# **How SilcoTek Helped Santa Deliver More Gifts!**



# A SILCOTEK® CASE STUDY

Due to privacy constraints, the customer who allowed us to share their game-changing story wishes to stay anonymous. Thanks Santa! Oops we let the cat out of the bag!



#### **SUMMARY:**

This game-changing story focuses on a customer whose main objective in their project was to develop double-sided microstructured polymer films with multifunctional surface properties. The customer wished to achieve a low coefficient of friction while improve corrosion resistance of mission critical runners on the customer's primary delivery vehicle. In other words, Santa wanted to deliver more gifts and not have to replace his sleigh runners so often! Now is that so hard to understand?

### **Challenges:**

The customer tried different surface coatings on their steel runners, but ultimately Dursan was the coating that solved their problems. The challenge illustrated by the customer was to prevent adhesion of snow to the the steel matrix to lower friction and thus increase sleigh take-off weight, ulitmately allowing Santa to deliver more gifts to us!

### HOW SILCOTEK HELPED

The main solution that SilcoTek's Dursan coating technology provides is lowering surface energy and increasing hydrophobicity which creates a sleigh runner that has better release and corrosion resistance, improving Santa's efficiency and making kids happier around the world!

## **GAME-CHANGING BENEFITS:**

The biggest game-changing benefit that the customer reported back was the increased hydrophobic properties that their molding surfaces experienced. According to their findings, this "is an advantage in demolding; possibly to coat both the steel and glass components of the system."

We are very pleased to have helped another customer with injection molding, an industry that we see a variety of other benefits including: improved corrosion resistance of components, improved wear resistance, improved lubricity, and more.



Fig.1. Yucky corrosives like sulfuric acid from acid rain can corrode Santa's sleigh runners. Dursan fixes that! And makes Santa happy!



Fig. 2. Comparative testing shows Dursan improves lubricity by 36% over stainless steel while reducing surface energy by up to 8x. Lots of numbers, all we know is we get a nice thank you card from all the reindeer every year thanking us for making their jobs easier!



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