Industrial Systems Ltd.
10917 Commercial St. Unit 2
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Potassium Acetate 50%
(KAC)

Liquid Deicer

Product Description

Potassium acetate (KAC) is a deicing solution that provides reliable anti-icing and deicing performance while minimizing the environmental impact of chloride, urea-nitrogen and/or glycol based formulations. KAC can be used for municipal sidewalks, roads and bridges, and parking garage applications as well as industrial coal mining or construction aggregate applications. KAC is readily biodegradable, and does not contain chlorides or nitrogen, which can contaminate surface waters.

Product Specifications

Composition	Minimum 50% w/w KAC solution plus corrosion inhibitors
Appearance	Transparent amber solution
Freeze Point	– 75°F (-59.4 C)
Freeze Point (1:1 dilution in water)	– 4°F (-20 C)
Density	At 68° F 10.8 lbs/gallon
Viscosity	At 77° F 15 cp maximum
Flash Point	Non-flammable
Water Solubility	Complete
pH (neat)	10 – 11
pH (1:1)	8 - 9
Odor	None
$BOD_{5\text{-day at }68^{\circ}\text{ F}}$	<0.25 kg O_2/ kg
COD ($TOD_{5\text{-day}}$) at 68° F	<0.36 kg O_2/ kg
EPA 40 CFR 797.1400	
96 hour LC_{50}	2,750 mg/L

Examples of Application/Benefits

- Effective to –4° F at 50% dilution resulting in long residual effectiveness
- Can be mixed with dry road salt deicer to improve salt freeze/thaw characteristics & reduce bounce & scatter
- Can be used as an anti-icing application prior to an icing event
- Safer for bridge decks and other corrosion sensitive roadways than standard road salts
- Non-toxic, non-hazardous to operators and the environment
- Readily biodegradable, exhibiting very low BOD and COD values
- (< 0.36kg O_2/kg)

Product Application

Pavement (including parking garage and bridge applications)

Potassium Acetate (KAC) is generally applied as is (undiluted) using existing spray equipment. Any spray equipment that conveniently and uniformly applies the liquid to the pavement should be acceptable. If the rate of spray application is adjustable it should be applied at 0.5 gallons / 1000 ft^2 of surface area treated. Higher rates of application (up to 1.5 gallons / 1000 ft^2) can be made as experience warrants. In general, low spray pressures resulting in large droplet sizes are preferred.

It is also possible to combine KAC with solid deicers and/or surface abrasives including sand, sodium acetate, sodium chloride, magnesium chloride, and other non-calcium based deicing salts, by applying KAC as evenly as possible with the solid deicer

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during truck loading. Typical addition ratios range from 5-25 gls/ton KAC into the solid deicer blend. KAC coated sand and solid deicers offer improved ice melting speed, maximize adherence of particles to treated area, and improve long-term residual performance.

As ice and snow is melted, the KAC concentration is diluted by the melt, and the freeze point of the diluted KAC is lowered. To minimize the rate of dilution, mechanically remove accumulating snow and ice frequently. When patches of ice or snow remain after mechanical removal, it is an indication that KAC has been diluted beyond its effectiveness and reapplication is necessary.

Coal car & aggregate loading and unloading (including conveyorized belts and mechanical loading equipment)

KAC is an effective release agent in the loading and unloading of coal from rail cars or aggregates in construction. Application of KAC to coal or aggregates and to loading and unloading equipment will minimize adhesion of coal & aggregates to belts, trailers and rail cars. KAC will also minimize coal dust generated during handling and transport by absorbing moisture in the air and retaining it in the coal.

Hazard Information

Hazardous Waste & Shipping
Potassium acetate is not a listed hazardous waste. The RCRA regulations define hazardous waste in two ways: a listed hazardous waste or a characteristic hazardous waste. A waste may be considered hazardous if it exhibits any one of four characteristics - corrosivity, toxicity, ignitability, or reactivity. A waste is corrosive under RCRA if it has a pH less than or equal to 2.0 or greater than or equal to 12.5. Potassium acetate is not RCRA corrosive, toxic, ignitable or reactive; therefore, it is not a characteristic hazardous waste.

No Hazardous Components
Potassium acetate contains no hazardous components as described by SARA Title III, Section 302. Nor is potassium acetate designated as a hazardous chemical by the U.S. Department of Transportation.

Spill Handling Procedures
Potassium acetate (KAC) is not expected to present environmental problems. If product should spill, it should be absorbed and the resulting waste disposed of in a sanitary landfill unless state or local regulations prohibit such disposal.

Packaging

- Bulk
- 275-gallon non-returnable totes

Storage Stability

- 36 months in sealed containers

Disposal

Dispose of container and unused contents in accordance with federal, state, and local requirements. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations.

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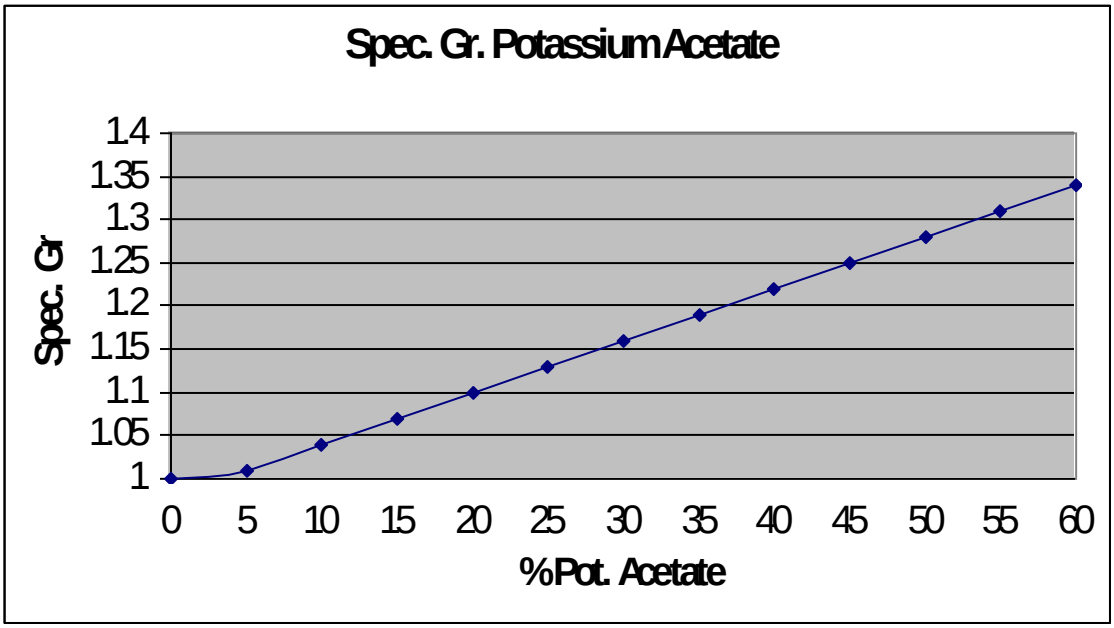

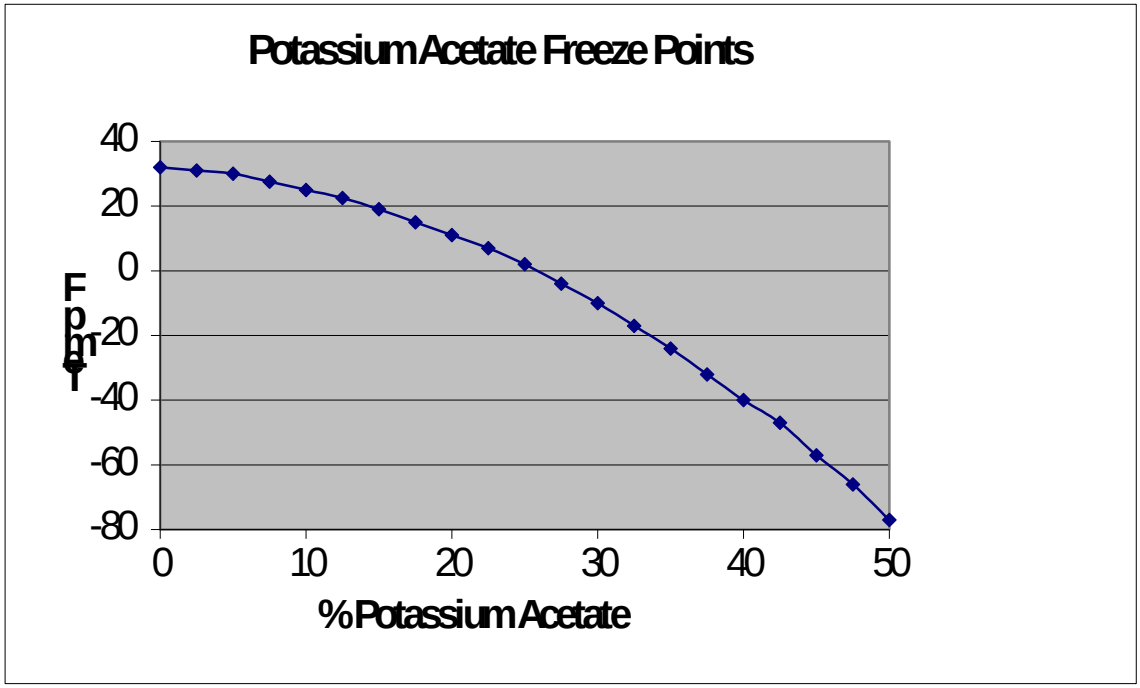

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Important Notice Regarding the Attached Information:

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