Antifog Systems LLC

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ANTI-FOG PET FILMS

‘WE HELP YOU SAVE ENERGY.’
WHAT IS IT?

- Anti-Fog Pet Film is a patented one-side coated Anti-Fog film with an adhesive backing.

- It is an excellent candidate for use in display case refrigeration units such as those found in grocery and convenience stores.

- It offers long-term anti-fog performance, abrasion resistance, impact resistance, and good optical clarity.

- Anti-Fog Film also provides chemical resistance, printability, and anti-static properties.
HOW DOES IT WORK?

- Anti-Fog Film is applied on the inside of freezer doors.
- Preventing them from fogging up when shoppers open the cases.
- The standard door heating system can be switched off.
- This can accomplish a significant energy saving.
WHY USE IT?

- A persistent problem with reach in display cases has been visibility through the glass doors.

- Temperature and humidity differences between the inside of the case and the ambient conditions cause fogging or sweating on the glass surface. If shoppers cannot see the products clearly, sales may be reduced.

- Case manufacturers typically install anti-sweat heaters to keep the door, frame and glass warm enough not to accumulate condensation after the door has been opened.

- These heaters consume electrical energy to produce heat that is ultimately added as an additional load to the refrigeration.

- The result is a very inefficient net use of electricity.

- A worrying report by the EIA calculates that a quarter of the carbon footprint of a supermarket is the result of the use of HFC’s in refrigeration equipment.

- **Anti Fog Systems Film can prevent these conditions from occurring.**
ENERGY SAVING FOR SUPERMARKETS

Typical Savings for supermarkets take into account, $ p/KWH of electricity, door heater amperage draw and the number and types of doors.

Example: By Installing the film on 1 freezer door:-

- Saving of $10 p/m, or $120 p/y, Freezer Life = 6-10 Years.
- Saving $720 - $1200 over the freezer door life.
- **Reductions up to 60%**

Compressors function ± 30% more energy efficient!

Drastic reduction of **CO2 emissions**!

(Freezers generally come in 2, 3 or 5 door units, these results will vary dependent on door type and usage)
CONSTANT CLEAR CONTINUAL BRAND CLARITY AND AWARENESS

FOGGED CABINETS DETRACTS CUSTOMERS FROM PURCHASES

CONTINUAL CLARITY FOR BRAND LEADERS ALLOW THE PRODUCTS TO SPEAK AND SELL FOR THEMSELVES.

THE CONTINUAL CLARITY OF THE FILM ALLOWS CUSTOMERS THE OPPORTUNITY OF CHOICE AND SELECTION.
PROVEN SUCCESS - TESCO

August 2008 – February 2009

Stores: 804

Doors: 52188

Energy Saving: 41,004,000 (kWh)/door

Reduced CO2 Emissions: - 31,680 tons/year

Largest Grocery Retailer in the UK
PROVEN SUCCESS – Farm Fresh

“Constant Clear helps Farm-Fresh shoppers see clearly inside frozen food glass door cases, while reducing energy costs”

- “We verified the anti-sweat heater amperage dropped by about 50% for the doors using ANTI FOG FILM - from 5.2 amps to 2.4 for a four door frozen food glass door case, when the glass door portion is disconnected”

- “We also expect a drop between 10% and 30% in energy usage for our compressors”

- "This is a simple, passive system that can be installed quickly. We plan to continue rolling it out to our other locations.”
PROVEN SUCCESS, Price Chopper

Constant Clear film allows supermarket chain to turn off glass door heaters and reduce the load on compressors.

- “By turning off the heat to the doors that heat the glass, we cut the electrical usage for the five-door case by 400 watts”.

- “we expect to recoup the investment in Constant Clear film in as little as 10 months, depending on the store”.

- “significantly lightens the load on compressors – potentially extending their useful life and avoiding maintenance issues, another important benefit of the anti-fog film”.

INNOVATIVE, SUSTAINABLE, EFFECTIVE

From the initial product launch up to today’s changes, with new and improved features, the Anti-Fog Film has proven to be a sustainable product with long-term Anti-Fog performance, tested by ENERGYGARD® in numerous conditions and atmospheres.
### Grocery Store Savings Example

<table>
<thead>
<tr>
<th>Typical No. of Doors</th>
<th>$/Y/Dr</th>
<th>Average KWH Savings / Grocery</th>
<th>Average Savings Grocery Year</th>
<th>Savings Per Chain (100 Stores)</th>
<th>Savings Chain KWH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ice Cream Doors</td>
<td>20% 20 Doors</td>
<td>$93.35</td>
<td>16819</td>
<td>$1867.00</td>
<td>$186,700.00</td>
</tr>
<tr>
<td>Low Temp Doors</td>
<td>60% 60 Doors</td>
<td>$93.35</td>
<td>50456</td>
<td>$5601.00</td>
<td>$560,100.00</td>
</tr>
<tr>
<td>Mid Temp Doors</td>
<td>20% 20 Doors</td>
<td>$35.00</td>
<td>6307</td>
<td>$700.00</td>
<td>$70,000.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>100 Doors</td>
<td><strong>73,582 kwh</strong></td>
<td><strong>$8168.00</strong></td>
<td><strong>$816,800</strong></td>
<td><strong>7,358,200 kwh</strong></td>
</tr>
</tbody>
</table>

| **6 years**         | 441,492 kwh | **$49,008**       | **$4,900,800**                | **44,149,200 kwh**              |

6 Year Savings minus the install cost of $1’600,00 for chain, ROI for 6 years 206%

Cost to grocery chain of waiting to install film = $4,476 per day, $1,633,565. per year
CONSIDERATION

ENERGY SAVING
ENVIRONMENTALLY SOUND
QUICK INSTALLATION
IMMEDIATE RESULTS
SHORT PAYBACK
COST EFFECTIVE
RETAIL CUSTOMER APPROVAL

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