ExxonMobil
Signature Polymers

Case Study

Exceed™ high performance PP

Exceed™ high performance PP eliminates fan cover damage for Camel Appliances Manufacturing Co.

Improved durability
- Improved impact performance by 500% vs. reference homopolymer polypropylene
- Enhanced stiffness by 40% vs. reference homopolymer PP

Premium high gloss appearance
Excellent gloss levels not possible with other ICP grades

Easy to process
Injection molding using existing molds and equipment

Recyclable
Recyclable in communities that have programs and facilities in place that collect and recycle these items

Challenge

The appliances market in the Asia Pacific region is highly competitive and growing fast. To stand out among global brands, regional appliance makers must offer high quality products at affordable prices. Camel Appliances, a well-known appliance manufacturer in the Philippines, was concerned that 0.8% of its pedestal fans were being returned because fan covers became damaged during handling and delivery. The company began searching for a more durable and aesthetically pleasing alternative to the homopolymer polypropylene (PP) that it had been using to make the fan covers.

Solution

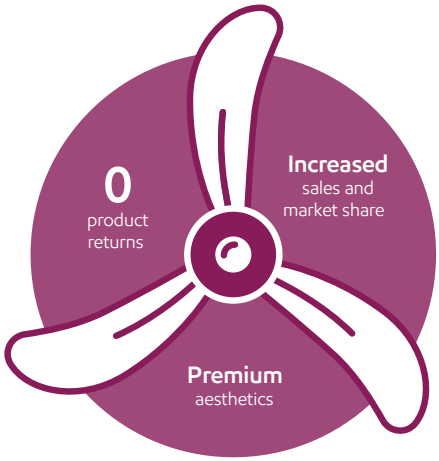
Camel Appliances shared their challenges with ExxonMobil, with whom they had been collaborating for over 15 years. Because of this long-standing relationship, Camel Appliances was confident that ExxonMobil could provide an innovative, high-quality solution for its fan covers supported by excellent technical expertise. ExxonMobil sent Camel Appliances a sample of Exceed™ PP7123KNE1, and after successful trials, Camel Appliances replaced homopolymer PP with Exceed PP7123KNE1.

Results

Just three months after switching from homopolymer PP to Exceed PP7123KNE1, Camel Appliances reported zero product returns and increased sales and market share domestically, with interest from other Asia Pacific markets. After seeing the improvement in the durability and appearance of the fan covers, Camel Appliances started to explore the use of Exceed PP7123KNE1 in other appliance components, including washing machine covers.

Challenge reality and rethink what's possible in appliance components with durable, aesthetically pleasing Exceed™ high performance PP

Just three months after switching from homopolymer PP to Exceed™ PP7123KNE1, Camel Appliances attained the following results:



"The switch to Exceed™ high performance PP has been a very affordable solution. The pedestal fans have been very well accepted in the market and with product returns reduced to zero. Meanwhile, our reputation as an early adopter of innovative solutions has been enhanced."

Imelda Ty, Vice President, Manufacturing Camel Appliances

Better and balanced performance of Exceed™ PP7123KNE1

Generally homopolymer PP has higher gloss than common ICP grades, but its impact is significantly lower which causes parts breakage. Exceed™ PP7123KNE1 has similar gloss level to homopolymer PP while delivering much better impact performance.

Exceed™ PP7123KNE1 can replace common ICP and thereby help enhance product aesthetics while maintaining durability.

Exceed™ PP7123KNE1

Property	Unit	Typical value	Test Method based on
Melt Mass-Flow Rate (MFR) (230°C, 2160g)	g/10 min	11	ASTM D1238
Tensile Stress at Yield (23°C)	MPa	30.8	ISO 527-2/50
Flexural Modulus (2.0mm/min)	MPa	1680	ISO 178
Notched Izod Impact Strength (23°C)	kJ/m2	6.9	ISO 180/1A
Heat Deflection Temperature (HDT) @0.45MPa	°C	102	ISO 75-2/Bf
Gloss (60°)	-	89	ASTM D523

What's new: ExxonMobil Signature Polymers

All our polymers are now positioned under a single portfolio brand: Signature Polymers. The aim is to simplify our product architecture and naming to improve portfolio navigation for you. We would like to stress that our commitment to high quality products remains the same. The composition of the products are unchanged, it is only the names that updated. We will be making these modifications over the next few months, through mid 2025, so you will see both old and new grade names highlighted during that time

Here's a quick overview of brands and grade names that have been changed in this document:

Legacy Commercial Name	New Commercial Name
Achieve™ Advanced PP7123KNE1	Exceed™ PP7123KNE1

Want to see what's changed in our portfolio? Go to **exxonmobilchemical.com/sptransform**

Contact us for more information: **exxonmobilchemical.com/pp**

ExxonMobil Signature Polymers

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