty well with his own knowledge, memories and oral history, so only a few changes have been made in order to knit it more seamlessly into the article.

However, interested readers may have other recollections or even first-hand experiences that could serve to correct, clarify or enhance – we welcome those contributions.

## THE HISTORY

### 1. EUROPE & US (with thanks to john from focusfloors)

The concept of flooring tile goes back thousands of years when hard surfaces of various rock forms, baked clay, and ceramic were being used. The early users of these initial tile flooring types needed something to cover their dirt floors that were of a size that could be easily carried to where the floor was located. These hard surface types of flooring preceded woven grasses and fabrics that were used to cover the ground such as mats and rugs. As civilization progressed, wood tiles and certain forms of metal, glass and rubber tiles were used. Also, finely finished rock such as limestone and granite were being improved for the, now, classic look of stone tiles.

Flash forward to the mid-nineteenth century and you find the first carpet tiles being used. It was then that a small Dutch company outside of Amsterdam, Holland made the first “true” carpet tile. The name of this company was Heuga and their initial business was making bicycle seat covers with animal hides. They purchased a needle punch machine which enabled them to use the horse and hog hair yarn to manufacture wider width fabric ideal for carpet tiles. Heuga strived, at this relatively early date, to make sure that they were using a waste by-product from local slaughter houses. Not only did they continue to cut their bicycle seats from this new fabric but they began to sell rugs and broadloom carpet. However they were still concerned with using as much of the product as they could to eliminate waste. They began experimenting with putting an Asphalt (Bitumen) backing on their fabric to give it stiffness and further

durability plus dimensional stability and they cut it into 10 inch squares so the homes and commercial buildings using their product didn't create the waste they did when cutting in a wall-to-wall (3.66m or 4m wide rolls) carpet installation.

Heuga was a very frugal Dutch company and it pleased them and their customers that they were using by-products for the face and backing to manufacture their new carpet tile flooring product. Asphalt came from the earth and when heated flowed on nicely to the back of their face fabric and cut nicely once it cooled into portable tiles that didn't have transporting problems as 12 ft. broadloom carpet did. Instead they had created a square 10" carpet that fit nicely in a box. This new product spread with popularity over Europe where the majority of the population lived in smaller homes and apartments. What better way to cover their floors than by transporting a few boxes of carpet tile to their place for an easy install. Carpet tiles popularity grew for use in commercial buildings as heavy traffic didn't create severe wear. Soon, Heuga expanded into needle punching synthetic yarns into their products as well. A limited supply of animal hair no longer restricted the growth of their popular product.

We'll call this period the **1<sup>st</sup> Generation of carpet tile**. The major drawback to it's ongoing success would eventually be the lack of engineered dimensional stability - each tile would shrink when cold, or expand when warm - this would prove to be a problem as the western world moved into the computer/information age.

Meanwhile, 10-12 years later in the United States the first textile company to move into carpet tile manufacturing was Collins & Aikman with their "Tex-Tiles" brand. It was a logical move for them because they were already making a six foot wide carpet with a durable cushion vinyl backing they called "Powerbond". Also, in the 1960's Milliken, at that time, the most powerful textile company in the USA bought a Lagrange, Georgia based carpet manufacturer called Callaway. This move put Milliken in the carpet business. Not only was carpet a hot product in the US, it was making noise all over Europe. Milliken took one of their young bright employees, a Georgia Tech graduate, Ray Anderson and sent him to Europe to explore their technology and further expansion into carpet. With the advice of Anderson, Milliken purchased the U.S. rights to a fusion bonding manufacturing process for making carpet tile. This particular method of making carpet tile was invented and patented by a company called Debron, a division of The Carpet Manufacturing Company of England.

It wasn't a year later that Ray Anderson left Milliken and with a group of investors, he formed a carpet tile company initially called Carpets International of Georgia. Within nine years (by 1979) the company had grown to \$80 million in annual sales of fusion bonded carpet tile. They changed the name to Interface and today that company has carpet tile sales in excess of \$350 million.

Throughout the 70's and 80's USA based carpet tile manufacturing led by Interface, Milliken and Collins & Aikman successfully introduced carpet tile into the growing mainstream

commercial market. Milliken (and Interface) who initially pioneered fusion bonded carpet tile in the US moved to incorporate tufted carpet tile surfaces as well. Collins & Aikman had always just been tufted. Tufting is faster than fusion bonding. US based manufacturers have led the technology worldwide in the development of highly innovative tufting machines.

Fusion bonded technology continues to be important to Milliken in its cut-pile offerings, but Interface appear to have phased their version of Fusion Bonding out of their product offerings, using tufting almost exclusively.

In 1988 Heuga, the original manufacturer of carpet tile was looking for someone to buy them and Interface made the purchase. Heuga had begun to sell their carpet tiles into the USA under the brand name of FLOR. Keep that brand name in mind as we continue to spin the history of carpet tile.

**This is now the 2<sup>nd</sup> Generation of carpet Tile.** We call it this because the tiles needed to be stabilized - they needed to retain their shape and dimensions under all office conditions - in an increasingly litigious world, failure to do so may have led to OH&S issues such as tripping etc., but aesthetically and practically, a dimensionally stable tile was a far superior solution.

To achieve this, PVC/fiberglass backings were used - in the years to follow, environmental concerns would cause this backing to be denigrated (correctly so), but at the time, it enabled carpet tile to grow enormously, moving into areas that previously would never have considered any style other than broadloom. Other issues that would eventually be seen as negative were a hardness underfoot, poor acoustics and poor insulation, particularly by the person living in these environments, but for the Facility Manager, the benefits far outweighed any comfort issues.

The decades of the 70's, 80's and 90's for the western world had phenomenal growth in commercial office space. Much of this growth was high rise, large floor-plate campus, or skyscraper office buildings. There were several reasons buildings of this type drove the popularity of carpet tile. Originally this sort of construction had multiple columns to not only support the building but to house heating, air conditioning and electrical wiring. Newer building techniques with lighter but stronger steel had done away with the need for the majority of these columns and the space between the floors housed these wires and vents. To facilitate frequent access to these electrical and heating and air functions, raised floor panels were developed. These panels are approximately 2ft. (approx. 600mm) square and have adequate space beneath them and the ceiling of the floor below to house these functions. Rather than having a hard surface cover them, it was desirable to have a functional carpet tile that could easily be lifted to access these panels for maintenance. Also, carpet tile could be easily transported and stored within these buildings while 12ft. (3.66m) wide carpet could not. As work stations could be reconfigured in this work environment carpet tile could be easily

rearranged as well. Working on one small area of the office didn't have to disrupt the other workers.

It was also the era of the rise of the Facility Manager, whose corporate role it was to ensure an efficient functioning of the corporations building assets - carpet tile met this need as it facilitated the flexible environment required in an era of immense churn - change was occurring everywhere, and this was particularly seen in the office environment, as companies strove to maximize use of spaces, but facing the challenges of changing corporate requirements.

Because of this fantastic growth of carpet tiles due to their ease of installation etc., it wasn't long before all the major carpet manufacturers included them in their line of floor covering.

The advent of the 2000's has seen a dramatic rise in awareness of a need to look after our planet.

**So this now brings to the 3<sup>rd</sup> Generation of Carpet Tile.**

In this current generation, there is recognition of many of the issues around the use and disposal of PVC and other types of hazardous/non-degradeable carpet backing materials. So industry and the carpet industry have undertaken dramatic efforts to replace/substitute PVC and fibreglass, but still retain all the benefits derived by that 1970's development.

Just what type of backing will become the mainstay in the coming decades remains to be seen, but one type is certainly worthy of mention – and that is the EcoSoft backing system developed by Carpets Inter/Tai Ping (in Thailand – perhaps a harbinger of Asian influence and ingenuity) which not only retains all of the positive benefits, but also adds further benefits such as enhanced underfoot comfort and superior acoustic and insulation qualities. It also “breathes” which means the issues of Wet Concrete Slabs (a multi-billion dollar health concern in western nations) is resolved. Incredibly this has been achieved by taking existing waste products made from PET (e.g. water bottles etc.), a readily multiple-recyclable product, and re-engineering the waste into EcoSoft carpet tile backing.

Other types of “sustainable” efforts are taking place at many carpet-tile manufacturers – the inevitable result of our competitive economic system. This augurs well for the future of commercial floorcoverings and the floor-covering industry. Who knows, what the 4<sup>th</sup> generation will bring us – perhaps a tile that decomposes to become a healthy soil at the end of its useful life – now wouldn't that be worth striving for.