

How to Use Liquid Anti-Icers

A Method for Implementation

T. A. P. E. R.

Temperature: How cold did it get since my last application?

Application: What is my rate of application?

Product: What product am I using?

Event: What kind of storm event?
Amount and type of precipitation?

Results: What were the results?
Why?
What should be changed?

*Your level of service goal should drive
road maintenance activities.*

There is no cure-all application rate for any deicing chemical. As with any product, the effectiveness and efficiency use comes from experience. Developed by Dale Keep, Washington State DOT, the T. A. P. E. R. system is an easy method to track your experiences, and establish application guidelines that meet your needs.

The next two pages illustrate the use of two T. A. P. E. R. log sheets through one storm event. One chart I blank for use in your own implementation program.

**No one application rate fits all storm events or environments.
Application experience is the foundation for effective product use.
T.A.P.E.R. is an easy way to track actions and results.**

TAPER LOG

Road Highway 123 Service Level Goal A

Start Date 1-15 End Date 1-16

Ta	T	A	P	E	R	\$\$\$\$	Alternative Notes	\$\$\$\$	
1:00 AM	34 F 1 C	15	35	30% MgCl2	3" fcsf	7.6 cm			
5:00 AM	32 F 0 C	0	0	30% MgCl2	Trace	Trace			
10:00 AM	28 F -2 C	20	47	30% MgCl2	1.5"	3.8 cm	stopped snowing about 3 am or so.		
12:30 PM	26 F -4 C	15	35	30% MgCl2	2"	5 cm	Plowed slush while applying chemical.		
4:00 PM	26 F -4 C	0	0	30% MgCl2	2.5"	6.3 cm			
9:00 PM	28 F -2 C	10	23.5	30% MgCl2	3"	7.6 cm	Summary Total application of 60 GPLM (117 LPLkm). Received 3.75" (9.5cm) total snow, and got down to a low of 26 (-4) degrees. Service level target of "A" was achieved over all.		
12:00 AM	30 F -1 C	0	0	30% MgCl2	3.5"	8.9 cm			
3:00 AM	30 F -1 C	0	0	30% MgCl2	3.75"	9.5cm	Comparison Smith Hill area was not pretreated or treated with liquids. This required 2 trucks in the area continuously, a third truck there during traffic problems to get traffic moving. A total of 8 hours of overtime was paid. Total sand = 125 yards, total salt = 30 tons. Two graders worked all day to remove accumulated snow bottom. Smith Hill mostly bare/wet with snow/slush in places. Liquid treated areas mostly bare and dry with 34 degrees and clear at 5:00 pm.		
9:00 AM	33 F 1 C	0	0	30% MgCl2	3.75"	9.5cm			
The 9:00 am entry in the TAPER log documented a service level of "A". The storm event is complete.									
Column Codes						Service Level Codes-Goals			
Ta =	Time of Application						A = Bare/Bare and Wet Pavement		
T =	Low Temp Since Last Application						C = Bare/Bare and Wet Tracks		
A =	Application Rate-Gallons/Lane Mile (GPLM) Liters per lane kilometer (LPLkm)						E = Ice or Compact Snow and Ice		
P =	Product Used								
E =	Event								
R =	Results						Metric		

TAPER Log Concept used with permission of Dale Keep, Washington State DOT

