



Highway Maintenance Manual
Chapter 06 Winter Maintenance
Section 20 Snow Removal Materials
Subject 25 Application Rates De-Icing

Bureau of Highway Maintenance
Nov 2008

1.0 De-icing Application Rates (4-lanes and greater)

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2.0 De-icing Application Rates (2-lanes)

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DE-ICING APPLICATION RATES FOR PRE-WETTED SALT – (4-LANES AND GREATER)

This guide is not meant to be a substitute for the use of judgment and the observation of the result of treatments on existing conditions. It is meant to show variables that usually occur together and the treatment that has proven to be the most successful. This guide should then be used to assist in deciding on the best course of action depending on existing conditions. This table assumes the salt is pre-wetted. (Allow de-icing agents time to begin working before making additional plowing passes.)

4-lane Highways Application Guidelines #/LM Pre-wetted Salt	Pave. Temp. 28° to 32° F		Pave. Temp. 23° to 28° F		Pave. Temp. 15° to 23° F		Pave. Temp. Less than 15° F	
	Initial	Subsequent	Initial	Subsequent	Initial	Subsequent	Initial	Subsequent
Frost	100	50-100	100-150	50-150	100-200 ²	100-150 ¹	100-300 ^{1,2}	100-200 ^{1,2}
Black Ice	200	100-200	100-300	100-200	100-400 ²	100-300 ¹	200-400 ^{1,2}	100-300 ^{1,2}
Sleet/Freezing Drizzle	200	100-200	100-300	100-200	200-400 ²	100-300 ¹	200-300 ^{1,2}	100-300 ^{1,2}
Freezing Rain	100-300	100-200	200-400	100-200	200-400 ²	200-300 ¹	300-400 ^{1,2}	200-300 ^{1,2}
Dry Snow	100-200	100-200	100-300	100-200	Plow Only ¹	Plow Only ¹	Plow Only ¹	Plow Only ¹
Wet Snow	200	100-200	100-300	100-200	200-400 ²	100-300 ¹	200-400 ^{1,2}	200-400 ^{1,2}

- Mechanical means of snow removal is the preferred method. Before applying any de-icing agents, the surface should be cleared of as much snow and ice as possible by mechanical means.
- Application rates are "MAXIMUM RECOMMENDED RATES". **Only apply the amount of pre-wetted salt necessary to accomplish the desired level of service.** Rates may vary with regard to pavement temperature, type of roadway surface, and weather conditions.
- Abrasives should not be used on roadways where speeds in the sanded areas exceed 45 mph.
- When wind speed is over 15 mph, use caution when salting and applying moisture drawing de-icing agents.
- ¹ Intersections and low speed hazardous areas may be treated with pre-wetted abrasives when warranted.
- ² If necessary, use alternate de-icing agents like calcium chloride and magnesium chloride in combination with a lower application rate of salt.

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DE-ICING APPLICATION RATES FOR PRE-WETTED SALT – (2-LANES)

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2-lane Highways Application Guidelines #/LM Pre-wetted Salt	Pave. Temp. 28° to 32° F		Pave. Temp. 23° to 28° F		Pave. Temp. 15° to 23° F		Pave. Temp. Less than 15° F	
	Initial	Subsequent	Initial	Subsequent	Initial	Subsequent	Initial	Subsequent
Frost	100	50-100	100-150	50-150	100-200 ²	100-150 ¹	100-300 ^{1,2}	100-200 ^{1,2}
Black Ice	200	100-200	100-300	100-200	100-300 ²	100-300 ¹	100-300 ^{1,2}	100-300 ^{1,2}
Sleet/Freezing Drizzle	200	100-200	100-300	100-200	100-300 ²	100-200 ¹	100-300 ^{1,2}	100-300 ^{1,2}
Freezing Rain	100-300	100-200	100-300	100-200	100-300 ²	100-300 ¹	200-300 ^{1,2}	100-300 ^{1,2}
Dry Snow	100-200	100-200	100-300	100-200	Plow Only ¹	Plow Only ¹	Plow Only ¹	Plow Only ¹
Wet Snow	200	100-200	100-300	100-200	100-300 ²	100-200 ¹	100-300 ^{1,2}	100-300 ^{1,2}

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