

Table 1: Light Snow Storm

Michigan Department of Transportation

Pavement Condition		Initial Operation			Subsequent Operations			Comments
Temperature	Surface Condition	Maintenance Action	Chemical Spread Rate		Maintenance Action	Prewet Salt	Dry Salt	
			Liquid	Prewet Salt	Dry Salt			
Above 32°F Pavement temperature steady or rising	Dry, wet, slush or light snow cover	None; see comments				None, see comments		1) Monitor pavement temperature closely. 2) Treat icy patches with dry salt at 100 lbs/lane mile or prewet salt at 50-75 lbs/lane mile, blade if needed.
Above 32°F Pavement temperature is falling to near 32°F	Dry	Anti-ice	Anti-ice app. rates depend on chemical used			Blade as needed; apply salt when needed	50-75 lbs/lane mile	100 lbs/lane mile
15°F to 32°F Pavement temperature remaining in range	Dry	Anti-ice	Anti-ice app. rates depend on chemical used			Blade as needed; apply salt when needed	50-75 lbs/lane mile	100 lbs/lane mile
	Wet or slush	Apply dry salt						
10°F to 15°F Pavement temperature remaining in range	Light snow cover	Apply dry salt or prewetted salt		50-75 lbs/lane mile	100 lbs/lane mile	Blade as needed; apply salt when needed	100-150 lbs/lane mile	200 lbs/lane mile
	Dry, wet, slush or light snow cover	Apply dry salt or prewetted salt						
Below 10°F Pavement temperature steady or falling	Dry or light snow cover	Blade as needed				Blade as needed	200 lbs/lane mile down to 0°F	1) It is not recommended that dry salt or prewetted salt be applied in this temperature range. 2) Abrasives can be applied to enhance traction. (5)

Notes:

- 1) If suggested application rates are lower than what the spreading equipment can handle, apply the minimum amount possible.
- 2) Time initial applications to prevent deteriorating conditions or the development of packed and bonded snow.
- 3) Apply liquid or salt ahead of traffic rush periods occurring during a storm.
- 4) If needed, blade before salt applications so that excess snow, slush, or ice is removed.
- 5) Abrasives will adhere to the road surface better if they are prewetted.

Table 2: Light Snow Storm With Periods of Moderate to Heavy Snows

Michigan Department of Transportation

Pavement Condition		Initial Operation				Subsequent Operations			Comments
Temperature	Surface Condition	Maintenance Action	Chemical Spread Rate			Maintenance Action	Salt Spread Rate		
			Liquid	Prewet Salt	Dry Salt		Light Snow	Heavier Snow	
Above 32°F Pavement temperature steady or rising	Dry, wet, slush or light snow cover	None; see comments				None, see comments			1) Monitor pavement temperature closely. 2) Treat icy patches with dry salt at 100 lbs/lane mile or prewet salt at 50-75 lbs/lane mile, blade if needed.
Above 32°F Pavement temperature is falling to near 32°F	Dry	Anti-ice	Anti-ice app. rates depend on chemical used			Blade as needed; apply salt when needed	Dry salt: 100 lbs/LM Prewet salt: 50-75 lbs/LM	Dry salt: 200 lbs/LM Prewet salt: 100-150 lbs/LM	1) Application will need to be more frequent at lower temperatures and higher snowfall rates. If the blade/treatment frequency cannot be maintained, the spread rate can be increased to 150 lbs/lane mile of dry salt or 75-100 lbs/lane mile of prewet salt.
15°F to 32°F Pavement temperature remaining in range	Dry	Anti-ice	Anti-ice app. rates depend on chemical used			Blade as needed; apply salt when needed	Dry Salt: 100 lbs/LM Prewet Salt: 50-75 lbs/LM	Dry Salt: 200 lbs/LM Prewet Salt: 100-150 lbs/LM	2) During light snow fall that occurs after heavier snow periods reduce dry salt rate to 100 lbs/lane mile or 50-75 lbs/lane mile for prewet salt; continue to blade and apply salt as needed.
	Wet or slush	Apply dry salt		50-75 lbs/lane mile	100 lbs/lane mile				
	Light snow cover	Apply dry salt or prewetted salt							
10°F to 15°F Pavement temperature remaining in range	Dry, wet, slush or light snow cover	Apply dry salt or prewetted salt		100-150 lbs/lane mile	200 lbs/lane mile	Blade as needed; apply salt when needed	Dry Salt: 200 lbs/LM Prewet Salt: 100-150 lbs/LM	Dry Salt: 200 lbs/LM Prewet Salt: 100-150 lbs/LM	
Below 10°F Pavement temperature steady or falling	Dry or light snow cover	Blade as needed				Blade as needed	200 lbs/lane mile down to 0°F	200 lbs/lane mile down to 0°F	1) It is not recommended that dry salt or prewetted salt be applied in this temperature range. 2) Abrasives can be applied to enhance traction. (5)

Notes:

- 1) If suggested application rates are lower than what the spreading equipment can handle, apply the minimum amount possible.
- 2) Time initial applications to prevent deteriorating conditions or the development of packed and bonded snow.
- 3) Apply liquid or salt ahead of traffic rush periods occurring during a storm.
- 4) If needed, blade before salt applications so that excess snow, slush, or ice is removed.
- 5) Abrasives will adhere to the road surface better if they are prewetted.

Table 3: Moderate or Heavy Snow Storm

Michigan Department of Transportation

Pavement Condition		Initial Operation			Subsequent Operations			Comments
Temperature	Surface Condition	Maintenance Action	Chemical Spread Rate		Maintenance Action	Prewet Salt	Dry Salt	
			Liquid	Prewet Salt	Dry Salt			
Above 32°F Pavement temperature steady or rising	Dry, wet, slush or light snow cover	None; see comments				None, see comments		1) Monitor pavement temperature closely. 2) Treat icy patches with dry salt at 100 lbs/lane mile or 50-75 lbs/lane mile for prewet salt, blade if needed.
Above 32°F Pavement temperature is falling to near 32°F	Dry	Anti-ice	Anti-Ice app. rates depend on chemical used			Blade as needed; apply salt when needed	100 lbs/lane mile	
30°F to 32°F Pavement temperature remaining in range	Dry	Anti-ice	Anti-Ice app. rates depend on chemical used			Blade as needed; apply salt when needed	50-75 lbs/lane mile	100 lbs/lane mile
	Wet or slush	Apply dry salt		50-75 lbs/lane mile	100 lbs/lane mile			
15°F to 30°F Pavement temperature remaining in range	Dry	Anti-ice	Anti-Ice app. rates depend on chemical used			Blade as needed; apply prewetted salt when needed	100-150 lbs/lane mile	200 lbs/lane mile
	Wet or slush	Apply dry salt			150-200 lbs/lane mile			
10°F to 15°F Pavement temperature remaining in range	Dry, wet, slush or light snow cover	Apply dry salt or prewetted salt		100-150 lbs/lane mile	200 lbs/lane mile	Blade as needed; apply prewetted salt when needed	100-150 lbs/lane mile	200 lbs/lane mile
Below 10°F Pavement temperature steady or falling	Dry or light snow cover	Blade as needed				Blade as needed	200 lbs/lane mile down to 0°F	1) It is not recommended that dry salt or prewetted salt be applied in this temperature range. 2) Abrasives can be applied to enhance traction. (5)

Notes:

- 1) If suggested application rates are lower than what the spreading equipment can handle, apply the minimum amount possible.
- 2) Time initial applications to prevent deteriorating conditions or the development of packed and bonded snow.
- 3) Apply liquid or salt ahead of traffic rush periods occurring during a storm.
- 4) If needed, blade before salt applications so that excess snow, slush, or ice is removed.
- 5) Abrasives will adhere to the road surface better if they are prewetted.

Table 4: Frost
Michigan Department of Transportation

Pavement Condition		Initial Operation			Subsequent Operations			Comments	
Temperature	Traffic Condition	Maintenance Action	Chemical Spread Rate		Maintenance Action	Prewet Salt	Dry Salt		
			Liquid	Prewet Salt				Dry Salt	
Above 32°F Pavement temperature steady or rising	Any level	None; see comments				None, see comments		1) Monitor pavement temperature closely. Begin treatment as soon as pavement temperature begins to drop to 32°F and is at or below dew point.	
28°F to 32°F Pavement temperature is falling to near 32°F	Less than 100 vehicles/hr	Apply salt		50-75 lbs/lane mile	100 lbs/lane mile	Apply salt when needed	50-75 lbs/lane mile	100 lbs/lane mile	1) Monitor pavement closely, if pavement becomes wet or if thin ice forms, increase application rate to 150 lbs/lane mile for dry salt or 75-100 lbs/lane mile for prewet salt.
20°F to 28°F Pavement temperature remaining in range and equal to or below dew point	Any level	Apply salt		50-100 lbs/lane mile	100 -150 lbs/lane mile	Apply salt when needed	50-100 lbs/lane mile	100-150 lbs/lane mile	1) Monitor pavement closely; if thin ice forms, increase application rate to 150 lbs/lane mile for dry salt or 75-100 lbs/lane mile for prewet salt. 2)Applications will need to be more frequent at higher levels of condensation. If traffic volumes are not enough to disperse condensation, it may be necessary to increase treatment frequency.
10°F to 20°F Pavement temperature remaining in range	Any level	Apply salt		75-150 lbs/lane mile	150 -200 lbs/lane mile	Apply salt when needed	75-150 lbs/lane mile	150-200 lbs/lane mile	1) Monitor pavement closely; if thin ice forms, increase application rate to 200 lbs/lane mile for dry salt or 100-150 lbs/lane mile for prewet salt. 2)Applications will need to be more frequent at higher levels of condensation. If traffic volumes are not enough to disperse condensation, it may be necessary to increase treatment frequency.
Below 10°F Pavement temperature steady or falling	Any level	Apply abrasives or prewet salt				Apply abrasives as needed (5)	200 lbs/lane mile down to 0°F		1) It is not recommended that dry salt or prewetted salt be applied in this temperature range.

Notes:

- 1) If suggested application rates are lower than what the spreading equipment can handle, apply the minimum amount possible.
- 2) Time initial applications to prevent deteriorating conditions or the development of packed and bonded snow.
- 3) Apply liquid or salt ahead of traffic rush periods occurring during a storm.
- 4) If needed, blade before salt applications so that excess snow, slush, or ice is removed.
- 5) Abrasives will adhere to the road surface better if they are prewetted.

Table 5: Freezing Rain

Michigan Department of Transportation

Pavement Condition	Initial Operation		Subsequent Operations			Comments
	Maintenance Action	Prewet Salt	Dry Salt	Maintenance Action	Prewet Salt	Dry Salt
Above 32°F Pavement temperature steady or rising	None; see comments			None, see comments		
Above 32°F Pavement temperature is falling to near 32°F	Apply prewetted salt	50-75 lbs/lane mile	100 lbs/lane mile	Apply prewetted salt when needed	50-75 lbs/lane mile	100 lbs/lane mile
20°F to 32°F Pavement temperature remaining in range	Apply prewetted salt	50-150 lbs/lane mile	100-200 lbs/lane mile	Apply prewetted salt when needed	50-150 lbs/lane mile	100-200 lbs/lane mile
10°F to 20°F Pavement temperature remaining in range	Apply prewetted salt	100-300 lbs/lane mile	200-400 lbs/lane mile	Apply prewetted salt when needed	100-300 lbs/lane mile	200-400 lbs/lane mile
Below 10°F Pavement temperature steady or falling	Apply abrasives			Apply abrasives as needed		

Notes:

- 1) If suggested application rates are lower than what the spreading equipment can handle, apply the minimum amount possible.
- 2) Apply liquid or salt ahead of traffic rush periods occurring during a storm.
- 3) If needed, blade before salt applications so that excess snow, slush, or ice is removed.
- 4) Abrasives will adhere to the road surface better if they are prewetted.

Table 6: Sleet Storm

Michigan Department of Transportation

Pavement Condition	Initial Operation			Subsequent Operations			Comments
	Maintenance Action	Prewet Salt	Dry Salt	Maintenance Action	Prewet Salt	Dry Salt	
Above 32°F Pavement temperature steady or rising	None; see comments			None, see comments			1) Monitor pavement temperature closely. 2) Treat icy patches with salt at 100 lbs/lane mile.
Above 32°F Pavement temperature is falling to near 32°F	Apply salt	50-75 lbs/lane mile	100 lbs/lane mile	Apply salt when needed	50-75 lbs/lane mile	100 lbs/lane mile	1) Monitor pavement temperature and precipitation closely.
28°F to 32°F Pavement temperature remaining in range	Blade as needed apply Salt	50-150 lbs/lane mile	100-200 lbs/lane mile	Blade as needed: apply salt when needed	50-150 lbs/lane mile	100-200 lbs/lane mile	1) Monitor pavement temperature and precipitation closely. 2) Increase salt rate toward higher indicated rate with increase in freezing sleet intensity. 3) Decrease salt rate toward lower indicated rate with decrease in freezing sleet intensity.
10°F to 28°F Pavement temperature remaining in range	Blade as needed apply Salt	100-300 lbs/lane mile	200-400 lbs/lane mile	Blade as needed: apply salt when needed	100-300 lbs/lane mile	200-400 lbs/lane mile	1) Monitor pavement temperature and precipitation closely. 2) Increase salt rate toward higher indicated rate with increase in freezing sleet intensity. 3) Decrease salt rate toward lower indicated rate with decrease in freezing sleet intensity.
Below 10°F Pavement temperature steady or falling	Blade as needed			Blade as needed; apply abrasives as needed	200 lbs/lane mile down to 0°F		1) It is not recommended that dry salt or prewetted salt be applied in this temperature range. 2) Abrasives can be applied to enhance traction. (4)

Notes:

1) If suggested application rates are lower than what the spreading equipment can handle, apply the minimum amount possible.

2) Apply liquid or salt ahead of traffic rush periods occurring during a storm.

3) If needed, blade before salt applications so that excess snow, slush, or ice is removed.

4) Abrasives will adhere to the road surface better if they are prewetted.