

CleanZone
Technology



Dycem Ltd

The importance of CC at floor level within Critical
Environments

www.dycem-cc.com

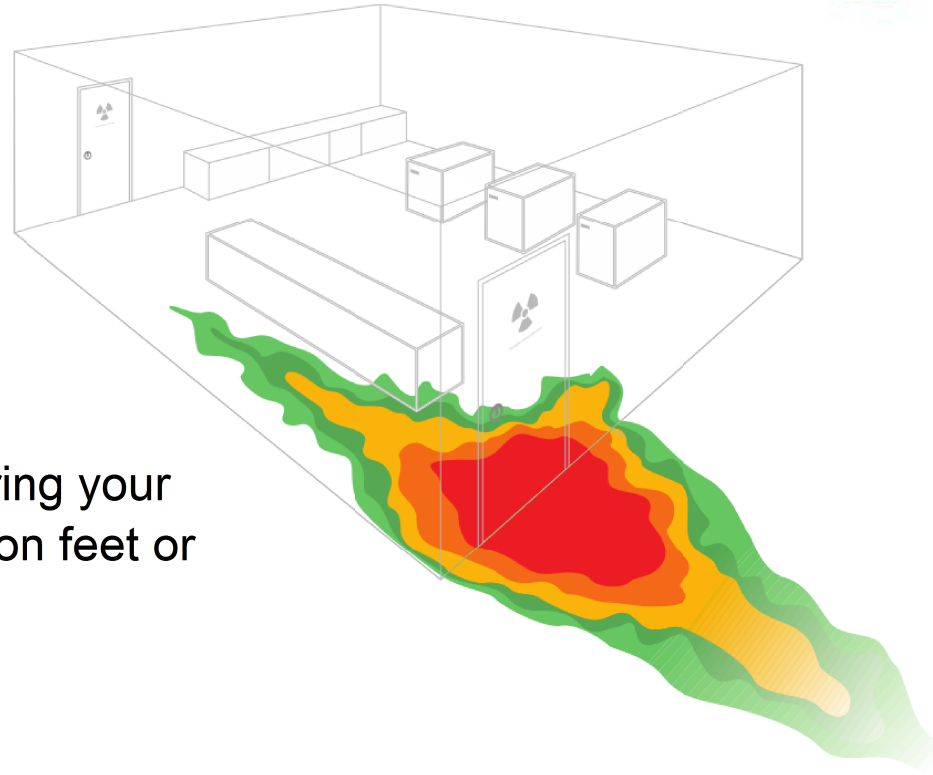
Introduction

- Dycem has been manufacturing High Performance Contamination Control Barrier Zones since 1966.
- Our diverse market place includes: Pharmaceutical, Aerospace, Semi Conductor, Disc Drive, Bio Medical, Research Labs, Hospitals, Medical Device, Fibre Optic, Computer Rooms, Optical, Automotive, Printing, Biotech, Microelectronics, Packaging and Food.
- We have a wide range of product options, including loose laid mats, fixed mats and bespoke floor coverings.



Can you relate to
this type of risk?

80% of contamination entering your
critical environment does so on feet or
wheels. (Source: 3M)

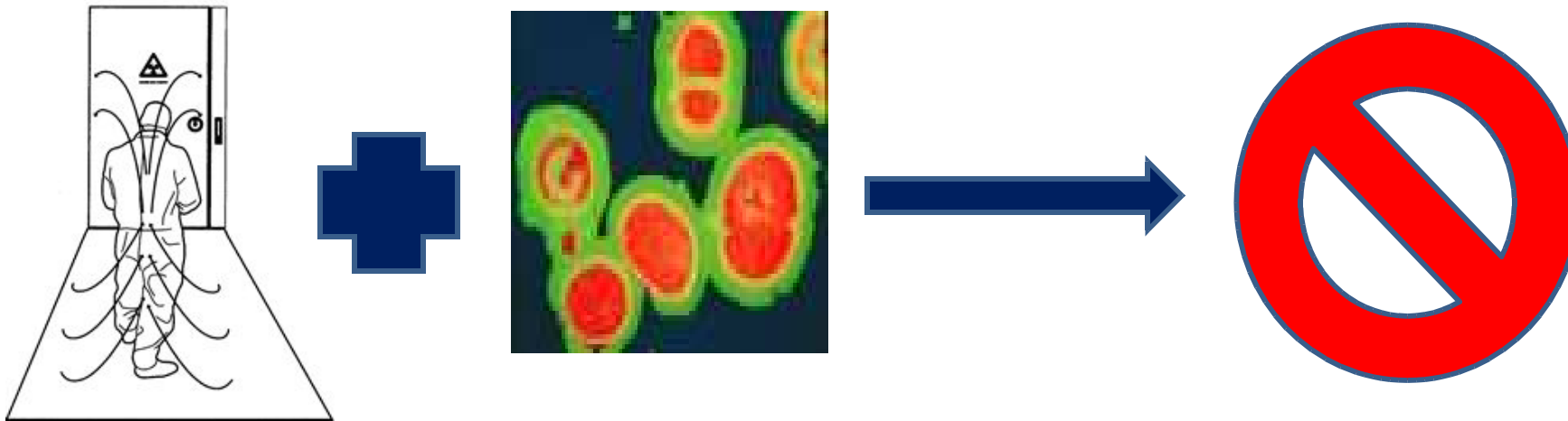


Contamination > product yield damage > greater manufacturing downtime >
costly losses on time/effort > damage to brand competitiveness

Avoiding Risk – Current solution / Alternatives

NOTHING

No control system in place will cause higher risk of particle spread through traffic flow



Common Solution – Adhesive Peel off mat



- Acrylic power only – No Science
- Ineffective particle control
- Quality determined by strength of glue, price, origin – No Control
- Too small for full retention
- People avoid them!
- Difficult to control protocol
- Consumable – High Cost Long term
- Contaminated waste costs when thrown away
- Non recyclable



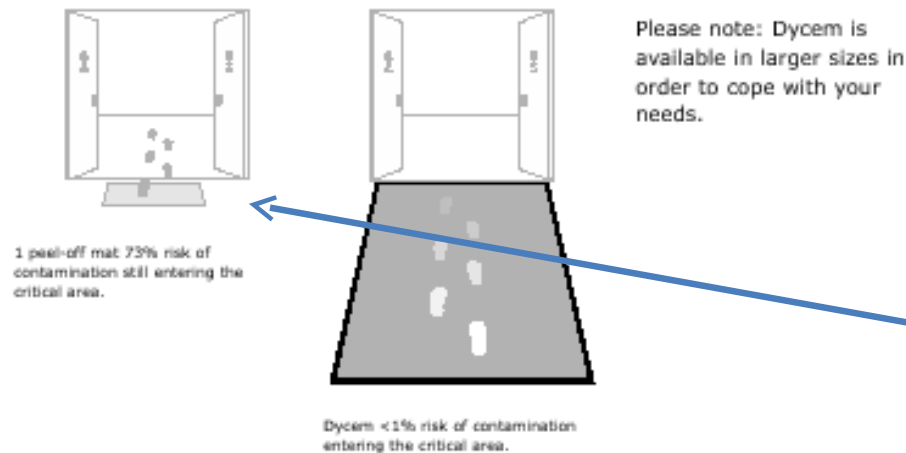
PEELING MATS
CAUSES **PARTICLE
SHEDDING AND
RECONTAMINATION**
OF THE ATMOSPHERE



PEEL-OFF MATS DON'T WORK **WITH WHEELED TRAFFIC**

- It is impossible to decontaminate wheeled traffic using a peel-off mat.
- Effective decontamination needs at least six footfalls (three for each foot), or three full wheel rotations as contamination builds up in layers on shoes and wheels.
- Peel-off mats cannot allow the three full wheel rotations necessary to decontaminate wheeled traffic.
- Peel-off mats are also prone to wrapping around wheels of trolleys and carts making it impossible to control cross contamination in corridors.





Is this a common theme for your facility?

% of foot & wheel borne particulates, (viable & non-viable) prevented from entering a critical area	Peel-off Mats	Dycem
	27%	99%

Based on tests at GlaxoSmithKline by Dr Caroline Clibbon, Senior Microbiologist

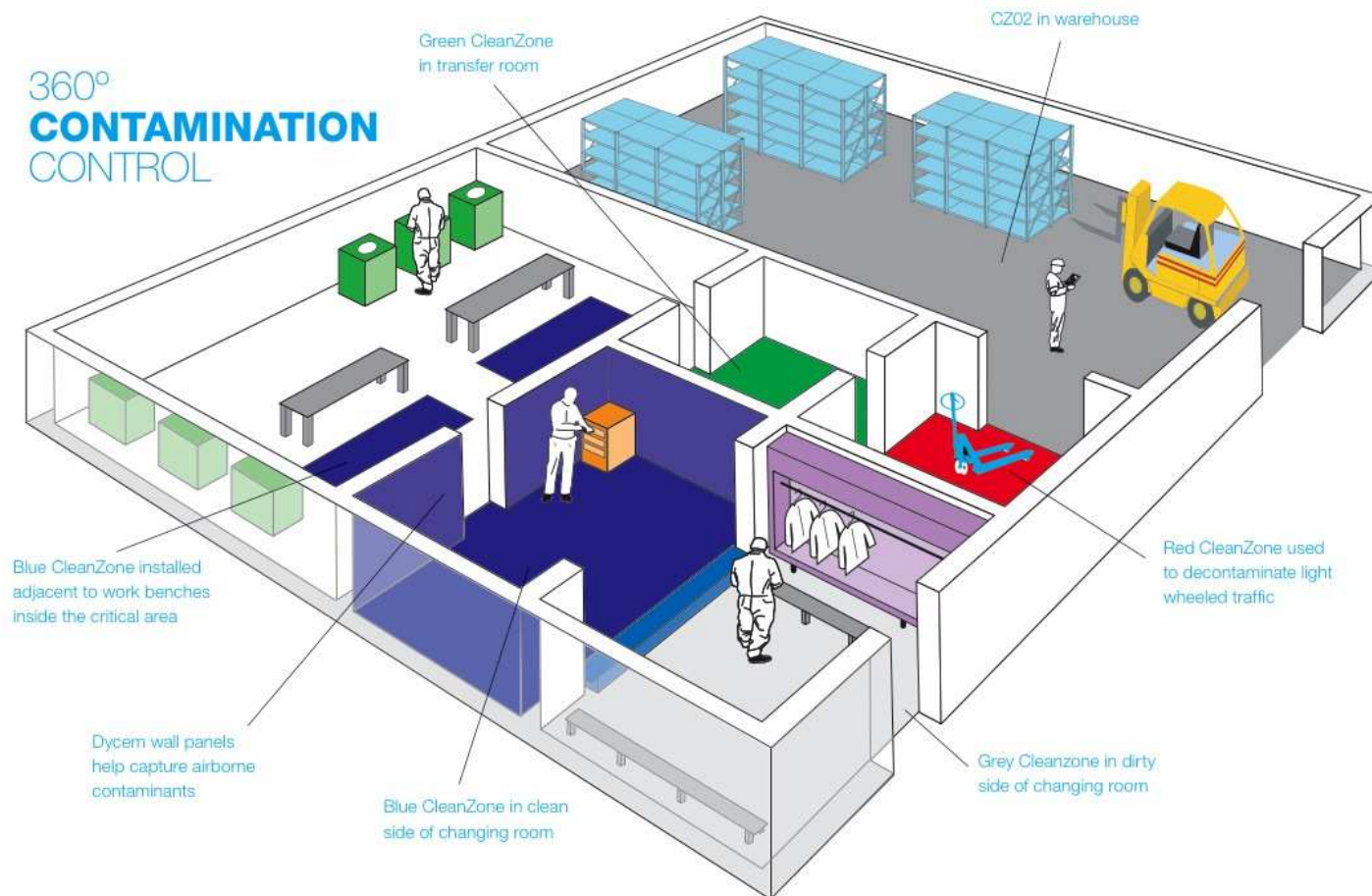
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www.dycem-cc.com

Dycem Polymer Solutions

- Total Floor Coverage option – Totally Sealed – Unavoidable
- Simple cleaning regime that adapts to current shift cleaning pattern
- Designed for high performance of both large pedestrian and heavy Forklift traffic
- Exhaustively tested Anti Microbial properties – Biomaster additive *
- Scientifically proven to control **99% of foot wheel activity**
- Proven to attract **75% of Airborne** particles prior to entry
- Optically smooth and supple for maximum contact
- Designed/ Approved for Class 100 Cleanroom and below
- Investment product that can last up to 3 years
- ISO 9001, ISO 14001 & GMP Approved
- No special waste requirements when replaced – Fully recyclable

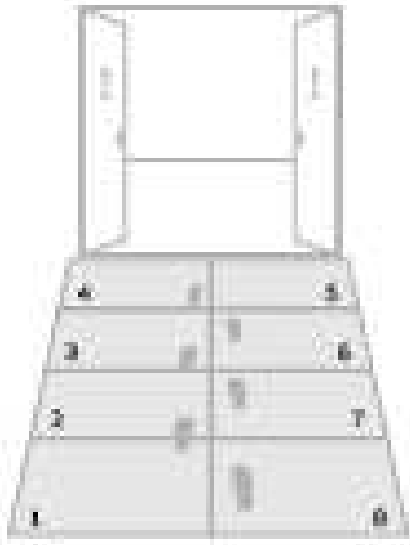
360° CONTAMINATION CONTROL



Dycem Polymeric Solutions



Size Matters



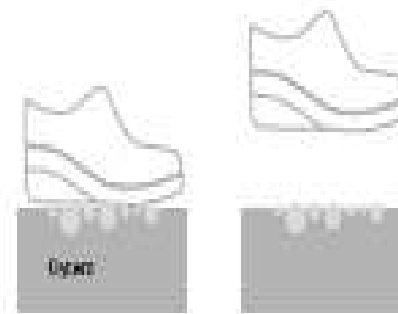
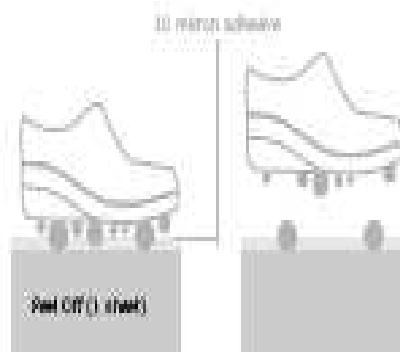
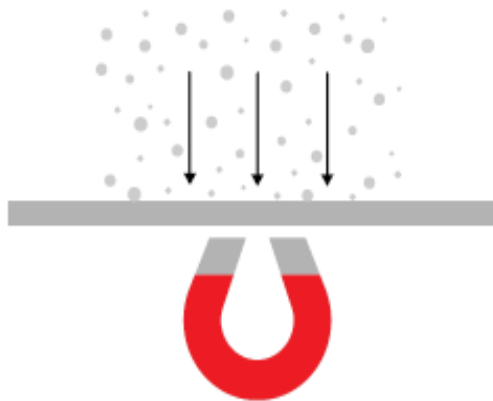
Based on Traffic Volume, Type
+
Based on Shift Cleaning Pattern
+
Layout

Equals

**Optimum Size for Successful
Decontamination and Full Life
Cycle**

Due to Dycems **Natural Surface Energy** and **Smooth/Supple Composition**, it has been scientifically proven to attract, collect and retain particles ranging from 0.2 – 100 micron.

All this with **no transfer** of particles after several overstrikes





Client: AddMaster (UK) Limited
Darfin House
Priestly Court
Staffordshire Technology Park
Stafford
ST18 0AR

Job Ref: 05F2340
Sample Ref No.: LSN 26/92456
Date Received: 27/06/2005
Date Reported: 01/07/2005

CERTIFICATE OF ANALYSIS

Dycem floor coverings & mats with Biomaster Blue

Meth. Desc	Film contact		
Reference	173		
Test	Result	Unit	Est
Staphylococcus aureus (Resistant Strain)	99.9	%	

Comment: The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains.

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R.P. Elliott
Clean, Micro, MPT
Deputy Managing Director

D.J. Petford
D.J. Petford
Micro, Clean, FRC,
FRC
Analyst Services
Director

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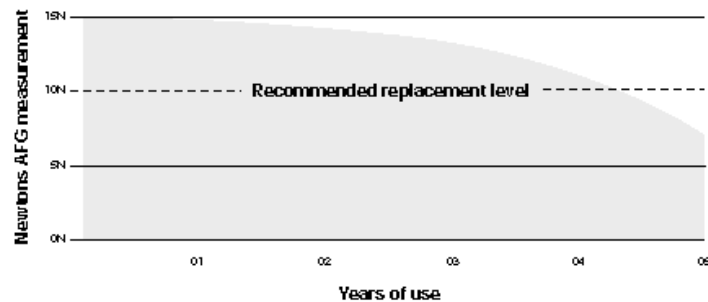
Anti-Microbial - Biomaster

All Dycem High Performance Contamination Control Zones incorporate BioMaster™ protection. This highly effective antimicrobial has been proven to inhibit the growth of over 50 organisms including Salmonella, E.coli, Listeria, Campilobacter, Pseudomonas, A.Niger (black spot mould growth), Algae and MRSA.

Service - Global Service Contracts

Standard Service includes Site Survey , Annual Particle Test and Warranty for 2 years

-AFG Report is approved and seen by external regulators globally



Dycem Portfolio

Loose Mats

Dycem loose-laid mats are easy to install, simply take out of the box and unroll.



Fixed Mats (preferred option)

Once installed, it is a totally sealed system. This means no moisture, contamination or bacteria can get underneath. The thin but strong, low profile Floor Covering is easy for carts and all traffic to negotiate.



-  Cold Weld
-  Edging Strip
-  Top coat
-  Mid coat
-  Base coat with polyester fabric
-  Double sided adhesive tape
-  Waterproof double sided adhesive tape Firmoflex

LOOSE LAID MATS		FITTED AND BESPOKE FLOOR COVERINGS	
			
LabMat	ProtectaMat	CleanZone	WorkZone

**Tailored for each individual
need/risk/activity**

FACT not FICTION

GlaxoSmithKline

Dycem was over 99% effective at preventing wheel and footborne, viable and non-viable particulates from entering the critical manufacturing area.

Boehringer Ingelheim

The study showed that the cross contamination from the warehouse area was greatly reduced by the installation of the Dycem polymeric flooring.

Bio Products Laboratory

The study demonstrated that the microbial counts into the access corridor was significantly reduced, by approx. 80% after the installation of Dycem.

Kennet BioServices

Switching from peel;-off mats to Dycem over a 2-year period:

- Saves over \$300,000 (226,266.40 EUR).
- Use 18 tonnes less of raw materials.
- Reduce emission of greenhouse gases by over 120 tonnes.

GlaxoSmithKline

Novartis

Astra Zeneca

Actavis

Semmelweis University

St James Hospital, Budapest

Medical Institutes in Sweden,
Denmark, France, Germany & Italy

Baxter Healthcare

Zentiva

- Johnson & Johnson
- Apoteket AB
- Chinoin (Hungary)
- TEVA
- Eli Lilly
- Abbott Labs
- Bayer Schering
- Proctor & Gamble
- Genzyme
- Nokia
- Pfizer



Customer

Saab, Sweden

The challenge

To control dust and contamination from critical manufacturing areas.

Solution

Dycem Cleanzone and WorkZone has been installed at several key areas of the facility in Juncos including, gowning rooms, corridor, elevators, air locks and warehouse areas.





Customer

Amgen, Puerto Rico

The challenge

To maintain a consistently high standard of contamination control Amgen in Puerto Rico were searching for an effective flooring system.

Solution

Dycem Cleanzone and WorkZone has been installed at several key areas of the facility in Juncos including, gowning rooms, corridor, elevators, air locks and warehouse areas.





Customer

Lilly (France)

The Challenge

To maintain high standards in a number of Class 100 clean areas within a large facility producing a range of diabetic-related products. With 24-hour shift patterns and a high volume of pedestrian traffic an exceptional contamination regime is required to prevent cross contamination between areas.

The Solution

Dycem was tested over a period of two weeks. The result was a dramatic reduction in particulate count. Monsieur Claude Muller, expert Trainer in Techniques Aseptiques, commented that Dycem flooring also reduced cleanroom cleaning costs as well as particulate levels. The tests were so successful that Dycem has since supplied the facility with 34 installations of Clean Zone and Work Zone. As a very satisfied Dycem customer for over ten years, Lilly has re-ordered and replaced installations as they have reached the end of their effective life.

Lilly

Customer

GlaxoSmithKline (UK)

The challenge

To meet and exceed the rigorous standards required to prevent microbial cross contamination in critical areas of the Pharmaceutical Research and Development Unit.

Solution

Senior Microbiologist, Caroline Clibbon, carried out tests which showed Dycem to be over 99% effective in preventing floor contamination entering the clean areas. The tests also revealed that the peel-off mats in use in the facility were only 27% effective. As part of its cGMP programme Glaxo has since installed Dycem Work Zone and Clean Zone throughout the facility in Ware and in a sister facility in Mayenne, France





Customer Boehringer

The challenge

Boehringer were looking to reduce the amount of microbial cross contamination being tracked into production areas from the warehouse.

Solution

Two test areas of Dycem were installed and monitored by Boehringer's senior on site microbiologist. The results were outstanding, just 2 small areas reduced the levels of microbial contamination by two thirds. The trials have proven so successful that additional areas are now being specified in. In a recent audit by Boehringer's International audit team, they were so impressed they will be recommending Dycem to all their facilities worldwide.



Customer Schering Plough

The challenge

As a major manufacturer of biotechnology-based pharmaceutical products, Schering Plough needed a quality resolution in reducing contamination from entering production facilities.

Solution

Dycem Clean Zone has been installed at numerous entrances and exits ways to prevent contamination entering clean areas. As a satisfied customer, Schering Plough has significantly increased the number of installations of Dycem high performance flooring.

Next Step – Moving Forward

- Create a detailed Site Survey
- Highlight critical areas for control – Total Floor plan
- Prioritise areas pending on production/audit/budget
- Arrange for 1 or 2 trial zones to start
- If satisfactory , begin a structured implementation
- Set install dates followed by test dates
- Service lifecycle begins



CONTAMINATION
CONTROL



THANK YOU

Zapraszamy na stoisko nr. 9