

## PROFLEX AIRE – ANTI CONDENSATION COATING

### Model: PA-ANTICON

The Anti-Condensation treatment named “**Sweatless FiberCoat micro-Fibers**” (MODEL: PA-ANTICON) that Proflex (S) Aire Pte Ltd bring into Singapore market is a technique that is being widely used in both Hong Kong and Macau market in all various type of industries which included Healthcare, Hotel, commercial and F&B since Year 2017.



PA-ANTI CON is an anti-condensation treatment done on the surface of the grilles and diffuser by applying a layer of Sweatless Fibre Coat (Nylon 66) and secured with the use of electrostatic flocking technology.

After anti-condensation treatment on the surface, the chance of condensation will be dramatically decreased due to the low thermal conductivity property of the Nylon material. In the event of condensation, the Nylon material is able to absorb the water drop due to its water absorption characteristic and will dry up eventually.

Recommend setting for the operating Room Temperature and Relative Humidity will be as below:

Room Temperature: **18 -26 Deg C**

Relative Humidity: **50% - 95%**

Relative Humidity (%)	50	55	60	65	70	75	80	85	90	95
Delta T (Deg C)	19.0	17.5	16.2	14.8	13.8	12.7	11.6	10.7	9.7	8.8

## PROFLEX (S) AIRE PTE LTD

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### PRODUCT BENEFIT:

- **Lower in costing:**  
The anti-condensation coating can be done on the existing piece of grilles or diffuser, no need to replace the new piece. The user would need to ensure the surface of the grilles or diffuser is properly cleared, then the anti-condensation treatment can be done on the surface.
- **Comparative Price:**  
The cost of the treatment is comparative to the rest of the anti-condensation treatment in the market.
- **Ease of maintenance:**  
The dirt on the surface can be easily removed by using fabric cleaning tool
- **Consistent finishing:**  
The finishing of the anti-condensation treatment will be uniform and neat.
- **Color Availability:**  
Standard White, Black, Grey colour is available for the user to suit the ceiling color.  
Special Color is available upon request for big amount order.

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### Test Done on the Sweatless FiberCoat micro-Fibers

#### 1) HONG KONG

There is a test being carry out under the Department of Mechanical Engineering of University of Hong Kong. The test results showed that even under the very extreme conditions of the hot air chamber (where the temperature difference is 14.7°C and 93%RH), the Sweatless FiberCoat micro-Fibers were capable of retaining any condensation on their surface while allowing part of the condensate to evaporate into the surrounding air so that a steady balanced condition was achieved which prevented the occurrence of any water dripping.

#### 2) SINGAPORE

There is a site witnessing test of the diffuser's performance done by the TUV SUD PSB at Proflex Aljunied branch. In the report there is two portions: Outdoor condition and Indoor Condition.

### Outdoor Condition

In the outdoor condition setup, there is 3 types of air diffusers were used for comparative condensation performance test.

- Aluminium Grille with **PA-ANTICON** Anti-Condensation Coating
- Normal Aluminium Grille
- WPC Grille



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### Observation:

#### Normal Aluminium Grille

Heavy condensation was observed on the surface of the aluminium grille after 20 mins of the test. The water droplet marks were observed on the ground after 2 hours of test

#### WPC Grille

Water condensation was observed on the surface of grille after 30 mins of test by naked eyes. Ther water droplet marks were observed on the ground after 24 hours of test.

#### Aluminium Grille with PA-ANTICON Anti-Condensation Coating

No water condensation was observed on the surface of grille after 2 hours of test by naked eyes.

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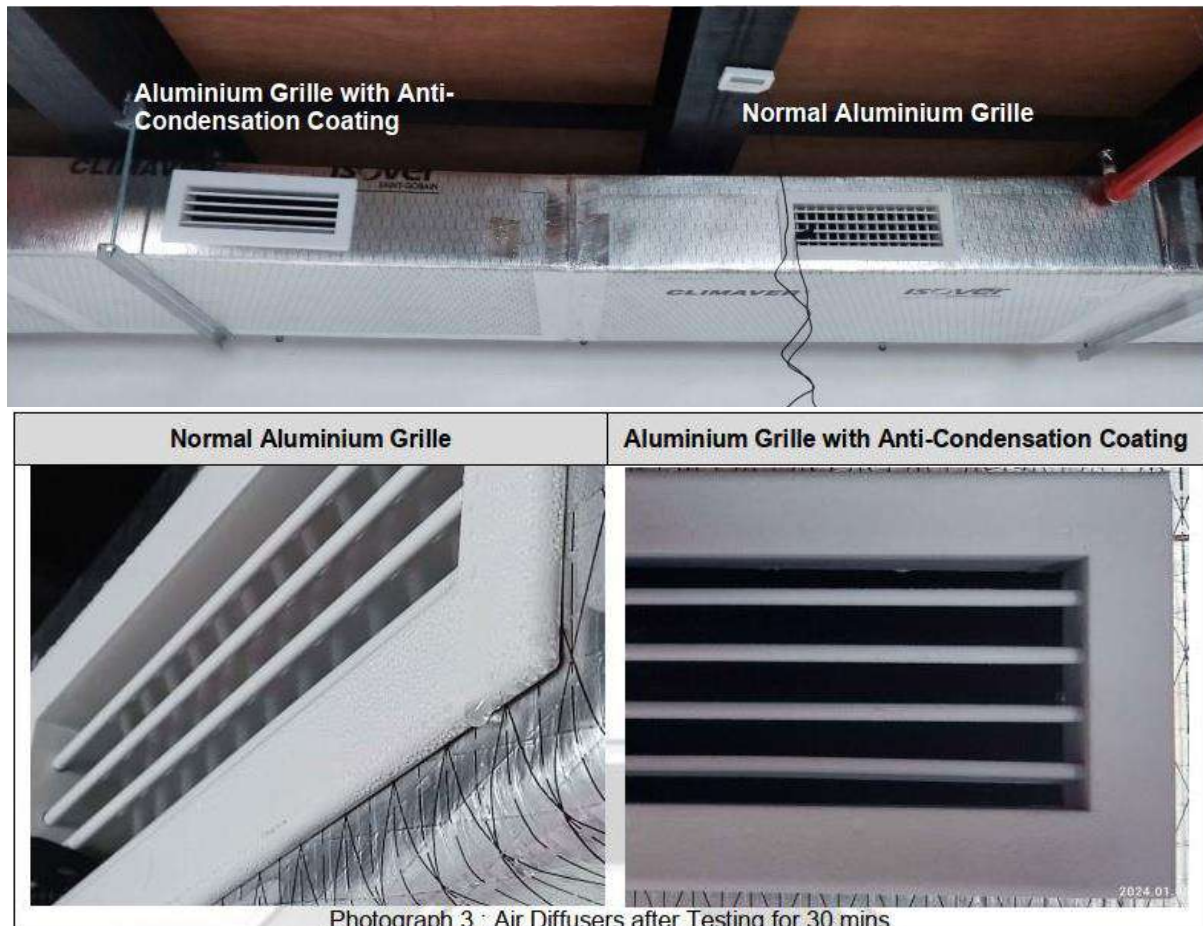
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#### Indoor Condition

In the indoor condition setup, there is 2 types of air diffusers were used for comparative condensation performance test.

- Aluminium Grille with **PA-ANTICON** Anti-Condensation Coating
- Normal Aluminium Grille



#### **Observation:**

##### **Normal Aluminium Grille**

Heavy condensation was observed on the surface of the aluminium grille after 20 mins of the test. The water droplet marks were observed on the ground under the aluminium air diffuser after 30 mins of test.

##### **Aluminium Grille with PA-ANTICON Anti-Condensation Coating Indoor Condition**

No obvious condensation was observed on the surface of grille after 2 hours of test.

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