

Anti-icing Formulas Prevent Train Delays



Ames Research Center

**Midwest Industrial Supply
Canton, OH**

NASA Technology

- ◆ Ice buildup on planes in the winter months make them dangerous to fly if not inoperable.
- ◆ NASA scientists developed a nontoxic, biodegradable deicing fluid that replaced an earlier liquid application that was banned by the US Air Force.



Technology Transfer

- ◆ Midwest Industrial Supply licensed the technology and improved its Ice Free Switch (IFS) product, a fluid that prevents train switches from freezing over.
- ◆ Compared to its old IFS product, the new NASA-technology-infused solution is easier to apply and sticks onto vertical surfaces better.

Benefits

- ◆ Midwest used the same technology to develop its Zero Gravity Third Rail product, which keeps the electrical rails—which power the trains—from freezing and causing delays.
- ◆ The two products increase company revenues by \$300,000 to \$600,000 a year, helping to prevent seasonal layoffs in the winter.