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Industrial flooring comes 'clean'

Both flooring manufacturers and flooring contractors have a crucial role to play in delivering clean room industrial flooring solutions says Roger Harrington, Key Account Manager for Industry, Gerflor Limited.

As a manufacturer of industrial floorings that can meet cleanroom standards we are seeing a greater requirement for cleanroom solutions, some being the result of increased high technology, sophisticated and increasingly small, precision-based electronic equipment.

The pharmaceutical industry often demands a controlled atmosphere within Laboratories and Manufacturing areas impacting on flooring where certain levels of contaminants are out of the question. The need to work in a controlled atmosphere, however, extends to other research, development, manufacturing and life science industries like the electronics, cosmetics, food processing, aerospace, automotive and micro-engineering sectors, and anywhere where sensitive processes take place and contamination could be disastrous.

What is a cleanroom?

A cleanroom environment must have low and controlled levels of pollutants like airborne particles and VOCs which are specified by the number and size of particles per cubic metre, they are classified according to the ISO 14644-1 standard for cleanrooms and the ISO 14698 standard where bio-contamination may be an issue. These standards define cleanliness classes particularly in terms of particulate, molecular and micro-organism concentration.

The ISO 14644-1 standard sets the classification measured by the concentration of particles suspended in the air ranging from ISO Class 1, the most rigorous sometimes required in acute medical environments, to ISO Class 9, which equates to normal indoor air.

When designing, building or refurbishing a controlled atmosphere, a flooring solution should comply with the EU GMP Class A. It must provide excellent microbiological performance, low molecular and particulate emissions, extreme resistance to damage from chemicals, heavy traffic and mechanical wear, and most importantly, it must withstand the cleaning, disinfection and decontamination processes.

The correct PVC floorcoverings are better able to deal with these issues than any other floorcovering materials. Added to which they are very simple to repair without having to shut down the area for an inconveniently long, and probably very costly period.

Complete solution

The ultimate aim of a cleanroom is to provide a watertight, impervious 'sealed box' effectively covering walls, floors, ceiling materials and its components with nowhere for bacteria to hide. Welding a PVC flooring will provide this, however, some areas can prove problematic, corners, as it is very difficult to achieve a strong bond that will be completely watertight and resist damage from cleaning apparatus. The correct corner solutions and coving systems, flexible enough to curve in corners and rigid enough to be supportive, are a crucial part of contamination control as smooth joints and chamfered corners avoid the acute angles that harbour dirt, making them hygienic, easy to clean and decontaminate.

To address the growing need for controlled atmospheres in industry, specialist advice can be sought from Gerflor who manufacturer fully tested compliant flooring solutions.

There are also now a growing number of specialist cleanroom companies providing bespoke solutions, and Flooring contractors play a vital part as a fully effective, quality system is reliant on the skills of the installer. It is only by fully understanding contamination issues, and then installing systems according to cleanroom requirements, that the best possible solution can be achieved.

Industry by Gerflor are able to offer advice on best practice concerning both products and installation. We also offer on-site testing for a 'peace-of-mind' evaluation to ensure that the installation is fully welded and watertight.

Learn more about Gerflor solutions, ask for a free sample or contact us to speak to a specialist today by calling 01926 622 600, emailing contractuk@gerflor.com, or visiting gerflor.co.uk for the latest innovations.

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With Compliments:

Hannah Evans
The Studio 4
Grosvenor House
Central Park
Telford
TF2 9TW
Tel: 01952 234 005
Email: pr@thestudio4.co.uk

Issued on behalf of:

Navjot Dhillon
Gerflor
Wedgnoek House
Wedgnoek Lane
Warwick
CV34 5AP
Tel: 01926 622 600
Email: contractuk@gerflor.com