

DYCEM[®] CLEANZONE

PRODUCT GUIDE & USER MANUAL



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PRODUCT INFORMATION SHEET

Dycem® CleanZone

Dycem® CleanZone mats are manufactured from a proprietary blend of specially formulated polymeric compounds providing superior control of floor-level contamination.

Dycem® CleanZone antimicrobial floor mats have a naturally tacky and reusable polymeric surface suitable for pedestrian flows and light-wheeled traffic up to 1000 lb/in² (70 kg/cm²). CleanZone mats have been scientifically proven to **prevent up to 99.9% of shoe and wheel-borne contamination**, and up to **75% of airborne contamination** from entering controlled environments. This long-term solution serves as a replacement for less effective alternatives like disposable shoe covers and peel-off sticky mats, wet disinfectants or sprays, and powdered sanitizers.

KEY BENEFITS



INSTALLED & CUSTOMIZED FOR YOUR FACILITY'S NEEDS

Custom size, shape, color & visual options available to achieve optimal contamination control as well as company specific branding & communication. Installed and sealed to the subfloor by trained technicians and tested annually for efficiency.



EFFECTIVE & EFFICIENT FLOOR-LEVEL CONTAMINATION CONTROL

Placed in the unavoidable flow of traffic, personnel require minimal training for use and must simply walk across the mat to capture particulate from shoes. CleanZone provides superior control with minimal downtime.



LONG-TERM SOLUTION & SUSTAINABLE ALTERNATIVE

CleanZone mats are cleaned daily or per shift and have an average installed lifespan of 3+ years. No daily disposable waste is required and water usage from specialized cleaning in controlled areas is reduced.

WHERE TO USE:

- ✓ Pedestrian entrances and exits to controlled areas
- ✓ Inside gowning rooms, airlocks (PALs), and air showers
- ✓ In hallways or between different product lines or processes
- ✓ Layered between ISO levels or hygiene zones

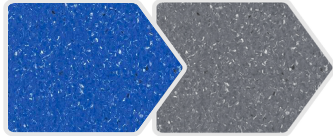


COLOR OPTIONS



Midnight Slate Green Red

*Solid colors help to HIGHLIGHT contamination



Cobalt Titatnium

*Speckled colors help to MASK contamination

EDGING SYSTEMS



Inlay Edging

3 15/16" (100mm) wide,
diminishing edge



Red Blue Green Yellow

Black Edging

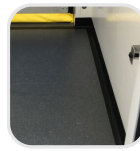
2 9/16" (65mm) wide,
diminishing edge



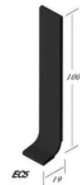
Black

Coving

3 15/16" (100mm) high,
3/4" (19mm) footer



Black



VISUAL COMMUNICATIONS



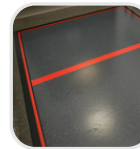
Floor Graphics

*customization available



Edging Labels

*customization available



Color Coding & Demarcation Lines

TECHNICAL FEATURES

- ✓ **SIZE:**
Nominal Height/Thickness - 1/8" (2.1 mm)
Standard Width - 4' or 6.5' (1.2 mt or 2.0 mt)
Length - Custom, can be seamed as needed

- ✓ **WEIGHT:**
Nominal 0.48 lb/ft² (2.4 kg/m²)

- ✓ **ANTIMICROBIAL:**
Biomaster silver ion additive incorporated during manufacturing, 24/7 protection against common microorganisms

- ✓ **CLEANING REQUIREMENTS:**
Wet mopped or sprayed with approved cleaning agent, agitation to lift the residue, and squeegee dried:
Caution - slippery when wet

- ✓ **PARTICLE COLLECTION:**
Proprietary polymeric blend with natural tack, optically smooth surface creates short range electromagnetic pull (van der Waals)

- ✓ **SURFACE RESISTIVITY:**
10⁸ ohms (tested to ASTM F150, DIN 51953, BS 2050)

- ✓ **CO-EFFICIENT OF FRICTION:**
≥ 0.30 in accordance with EN 13893 - Technical class DS

- ✓ **LOAD RESISTANCE:**
1000 lb/in² (70 kg/cm²)

- ✓ **COMPLIANCE:**



- ✓ **PRODUCT WARRANTY:**
1 year, restrictions apply, see warranty statement

- ✓ **TOXICITY:**
Non-toxic, silicon, latex and melamine-free, no known adverse skin reactions

- ✓ **OUTGASSING:**
Requirements met for ISO 16000-3, ISO 16000-6, ISO 16000-9 and ISO 16000-11

- ✓ **UV & HEAT RESISTANCE:**
Working range 32°-122°F (0-50° C).
Constant exposure to light will degrade surface

- ✓ **FLAMMABILITY:**
EflSI EN 14041:2004

TECHNICAL DATA SHEET

Dycem® CleanZone

Dycem® Contamination Control polymeric mats are crafted using a proprietary blend of specialized polymeric compounds creating a natural tack. Our unique process technology produces a durable material that is optically smooth with high surface energy.

PRODUCT COMPOSITION:

Polymer compound

COLORS:

Cobalt, Titanium, Midnight, Slate, Red or Green

SIZE:

Standard width (can be customized) -

4' or 6.5', (1.2 mt or 2.0 mt)

Length - custom

Nominal thickness - 1/8" (2 mm +/- 0.1 mm)

WEIGHT:

Nominal 0.48 lb/ft² (2.4 kg/m²)

LOAD RESISTANCE:

Using a 400kg truck on 4 wheels, each contact area being 25sqcm, the load resistance is 1000 lbs/psi (70 kg/cm²)

COMPLIANCE:

CE BS EN 14041:2004, ISO 9001, ISO 14001, REACH, RoHS 3 EU 2015/863, California Proposition 65

CO-EFFICIENT OF FRICTION:

≥ 0.30 in accordance with EN 13893 and shall be declared as Technical Class DS

Direction - Along: 1.82, Across: 1.90

SURFACE RESISTIVITY:

Resistance to earth 10⁸ ohms, tested to ASTM F150, DIN 51953, BS 2050

TENSILE STRENGTH N:

MD 606, CD 440

CLEANING REQUIREMENTS:

Wet cleaning per shift is recommended using Dycem-approved tools and cleaning agents.

CAUTION: Slippery when wet.

ANTIMICROBIAL PROPERTIES:

Manufactured with Biomaster silver additive as an integral ingredient, providing 24/7 antimicrobial protection.

Biomaster has been tested effective to inhibit growth by up to 99.99% of common microorganisms (MRSA, E.coli, Salmonella, Listeria, Campylobacter).

UV EFFECT:

No effect. Tested at a presence of 10psi for 10 minutes @ 115°C. Constant exposure will degrade the product.

SKIN REACTION (LATEX FREE):

No adverse reaction. After a 48-hour period of constant contact with Dycem material, there was no evidence of erythema, edema, or any other reaction to skin.

FLAMMABILITY:

EfISI EN 14041:2004

HEAT RESISTANCE:

Working range 32°-122°F (0° to 50° C)

TOXICITY:

Non harmful. Materials are silicon, latex and melamine-free. and compliant to REACH and California Proposition 65.

OUTGASSING:

Requirements met for ISO 16000-3, ISO 16000-6, ISO 16000-9 and ISO 16000-11

[TO DOWNLOAD A COPY](#)
[CLICK HERE](#)

INSTALLATION

Dycem® Fixed Products

FREQUENCY:	Initial implementation	INSTALLED BY:	Dycem certified technician
PRICING:	See quote *After hours and weekends charged at a premium	TIME REQUIRED:	1-3 hours per standard mat area
EQUIPMENT USED:	Dycem material and edging strip, double-sided industrial tapes, cold-weld, sealant, blade, and roller *See RAMS/method statement documents for full procedures and specifications		

DESCRIPTION:

For long-term fixed products, Dycem offers warrantied installations by our approved and certified technicians, who have years of global experience in cleanroom and controlled environments. A professional installation by a Dycem technician ensures quality standards are met and maximum lifespan of the product.

PROCEDURE:

Subfloor should be cleaned and free of debris or damage prior to installation. Materials should be staged in or near the area.

STEPS FOR STANDARD INSTALL*:

- 1) Subfloor is swept and cleaned with IPA in area for mat installation.
- 2) Perimeter of mat is marked out and double-sided tapes are applied and cut to size.
- 3) Dycem material is placed on top of tapes and release liner is removed, adhering the material to the adhesive. Material is rolled to eliminate air pockets and then trimmed to size.
- 4) Edging strips are installed with miter joints cut in corners. Edging is cold welded to the Dycem material and sealed around the perimeter to the subfloor, creating a secure barrier for moisture ingress.
- 5) Dycem edging labels are applied, residual waste is disposed of, and a cleaning demo may be given when applicable.
- 5) Mat is ready for use within 30 minutes.

*Specialty installations will vary in steps and timeframe.



GENERAL INSTRUCTIONS FOR USE

Dycem® CleanZone

Dycem® CleanZone contamination control mats are an active working surface designed and implemented to protect critical areas from potentially disruptive and harmful contamination. With this in mind, please use the guidance below in order to ensure the longevity and efficacy of the CleanZone mat and prevent any operational damage.

READY FOR USE:

After installation, please allow AT LEAST 30 minutes prior to utilizing the Dycem CleanZone mat.

TO USE:

Simply walk across the CleanZone mat to decontaminate shoes prior to entering the controlled space. **3 footfalls** from each shoe is suggested for optimal results. Make sure to always follow facility specific PPE requirements and contamination control protocols.

GENERAL INFORMATION:

- Post warning signs and instructions to all personnel.
- Keep the area where Dycem is installed clear and free from obstacles e.g., bins, carts, equipment.
- Ensure no heavy items are left on the Dycem surface for prolonged periods of time.
- During usage, your mat may look dirty. This is GOOD and shows that your Dycem mat is working to keep contamination out of your critical environments.
- Slight scuffing may become apparent if shoes are dragged across the Dycem surface, this does not affect how your Dycem mat performs.

WHEELED TRAFFIC:

- Heavy wheels should **NOT** travel across the CleanZone mat surface.
- Light wheels should travel in straight lines over the surface of the mat.
- **NO** stopping or sudden breaking
- **NO** static twisting or turning

CARE AND MAINTENANCE:

See cleaning instructions and SOP. Follow these instructions in order to ensure the most effective results and longevity of your Dycem mat.



WARNINGS



**MAT IS SLIPPERY
WHEN WET**



**NO TURNING
NO BRAKING
NO ACCELERATING**



**MAT MAY LOOK
DIRTY**
between cleanings but is
STILL WORKING



**CONTACT
DYCEM**
if damage occurs
CONTACT@DYCEM.COM

CLEANING PROCEDURE

Dycem® Fixed Mats

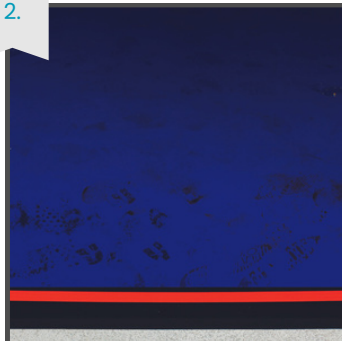


1.



Clean mats at least once a day (or as advised by your specialist) to maximize performance. A Dycem-approved cleaning solution (diluted per instructions) should be used.

2.



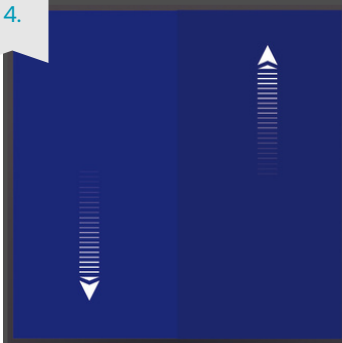
Using a spray bottle, mop, or pre-saturated wipe, apply the diluted cleaner to the entire mat ensuring complete coverage. For larger installations, complete all cleaning steps in sections.

3.



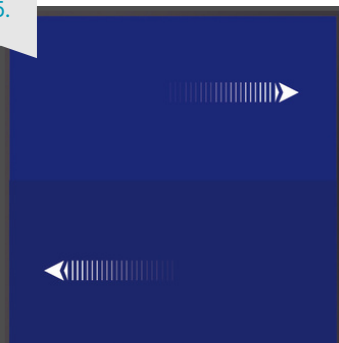
Using a squeegee system, such as a Vikan, agitate the surface of the mat to lift the retained particulates.

4.



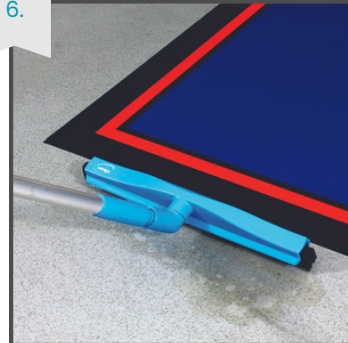
Mats should be agitated in both a vertical and horizontal direction to ensure all contamination is lifted and removed. Start closest to the controlled area and work backwards.

5.



Continue to agitate with the squeegee in a horizontal direction, starting closest to the controlled space and working outward.

6.



Pull the dirty liquid to the edge of the mat surface using the squeegee. Collect with a sponge, mop, or cloth and dispose in accordance with facility mandated SOP's. For heavily saturated mats, repeat cleaning steps 1-6.

Tips & Advice

- For maximum performance, clean your Dycem mats at least once a day (or as advised by your specialist) with the following:
 - Dyclean, InSpec N10 or approved cleaner
 - Spray bottle or mop
 - Squeegee system
- [To find out if your cleaning agent is approved, click HERE.](#)
- After cleaning, make sure to wash out any equipment per your company's Standard Operating Procedures.
- Where use of a phenolic or hydroxide is required, rinse as per the instructions to reduce a film buildup and loss of effectiveness.
- DO NOT USE concentrated bleaching agents, scoring or abrasive powders, or cleaning, buffing or polishing machines with stiff brushes - Shortened lifespan or damage to the Dycem surface may occur.

Cleaning
Tutorial
Video

STANDARD OPERATING PROCEDURE (SOP)

Cleaning Dycem® Mats in a GMP Environment

PURPOSE:

To provide a standard operating procedure for the cleaning of Dycem mats in a Good Manufacturing Practice (GMP) regulated environment.

SCOPE:

This SOP applies to all personnel responsible for cleaning and maintaining the cleanliness of floors in GMP areas.

MATERIALS:

- DYCLEN OR INSPEC™ N10 OR A DYCEM APPROVED CLEANER
- Squeegee system such as Vikan
- Microfiber mop or spray bottle
- Flat mop or microfiber cloth

CLEANING FREQUENCY:

- a. Clean Dycem mats at least once a day/shift (or as advised by your Dycem specialist) to maintain optimal effectiveness of contamination collection.
- b. Increase the cleaning frequency in high-traffic areas or as required.

CLEANING PROCEDURE:

- a. Dilute Dyclean or an approved cleaner according to the manufacturer's instructions with warm water.
- b. Spray or mop the cleaning solution onto the floor, ensuring full coverage of the Dycem area.
- c. Once complete, begin agitating the surface of the Dycem with the squeegee (Vikan).
- d. Begin by cleaning the full mat in a vertical direction. Then, continue to agitate the full, mat surface in a horizontal direction.
- e. Remove the excess liquid or residue from the edge of the Dycem surface. A flat mop or microfiber cloth can be used to collect and dispose of the dirty liquid. View your waste removal SOP for additional requirements.
- f. If the removed, cleaning liquid is dirty, repeat the process until clean and increase cleaning frequency.

REPORTING:

- a. Report any deviations from this SOP to the QC department.
- b. Record all cleaning activities in the appropriate cleaning log.

NOTES:

- a. Wash out the equipment after use so that it is ready for reuse.
- b. To remove built-up spots of contamination, clean with a 70/30 isopropyl alcohol wipe.
- c. Where decontamination or sterilization takes place using a phenolic or hydroxide, rinse off as per the instructions. Otherwise, a film can develop, reducing the effectiveness of the cleaning solution.
- d. For heavily contaminated areas, contact Dycem customer service for potential next steps.

WARNINGS:

- a. Do not use concentrated bleaching agents, scouring or abrasive powders, or cleaning machines with stiff brushes. Buffing or polishing machines will damage the surface, shortening the active working life of the mats.
- b. Do not use equipment that is not designated for Dycem/GMP cleaning purposes.

TRAINING:

- a. Ensure that all personnel responsible for cleaning and maintaining the cleanliness of floors in GMP areas are trained on this SOP.
- b. Ensure that all personnel understand the importance of maintaining the cleanliness of GMP areas.

QUESTIONS:

For any questions or concerns regarding this SOP, contact Dycem or QC Department.

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For additional information
CONTACT@DYCEM.COM

CARE AND MAINTENANCE

Tips and Troubleshooting

CLEANING:

- Dycem surface **MUST** be agitated to remove retained contaminants.
- To remove built-up spots of contamination, clean with a 70/30 isopropyl alcohol (IPA) wipe.
- If residue or film develops on mat, make sure to squeegee and rinse solution after cleaning.
- For mats heavily saturated with contamination, contact Dycem customer service team to schedule a **STEAM CLEAN**.

Click these links for helpful cleaning resources:

[Confirm Your Cleaning Agent](#)

[Printable Cleaning Record](#)

[Printable Cleaning Procedure Poster](#)

DAMAGE:

- Normal wear and tear, scuffing from shoes, and track marks from wheels are all normal and DO NOT effect the performance of the Dycem material to retain particulates.
- Minor nicks or cuts in material can be repaired with sealant. Contact Dycem for further instructions.
- If damage occurs, measures should be taken to remedy as quickly as possible to ensure the subfloor is not compromised and that a safety concern is not created.
- Damage or defects should be reported to Dycem immediately and a **WARRANTY CLAIM** form should be completed if covered. *See warranty statement for full coverage details and procedure.
- Training for operators using Dycem mats is imperative.

Click this link to download a printable attention sign for operators:

[Printable Attention Sign](#)

ON-SITE SUPPORT:

Should you need additional advice or assistance, please reach out to the Dycem team to **SCHEDULE A VISIT** with your local contamination control specialist.

DYCEM SERVICE

Particle Collection Efficiency Test (PCET)

FREQUENCY:	Annually	PERFORMED BY:	Dycem Contamination Control Specialist
PRICING:	Complimentary	TIME REQUIRED:	5-10 minutes per area
EQUIPMENT USED:	70/30 IPA Wipe, Scraper (squeegee) card, Mecmesin Advanced Force Gauge (AFG)		

DESCRIPTION:

The Particle Collection Efficiency Test (PCET) has been designed solely for Dycem® CleanZone and WorkZone mats. The test measures the particle collection and retention efficiency of both products over the average effective working life of 3+ years.

The PCET uses an Advanced Force Gauge (AFG); a high-specification gauge used to measure both tension and compression forces. The device measures the pull-off Newton force of a smooth, polished brass foot as it is lifted from the Dycem surface. Extensive testing by Dycem has shown that the higher the Newton force, the higher the collection and retention of particulates.

PROCEDURE:

Using a 70/30 IPA wipe, an area of the mat is cleaned to remove any dirt and particulate and to ensure the brass AFG foot is in complete contact with the surface of the Dycem material. The AFG is placed vertically on the Dycem surface and downward pressure of 20N is applied. The gauge is then removed vertically and a pull-off force in Newtons is read and recorded.

This process is repeated 2 or more times depending on the size of the mat. Once complete, the readings are averaged to form the final PCET result for the mat.



While the mat is being tested, a thorough inspection is performed. The edges, seams, and material are inspected to ensure they are intact and sealed to the subfloor with no damage, lifting, or bubbling. If necessary, cleaning procedures are also reviewed to ensure that the mats are properly maintained and lifespan is maximized.

The above procedures are repeated for all Dycem mats installed at the facility.

REPORT:

Once the testing and inspections are complete, a PCET Report is generated with the averaged AFG readings and any recommendations cited from the inspection. This report is an excellent resource for audits and inspections and is a useful tool for planning future replacements.

The tables and graph on this page show the precise relationship between the Newton force and particulate collection and retention efficiency for Dycem CleanZone and WorkZone.

Tables A and B demonstrate typical readings for CleanZone and WorkZone using the Advanced Force Gauge in relation to the percentage of particles removed from a clean surface.

Graph A below demonstrates the average life cycle for Dycem CleanZone and WorkZone and the threshold for recommended replacement.



Dycem recommends replacement of our mats once efficacy levels drop below **55%** particle retention.

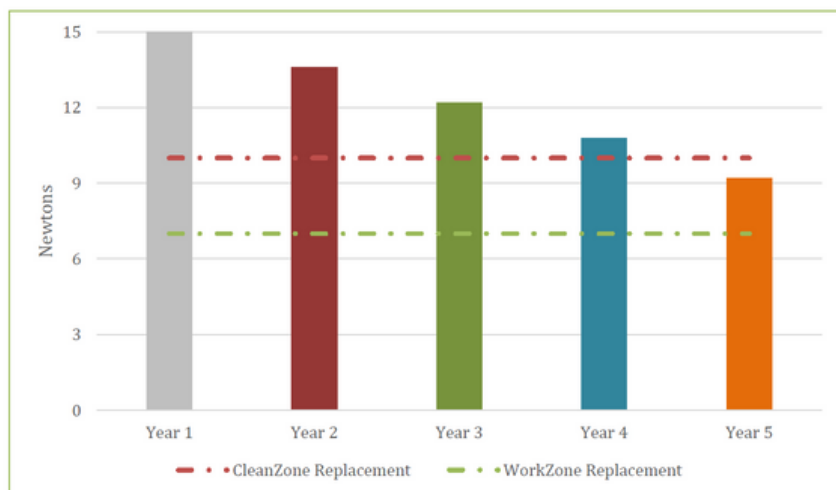
Table A

CleanZone Newton Readings	
Tensile Value	% of Particles
15 Newtons	>99%
<u>10 Newtons</u>	<u>55%</u>
7 Newtons	45%
3 Newtons	30%
2 Newtons	20%
<1 Newton	<10%

Table B

WorkZone Newton Readings	
Tensile Value	% of Particles
12 Newtons	>99%
<u>7 Newtons</u>	<u>55%</u>
5 Newtons	45%
3 Newtons	30%
2 Newtons	20%
<1 Newton	<10%

Graph A*



*Example of a PCET report

DYCEM SERVICE

Steam Cleaning

FREQUENCY:	Bi-Annually, or as needed	PERFORMED BY:	Dycem certified technician
PRICING:	<u>REQUEST QUOTE</u>	TIME REQUIRED:	15 minutes for heating, 30 minutes to 1 hour per area for cleaning
EQUIPMENT USED:	Dyclean or Inspec10 cleaning solution, HEPA Steam Cleaner *water, electrical, and disposal access needed		

DESCRIPTION:

Over time, excess particulate not removed with regular cleaning combined with residue from cleaning solutions can form a barrier to the particulate collection and retention efficiencies of the Dycem material. Steam cleaning is a service provided by Dycem to rejuvenate the surface, increase particle collection and retention properties, and potentially extend the effective working life of CleanZone and WorkZone installed mats.

Dycem utilizes a HEPA Steam Cleaner system to effectively remove build-up from the surface of the Dycem material. This is a unique, commercial steam cleaner offering pressure up to 75psi and temperature levels up to 310°F. The system utilizes a HEPA filter of 3 microns as well as exclusive water capture and water filtration components. Additionally, the steam cleaner features Advanced Thermal Ionic Sanitization™ technology which eliminates more than 99% of mold and bacteria.

PROCEDURE:

The HEPA steam cleaner is transported by a Dycem technician or mailed directly to the work location. Once the boiler is filled with water, the system is plugged in and allowed to heat. A spray bottle is filled with 3 parts water to 1 part cleaning solution.

Once the system is heated, the Dycem mat is sprayed with the cleaning solution and thoroughly cleaned with the HEPA Steam Cleaning system. The water and solution are then removed from the surface of the Dycem mat using the integrated wet extraction vacuum and the mat is ready for use. This procedure is repeated for all mats to be cleaned. (Note: The steam cleaning system requires time to reheat when transported to different areas within the facility.) After the steam cleaning is complete or when the wet extraction chamber is full, the system will be emptied into a utility sink or other, facility approved, liquid disposal.

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