

Name: _____

Date: _____

Chemistry: Article – *Salting Roads- The Solution for Winter Driving*

1. What is one disadvantage to spreading salt on roads?
2. Describe the freezing process and the molecular movement present in the solid phase.
3. When salt water freezes what happens to the salt crystals?
4. Explain what we mean by the term “freezing point depression.”
5. How does concentration affect freezing point depression?
6. List the two ways that highway workers use salt on roads.
7. Explain how spreading salt before a storm prevents snow from sticking to the roads.
8. What is a eutectic temperature?
9. How is the surface of an ice crystal different from the interior of the ice crystal?
10. Explain how adding spreading salt on an already icy road can help melt the ice.
11. Explain what “prewettered” salt is and why it is used.
12. How long have we been using salt on roads?
13. Explain why magnesium chloride and calcium chloride are more effective than sodium chloride.
14. How many tons of deicing salt are used each year in the US?
15. What are some benefits to dissolving the salts in water and spraying them?
16. What else is added to the deicing solution and why is it added?
17. Why do bridges generally ice before road surfaces?
18. Why is sugar cane or molasses sometimes mixed with the salts?