



Neoflex™ – The Environmentally Friendly Choice

Neoflex™ is an environmentally friendly homogeneous rubber floor covering made of recycled and synthetic rubbers. Direction free rubber chips supplied in a variety of colours, allow for a wide variety of patterns and expands the designers' choice to express their creativity. Neoflex™ brings a large range of designs and colours making it easy and efficient to design.

Neoflex™ contains a high percentage [up to 80%] of recycled rubber and contains no substances that harm the environment. It is halogen free, formaldehyde free and PVC free. Neoflex™ itself can be fully recycled and does not generate toxic substances at the end of its useful life.

BENEFITS OF Neoflex™ RESILIENT FLOORING

- * naturally slip resistant, even when wet. Therefore, SAFE to use.
- * sound absorbent, due to the use of flexible compounds
- * flexible – it will not crack
- * resiliency – soft to the touch and feel and comfortable to walk on
- * environmentally friendly
- * custom colour choice – online Think Color™ Tool
- * economical over its life cycle

Neoflex™ is a durable resilient rubber flooring product which is designed to last as long as the life of the desired application. We recommend it for any commercial application, except commercial kitchens, whether indoor or outdoor. Studies confirm that choosing rubber flooring such as Neoflex™ is one of the most cost effective to purchase when calculated over a life cycle.

Neoflex™ is made of rubber particles [granules] which are bonded using a polyurethane binding agent. Rubber particles and the polyurethane binding agent are mixed and then poured into a mould and left to harden at regular air

temperature – requiring little energy – the only by product that is created during this process is Carbon Dioxide gas i.e. CO₂. The hardened rubber is then cut at a specific thickness. The rubber particles in the surface produce a pattern but also a unique terrazzo like structure. The benefit Neoflex™ has over vulcanised rubber floors is that it is softer which gives you several advantages: more comfortable to walk on, creates less step noise, assures less noise reverberation and ensures better slip resistance.

Lastly, Neoflex™ offers endless colour choices: because we can mix the rubber particles in just about any combination, we can create custom colours for architects and designers quite easily. This gives enormous flexibility to the architects and designers to create something specific and unique to their requirements.

Rephouse has introduced a new fully interactive on-line floor design programme to allow anyone to create colour designs for Neoflex™ Resilient Flooring straight on a computer screen. This program, called *Think Color™*, is simple to use, allowing one to experiment in creating unique designs which can be printed, used as well as order a representative sample.

Visit www.rephouse.com and click on the Think Color™ button to gain access to this unique internet tool. It is free and requires no pre-registration.

Vulcanised Rubber Floors

Hard, vulcanised rubber floors are a different kind of rubber flooring product when compared to Neoflex™.

Vulcanised rubber floors rubber floors are treated with sulphur. Vulcanised rubber is mixed in a high pressure moulding machine and when still soft it is then sent through several pressure rollers and made into a flat sheet. The result is that this type of floor is very hard, dense and smooth. The positive aspect of this type of floor is that it is durable and easy to clean however, they do not perform as well environmentally : the manufacturer uses a lot of energy during production as well use sulphur [not very environmentally friendly] to cure the rubber product.

Poly Vinyl Chloride [PVC] Flooring

PVC/Vinyl Flooring : are cheaper to buy than Neoflex™ but offer:

* little to no resilience

- * no comfort to walk on as they are hard
- * are more noisy [they do not dampen step noise]
- * are more costly to maintain
- * expensive to maintain
- * poor on the environment because PVC is comprised of Chlorine [Cl], Carbon [C], and Hydrogen [H]. In the manufacturing process to make PVC the chlorine is separated by electrolysis: a strong electric current across the liquid solution attracts sodium ions to the (negatively charged) cathode, while chlorine collects at the anode. The electrolysis required the use of liquid Mercury [Hg] as the cathode, and traces of toxic mercury frequently contaminated by-products and liquid effluents.

By-products of PVC production are highly persistent, bio-accumulative, and toxic. The chemical mixtures produced in the synthesis PVC include such extremely hazardous and long-lived pollutants as the chlorinated dioxins (polychlorinated dibenzo-p-dioxins), chlorinated furans (polychlorinated dibenzofurans), PCBs (polychlorinated biphenyls), hexachlorobenzene (HCB), and octachlorostyrene (OCS). In addition, a very large portion of these mixtures consists of chemicals that have not yet been identified or tested. Many of the by-products of the vinyl life cycle are of great concern, because of their persistent bio-accumulative toxicity:

Persistence means that a substance resists natural degradation, builds up over time in the environment, and can be distributed globally on currents of wind and water. Many of the by-products of the PVC life cycle are now ubiquitous global pollutants, which can be found not only in industrialised regions but in the planets most remote ecosystems. Absolutely every person on earth is now exposed to these substances.

Bio-accumulation means that a substance is fat-soluble and therefore builds up in the tissues of living things. Most bio-accumulative substances, including many formed during the PVC life cycle, magnify as they move up the food chain, reaching concentrations in species high on the food chain that are millions of times greater than their levels in the ambient environment. These substances also cross the placenta easily and concentrate in the breast milk of human and other mammals.

Toxicity. The feed stocks, additives, and by-products produced and released during the life cycle of PVC have been shown to cause a range of health hazards, in some cases at extremely low doses, including:

- Cancer
- Disruption of the endocrine system
- Reproductive impairment
- Impaired child development and birth defects
- Neurotoxicity (damage to the brain or its function), and
- Immune system suppression.

Dioxins. Among the most hazardous by-products of the PVC life cycle are dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin) and a large group of structurally and toxicologically related compounds, collectively called dioxins or dioxin-like compounds. Dioxins are never manufactured intentionally but are formed accidentally whenever chlorine gas is used or chlorine-based organic chemicals are burned or processed under reactive conditions.

Dioxins are formed during numerous stages of the vinyl life cycle. Formation of dioxins has been documented in production of chlorine, synthesis of the feed stocks that make up the PVC, burning of vinyl products in accidental fires, and incineration of vinyl products and the hazardous wastes from PVC production.

Vinyl is a major dioxin source. Vinyl is the predominant chlorine donor and therefore a major and preventable cause of dioxin formation in most of the leading dioxin sources that have been identified. When its entire life cycle is considered, vinyl appears to be associated with more dioxin formation than any other single product.

Dioxins are global pollutants. Dioxins are now found in the tissues of whales in the deep oceans, polar bears in the high Arctic, and virtually every human being on earth. Human infants receive particularly high doses (orders of magnitude greater than those of the average adult), because dioxins cross the placenta easily and concentrate in breast milk.

There is no known safe dose of dioxin. Dioxin causes damage to development, reproduction, and the immune and endocrine systems at infinitesimally low doses (in the low parts per trillion). Toxicological studies have not been able to establish a “threshold” dose below which dioxin does not cause biological impacts.

Dioxin is a potent carcinogen. Dioxin is the most potent synthetic carcinogen ever tested in laboratory animals and is a known human carcinogen.

Dioxin poses health risks to the general public that are already too high.

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