



NYCOTE APPLICATION CASE STUDY: **NYCOTE 7-11 CHEMICAL RESISTANCE TO RUNWAY DEICERS**

Airfield pavement deicing and anti-icing are essential activities to maintain safe winter operations of the aviation industry. Airfield pavement deicing products (PDPs) traditionally consisting of urea or glycols have become less popular due to environmental impacts. The New PDPs have emerged as alternatives that often contain Potassium Formate (KF) or Potassium Acetate (KAc) as freezing point depressant.

Oxidation of aircraft landing gear, especially carbon-carbon composite brakes by modern PDPs have become a growing concern for the aircraft industry. Field reports increasingly suggest that contact with modern PDPs promote damage to aircraft components.

Nycote 7-11 provides an excellent permanent safety barrier from extreme environments and can be used to coat and encapsulate aircraft landing gear parts. For example, Nycote 7-11 can be applied to wheel wells over other paint and coatings, providing a protective barrier against PDPs, which can later be wiped off of the coated surface.

BENEFITS:

- Cross-linking provides strong 3-dimensional structures and allows for custom coating features
- Adheres to Metal, Composites, Fabrics, Plastics, and more
- Provides self-leveling technology and a void-free impenetrable barrier
- Protects parts and systems from extreme environments / microscopic dust / friction / abrasion / corrosion
- Long lasting & cost-effective solutions
- 60 Years of Experience in Aerospace Collaborations

NYCOTE 7-11 QUALIFICATIONS:

Nycote 7-11 was immersed in liquid deicer over a 24 hour period. **Results indicated:**

- No blistering
- No loss of adhesion (ASTM D3359, Method B Crosshatch Adhesion Test) Nycote 7-11 0% affected and received the highest classification adhesion rating of 5B.
- No loss of Pencil Hardness (ASTM D3363 in accordance with MIL-PRF-32239A – Pre and Post test rating of 3H)

Test conclusion: Fluid immersion testing Nycote 7-11 showed no loss of adhesion and no change in hardness after 24 hours at room temperature.

Nycote 7-11, 88 and 99 can be applied to prevent corrosion and material degradation with complete nylon encapsulation technology. They are resistant to an array of harsh chemicals, such as, hydraulic fluids, jet fuels, greases, lubricants, chemicals used in PDP's and more.

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