



## Eliminate the Nightmare of Transit System Shutdown Due to Icing

Prevent third rail icing with an anti-icing strategy. Icing on the third rail will produce insufficient electrical contacts, causing power problems and preventing mass transit trains from operating. Be pro-active and stay ahead of the storm, after all, “an ounce of prevention is worth a pound of cure”.

Third Rail Anti-Icer is applied prior to a severe storm event. On-going applications during the storm will maintain a clear, ice-free third rail. Anti-icing provides the maintenance manager with two major benefits:

*Third Rail Anti-Icer makes anti-icing the twenty-first century “Smart Choice”.*



## Zero Gravity Smart Fluid

Third Rail Anti-Icer utilizes a NASA "Smart Fluid" technology we call Zero Gravity™, co-developed by NASA/Ames Research Center and Midwest. When a small amount of this non-corrosive, biodegradable substance is sprayed onto the third rail to produce a thin film of 0.01", its viscosity reverts to high "zero" shear or static viscosity which enables it to stay in place. Third Rail Anti-Icer remains in place to be triggered later by sleet, rain or snow. It positively prevents moisture from becoming ice on the third rail!

Third Rail Anti-Icer was developed to permit uninterrupted equipment operation at freezing temperatures. With the absence of electrolytes, there is no possibility of galvanic action and corrosion. Electrical shorts and arcing are eliminated as well. With its non-tacky nature, it will also reduce the wear-and-tear on the contact shoe.

Third Rail Anti-Icer is the smart choice for busy maintenance managers who have many other responsibilities on their minds. When you keep trains running on time, your passengers stay happy and that maintains high quality customer service.

Zero Gravity™ "Smart Fluid" technology is a patented and licensed capability which permits our Third Rail Anti-Icer to be sprayed or poured, in a liquid state, and become "jello-like" in its activated state. "Smart Fluid" technology allows the same substance to be a liquid and then become an extremely resilient coating that will stay in place, even on vertical surfaces. This extraordinary product retains its long-lasting anti-icing properties which are re-activated by freezing rain, sleet or snow. It absolutely prevents ice from forming on the third rail! Zero Gravity is one of the many reasons we have been the leader in anti-icing since 1975.

## Benefits:

- Eliminates power loss and stalled trains
- Prevents ice and snow from bonding to the third rail
- Maximizes safety conditions for passengers
- Defies the effects of rain, sleet, snow, wind and gravity
- Does not conduct electricity or cause shorting
- Holds fast to vertical surfaces and remains in place
- Reduces wear and tear on "contact shoes"
- More effective than electric rail heaters
- Safe to use/environmentally friendly
- Biodegradable/non-corrosive
- No electrolytes/non-galvanic
- Efficient and economical to use

## Ice Slicer Application System

A custom designed application system specifically fabricated to apply Third Rail Anti-Icer to dual sides of the third rail. Ice-Slicer™ is positioned inside revenue cars, where it applies the fluid directly onto the third rail. Once engaged, Ice-Slicer becomes fully automatic. Sensors and solenoid valves determine which side of the track (either cab side or non-cab side) receives the fluid at the appropriate time. Once the system is set to the required volume, (based on pressure settings and orifice sizes), no other adjustments are required.

Ice-Slicer is the most dependable way to keep your third rail free and clear of ice. Its more cost effective than using rail heaters, which drain maintenance budgets and require even higher power costs. Ice-Slicer is implemented only as needed and eliminates the need for specialized "storm trains". Best yet, Ice-Slicer keeps trains running on schedule.