

Cleaning of Pavement Surfaces by Potassium Acetate Runway Deicers

Airport operators have reported the appearance of residues on airport pavements after application of potassium acetate-based runway deicers early in the season. This is normal, easily mitigated, and may be used to an airport's advantage.

Cryotech E36[®], a potassium acetate-based runway deicer, has the ability to dislodge and lift pavement contaminants. In some cases, this may show up as a dark, tacky, or slippery residue. Typically, this happens after the first winter application if there is not enough precipitation to clean the pavement. The residue is easily removed manually by rinsing the pavement with water or by additional applications of E36 coupled with mechanical removal.

PAVEMENT CLEANING

E36 has low surface tension and high specific gravity (28% heavier than water). These properties are important to the deicer's performance. They allow it to spread quickly and uniformly over the pavement surface, and penetrate through the ice layer to undercut existing snow and ice, and also to proactively prevent it from bonding to the pavement surface.

These same properties also give E36 the ability to diffuse under the pavement contaminants and to 'deep clean' the pavement. This may result in a summer's worth of dirt, grime, rubber, fuel, oil, and other contaminants suddenly rising to the pavement surface. The residue can track into buildings and may obscure pavement markings. Usually, there is enough precipitation with E36 use that any residue is cleaned away as plows and/or brooms remove it with the snow and ice. However, if E36 is applied with light or no precipitation, it may be necessary to manually remove this residue. At temperatures above freezing, simply wash it away with water. Below freezing, it may be necessary to make additional applications of E36 to keep the residue mobile, and continue brooming to remove it. After the first significant rain or snow event of the season, it usually does not reappear for the rest of the winter.

PREVENTIVE MAINTENANCE

Residues are minimized by routinely cleaning contaminated surfaces prior to winter. Some airports have reported using E36 as an effective rubber removal chemical. Additionally, E36 use can help prevent rubber buildup on the runway surface in the first place.

Please note that E36 has been tested and determined to be compatible with asphalt and concrete pavements. Copies of those test results may be obtained by contacting Cryotech.