

# Arihant Creations

Regd Office : # 4, Shilpam Complex, Gaythri Mandir road, Amli, Silvassa, UT of DNH 396230

Works : Above Adhinath Industries, First Floor, Block D, Survey No 23, Opp Dist Panchayat Office, 66 KV Road, Amli Ind Area, Silvassa, UT of Dadra & Nagar Haveli 396230

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**Project No.: 07**

**Project Title : Footwear Sanitizer**

## **1. INTRODUCTION:**

During this difficult days people get sanitized especially their hands, body and cover with masks fearing that they may carry the bacteria's, viruses or any kind of dirt's that may affect them and others frequently. We forget that our footwear's too most vulnerable, to get contact with such, throughout the day, especially the soles. Disinfecting this footwear's becomes so important, especially in offices, industries, schools and colleges where more peoples in and out throughout the day.

## **2. PRODUCT & ITS APPLICATION**

Our concept of disinfecting or sanitizing the footwear's in three different steps to ensure it is fully done.

### **A) Disinfecting with liquid solution**

SS special coated trays filled with liquid disinfectant material.

A specially treated Polyuthrene casper foams

1-2% Sodium Hypochloride, Alchohol 2% and remaining distilled water.

Size 4 ft x 2.5 ft x 35 mm height. (optional sizes can be made according to the requirement)

Non slippery, walk through without standing to clean.



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## ***B) Cleaning the wet after Disinfecting***

A specially treated Polyuthrene casper foams for cleaning the wet portion of shoes soles  
Easily washable, unaffected by chemicals  
Size 4 ft x 2 ft x 25 mm thick (optional sizes can be made according to the requirement)



## ***C) Sanitizing through UV lights***

Special coated SS box frame size 2.5 ft x 2.5 ft x 1 ft height.  
18Watts, 148Nm UV lights from Philips  
230V 50Hz power input  
Auto on when some one stand on it, and off in 30 seconds with long beep sound.



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## ***Why this is required?***

- Everyone has to walk in streets, washrooms etc where dirt's, bacteria's were spread.
- These normally stick to the foot wears and carry them inside the offices, industries, labs etc
- It is not possible to wash them frequently that makes vulnerable to carry.
- In first step the chemicals and distilled water will wash the soles remove dirt's majorly.
- In second step the wet condition of sole is removed.
- In third step the UV curing of leftover bacteria's which is proven methods in hospitals and labs.
- The length can be increased or reduced according to the area available and no of people using it.
- Depends on users and kind of dirt's the chemical water solution can be changed in certain frequency.
- UV light box can be wiped by clean cloth in frequency for effectiveness.

## ***Advantages of UVC Germicidal Lights.***

There are three types of UVC lights

UVC-A Least harmful, less expensive and less effective

UVC-B, Causes sunburn not advised to fall directly on human body

UVC-C Used for purification of air, water and surface Much effective.

## ***Reduces Germs & Bacteria***

When **UVC-C germicidal light** added it works for you instead of against you. Unfortunately, germs and bacteria are extremely small, unnoticeable to the naked eye. Mold, fungi, and viruses are often every place and in air. The **UVC-C germicidal light** eliminate bacteria in the air & objects so your home's air quality improves exponentially.

**UVC-C germicidal light** are effective, but they work in a specific range. They'll kill organic growths, such as mold or bacteria, but they have no effect on dust, pet dander or other allergens. ... **UVC-C germicidal light** are particularly effective in humid climates, where evaporator coils can easily get wet.

<https://www.therma.com/understanding-ultraviolet-uv-c-light-and-its-benefits/>

## ***How does germicidal UV light work?***

**UV-C light** is **germicidal** – i.e., it deactivates the DNA of bacteria, virus and other pathogens and thus destroys their ability to multiply and cause disease. Specifically, **UV-C light** causes damage to the nucleic acid of microorganisms by forming covalent bonds between certain adjacent bases in the DNA.

## ***Are UV disinfection lights safe?***

**UV** radiation (UVR) used in most germicidal **bulbs** is harmful to both skin and eyes (vary depending on length of exposure), and germicidal **bulbs** should not be used in any fixture or application, that was not designed specifically to prevent exposure to humans or animals.

## ***How long does it take for UV light to kill bacteria?***

Ten seconds - The average bacterium will be killed in **ten seconds** at a distance of six inches from the lamp