

# Flight Line Ready: Protecting Ground Support Equipment

Airports are harsh, demanding environments. Tarmacs are hot, open to the elements, and constantly exposed to jet fuel, hydraulic fluids, and de-icing chemicals. Ground Support Equipment (GSE)—tugs, baggage carts, belt loaders, and chocks—takes a beating 24 hours a day. Equipment failure causes delays, and in aviation, delays cost millions. Safety is also critical; a rusty piece of metal falling off a cart becomes FOD (Foreign Object Debris), which can destroy a jet engine. **Powder Coating NJ** services provide the heavy-duty protection needed to keep this fleet reliable, visible, and safe.

## FOD Prevention

Rust is a major source of Foreign Object Debris (FOD). Flaking paint and rust scales can detach from equipment and end up on the runway or taxiway, where they can be ingested by engines or cut tires. Blasting and powder coating GSE frames ensures a solid, bonded finish that encapsulates the metal. It eliminates the risk of flaking. Furthermore, by stopping corrosion, you prevent structural parts from snapping and falling off. This is a critical safety protocol for any ground handling operation. A clean, coated fleet is a safe fleet that reduces the risk to aircraft.

## High Visibility on the Ramp

The airport ramp is a busy, dangerous place with moving aircraft and vehicles. Equipment needs to be seen by pilots and ground crew, day and night, in all weather conditions. Safety Yellow and White are the standard colours for a reason. Powder coating offers UV-stable pigments that stay bright for years, unlike paint which fades quickly in the sun. Faded equipment blends into the concrete; bright equipment stands out. Coating tow bars, ladders, and chocks in high-vis colours prevents tripping hazards and collisions. It is a simple investment in operational safety.

## Resistance to Skydrol and De-Icing Fluid

Aviation fluids are chemically aggressive. Skydrol (hydraulic fluid) strips standard paint upon contact. De-icing fluid (glycol) is corrosive to metal and can cause rapid rusting. GSE is constantly soaked in these fluids during operation. Specialized chemical-resistant powder coatings are available that can withstand this exposure without

softening or peeling. They protect the metal asset from chemical attack, extending its service life significantly. This reduces the capital expenditure required for fleet replacement and keeps the equipment looking professional.

## **Refurbishing Baggage Carts**

Baggage carts are the most abused items on the tarmac. They are slammed together in "trains," dragged for miles, and loaded with heavy luggage. The side curtains and floors wear out, and the frames rust. Refurbishing the steel frames with a thick, impact-resistant powder coat keeps them in service. It stops the rust that can stain passenger luggage during transport. It ensures that the carts look professional, which reflects well on the airline's brand image as passengers look out the window.

## **Conclusion**

Aviation demands the highest standards of safety and reliability. Your ground equipment should meet those standards. Powder coating provides the durable, high-visibility, and chemical-resistant finish that keeps the ground operation running smoothly and safely, supporting the aircraft that rely on it.

**Call to Action** Ensure your ground support fleet is compliant and durable with our specialized aviation coating services.

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