Non-Chloride Deicer Data Sheet

FORMATES

Description

Common formate-based deicers include potassium formate (KFm) and sodium formate (NaFm). Formate-based deicers are similar to acetates and are commonly used at airports. Formate-based deicers are effective above temperatures of -25°F, however they can be costly.

Pros

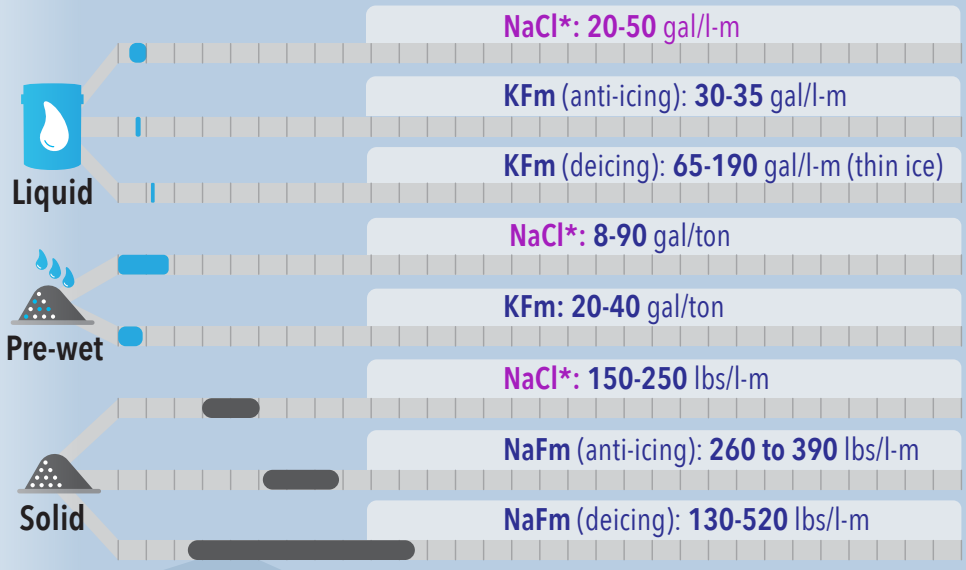
- Low effective temperature
- Fast acting

Cons

- Expensive
- Corrosive to galvanized steel

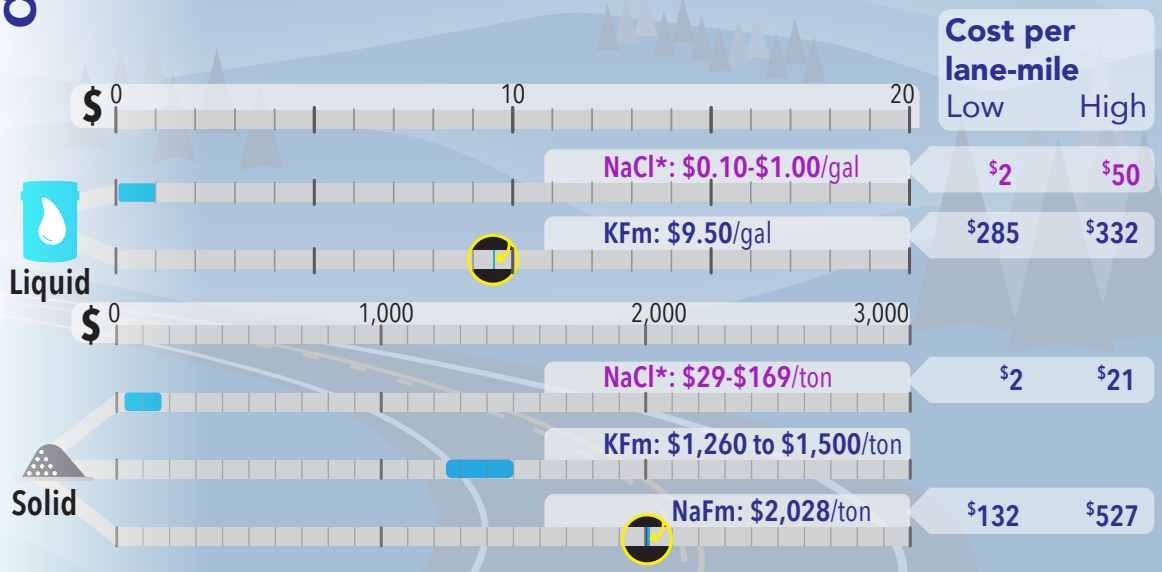
Effective temperature °F

Application Rate



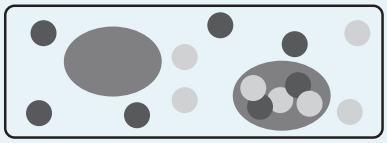
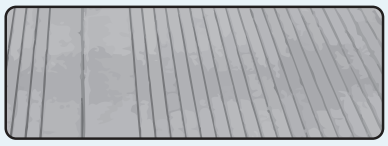
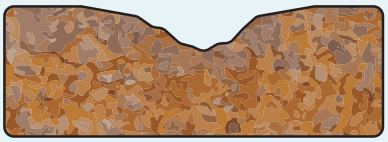
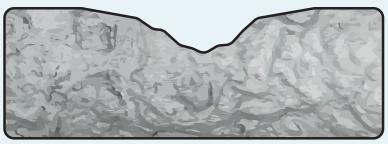
Eutectic temperature °F

Cost



Non-Chloride Deicer Data Sheet

FORMATES

	Impacts	NaCl*	KFm	NaFm
	BOD COD	Low	Low to Moderate	Low to Moderate
	Ecological Toxicity	Low to Moderate	Moderate	Moderate
	Asphalt Pavements	Low to Moderate	Low to Moderate	Low to Moderate
	Concrete Pavements	High	Moderate	Moderate
	Mild Steel Corrosion	High	Low	Low
	Galvanized Steel Corrosion	High	High	High

Storage and Handling

- All equipment surfaces that are frequently exposed to deicing products should be routinely rinsed with warm water to prevent accumulation.
- Keep containers tightly closed in a dry, cool and well-ventilated place.
- All liquids should be stored with secondary containment.
- All solids should be stored on non-permeable surfaces and covered from the elements.

** **NaCl** is included as a reference for comparison to the non-chloride deicers in this data sheet.*

CLEAR ROADS research for winter highway maintenance

MONTANA STATE UNIVERSITY | Western Transportation Institute

DEPARTMENT OF TRANSPORTATION

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