

## SABIC Innovative Plastics helps Jan Linders supermarkets cut energy costs and carbon emissions with Lexan\* freezer film

Anti-fog properties of clear, self-adhesive specialty polycarbonate (PC) film allows freezer door heaters to be turned off

Jan Linders Supermarkets, a 50-store chain in southern Netherlands, is a leader in reducing energy usage. The company saw an opportunity to cut power usage and the accompanying carbon dioxide (CO<sub>2</sub>) emissions by replacing door heaters for its freezer compartments with a more environmentally responsible solution: anti-fog film from SABIC Innovative Plastics.



### Challenge

#### Reducing energy costs and CO<sub>2</sub> emissions across 50 stores

To create an environment to house the Blue World Jan Linders Supermarkets, a 45-year-old supermarket chain operating in South Holland, has been proactive in reducing energy consumption in its 50 stores – both to support environmental protection and to cut overhead costs for an advantage in the highly competitive grocery industry. Jan Linders makes sure its buildings are energy-efficient and its vehicle fleet adheres to high standards for fuel efficiency.

In addition, local authorities in the Netherlands are encouraging supermarkets to reduce their energy usage. However, like many other supermarkets, Jan Linders used electrical heaters on the inside of their freezer doors to avoid fogging when the doors are opened by shoppers. These electrical heaters not only consume significant amounts of energy but also generate heat that circulates into the freezer compartment, which means that the compressor will use more energy to keep the inside of the freezer at -22°C.

When Jan Linders received a suggestion from Frijado Super Service – which maintains supermarket freezer compartments – to investigate a new anti-fog film from SABIC Innovative Plastics, the company decided to do a trial at its store in Arnhem. Fifteen freezer doors were outfitted with self-adhesive, anti-fog Lexan HPDF film by Windowgard, a company specialized in installing window films.

### Solution

#### Lexan freezer film for anti-fog performance without heat

Lexan HPDF film, featuring a proprietary anti-fog coating, adheres to glass doors to prevent the formation of condensation when shoppers open the cases. The film has an adhesive backing, making it easy and quick to install, and requires very little maintenance. Its optical clarity, combined with a long-term anti-fog coating, allows products inside the case to remain fully visible to shoppers. As an added benefit, the film can help maintain the integrity of the glass and prevent spalling if the internal pane of glass is broken.

Jack van Est, marketing specialist, SABIC Innovative Plastics, said, “Until now, stores have been forced to heat frozen food compartment doors to avoid fogged glass that can prevent customers from seeing the goods inside. With rising energy costs and increased emphasis on reducing our carbon footprint, it is becoming difficult to justify these heaters. Our durable, anti-fog Lexan film is a great solution for our customers and the store, helping to ensure a pleasant shopping experience while reducing energy consumption.”

### Benefits

#### Saving up to €155 per door and 400 tons of CO<sub>2</sub> annually

Jan Linders Supermarkets began testing Lexan freezer film in December 2007; the film was applied to 15 freezer doors and their heaters were turned off. During a trial of several months, fog accumulation and energy usage were measured. The results exceeded expectations – not only was

# Lexan\* resin / Jan Linders

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fogging completely eliminated, but data showed that up to 127 watts per door could be saved.

Extrapolating out from this small trial, Jan Linders Supermarkets, SABIC Innovative Plastics and Frijado estimated that by applying the film to all 450 doors in its stores and turning off door heaters, the company could save up to €155 euros per door per year, as well as up to 400 tons of CO2 emissions annually. It would take 1,300 full-grown trees to absorb this equal amount of CO2. Another benefit of the film will be Jan Linders' strengthening support of local government efforts to control energy usage.

Jan Linders Supermarkets has made the decision to retrofit all vertical freezer doors with Lexan freezer film. Leo Linders, president of the company, said, "This is good news for us all; our customers can continue to enjoy their shopping experience with the knowledge that Jan Linders is making a valuable contribution to the environment. They will also feel the benefit of our competitive pricing policy as we continue to drive down overhead costs."

**Details at**  
[www.janlinders.nl](http://www.janlinders.nl)

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