

CASE STUDY Food & Beverage Industry

CONTAMINATION CONTROL MAT

Preserving the Purity of Cleanrooms: How CC Matting Empowered Gardenia to Alleviate Contamination Threats



INTRODUCTION

Gardenia, a leading food manufacturer in Malaysia, is renowned for producing high-quality bakery products. As a key player in the food and beverage industry, Gardenia is committed to maintaining state-of-the-art facilities and ensuring the highest standards of hygiene and food safety.

With multiple production lines and a high level of output, Gardenia's facilities are designed to meet the rigorous needs of its customers while adhering to these certifications. To prevent contamination in their critical environments, it is vital that their production zones remain free from dust and other contaminants. With high foot traffic and frequent movement of equipment, Gardenia needed an effective solution to maintain cleanliness and compliance with food safety regulations.

CHALLENGES

Before SGH introduced its contamination control solution, Gardenia struggled with contamination from dust and debris, primarily caused by foot traffic and the movement of trolleys and carts in and out of the production area. Maintaining a clean and safe environment was a priority, but traditional cleaning methods were insufficient in completely eliminating contaminants at the entrance to their clean zones.



OUR SOLUTION

Addressing the challenge of 80% of contamination entering controlled environments at the floor level primarily due to human traffic, SGH implemented a tailored solution for Gardenia by installing our CC Matting. As a superior alternative to sticky mats, these custom-fitted mats were strategically placed at key entry points, including entrances to production areas, to ensure optimal decontamination with each footfall. Besides that, these mats were designed to capture dust, dirt, and other particles from shoes and wheels, preventing them from entering sensitive production zones.

RESULTS

Our CC matting mats have demonstrated remarkable effectiveness in addressing Gardenia's unique requirements by providing robust protection against contaminants that may infiltrate their cleanrooms through foot traffic and wheeled devices. This achievement has not only ensured reassurance for Gardenia and its clients but has also underscored the reliability of CC mats in safeguarding essential environments from the potentially damaging and expensive consequences of contamination.

ANNUAL SUPPORT & TESTING

At SGH, we believe in providing strong support even after installation. That's why we offer an annual service that includes two important tests: the **Particle Collection Efficiency Test (PCET)** and a tackiness test. These tests help us measure how well our CC mats are working to keep your environment clean.

After each test, we provide a complete report detailing the effectiveness of the mats, ensuring you have all the information you need to maintain a hygienic and safe environment.



+603 6187 6866

+6012 6494 786

+603 6187 6768

Sinar Global Hygiene (M) Sdn Bhd

ROC NO: 201101023930 (952066-K)

1-23A, First Floor, Sky Awani Commercial, Jalan Sentul Pasar,
Sentul Pasar, 51100 Wilayah Persekutuan Kuala Lumpur, Malaysia.

Ref. No : SGH/ADM/24/R269

Date : 9th February 2024

Gardenia Bakeries (M) Sdn Bhd,
Lot 3, Jalan Pelabur 23/1,
40300 Shah Alam,
Selangor.

Attn: En. Faiz

RE: PARTICLE COLLECTION EFFICIENCY TEST (PCET)

Referring to the above matter.

2. We are pleased to inform that Particle Collection Efficiency Test (PCET) was successfully completed on 5th February 2024 (Monday).

The details of the test completions are as follow:

Area of testing : 1) BLine Air Shower Mat – Sek 15
2) Kitchen Entrance (Air Shower) – Sek 15

Instrument : Macresim AFG Gauge (AFG 500N)

Calibration Due Date : 20th May 2023

Test Performed By : En Mohd Razib Bin Ismail (Specialized mat installer)
Operation & Logistic Manager

Thank you.

Your sincerely,
for, **SINAR GLOBAL HYGIENE (M) SDN BHD**


MOHD. RAZIB BIN ISMAIL
Operation & Logistic Manager





+603 6187 6866

+6012 6494 786

+603 6187 6768

Sinar Global Hygiene (M) Sdn Bhd

ROC NO: 201101023930 (952066-K)

1-23A, First Floor, Sky Awani Commercial, Jalan Sentul Pasar,
Sentul Pasar, 51100 Wilayah Persekutuan Kuala Lumpur, Malaysia.

Installation Details

Company: Gardenia Bakeries (M) Sdn Bhd

Installation Date: 14/08/2019

Branch: Selangor

Product: CleanZone

Location: Kitchen Entrance Air Shower

Size: 0.8M x 2.7M

Life Cycle

The two tables shown below demonstrate typical readings for Clean Zone and Work Zone using the Advanced Force Gauge in relation to the percentage of particles removed from a clean surface.

Clean Zone Newton Readings		Work Zone Newton Readings	
Tensile Value	% of particles	Tensile Value	% of particles
15 Newtons	>99%	12 Newtons	>99%
10 Newtons	55%	7 Newtons	55%
7 Newtons	45%	5 Newtons	45%
3 Newtons	30%	3 Newtons	30%
2 Newtons	20%	2 Newtons	20%
< 1 Newton	<20%	< 1 Newton	<20%

Tensile Result Readings

Installation of CleanZone in area Kitchen Entrance Air Shower

Test Date	Reading	Comments
14/08/2019	11.0N	*Readings 11.7N (Taken on 05/02/2024) (Mat is still in good condition)
05/02/2024	11.7N	

NB: Work Zone has a lower Newton Reading (12N) than Clean Zone (15N) because it is designed to accommodate heavy wheeled traffic. Work Zone relies upon the weight of the traffic to press the contaminants into the Oxygen Floor.

CleanZone - 15N
Area 99% are recommended replacement

WorkZone - 12N
Area 70% are recommended replacement

LIFA by



+603 6187 6866

+6012 6494 786

+603 6187 6768

SINAR GLOBAL HYGIENE



Sinar Global Hygiene (M) Sdn Bhd

ROC NO: 201101023930 (952066-K)

1-23A, First Floor, Sky Awani Commercial, Jalan Sentul Pasar,
Sentul Pasar, 51100 Wilayah Persekutuan Kuala Lumpur, Malaysia.