

Sand, De-icing & Anti-icing Products

Objective: to familiarize crew members with different types of de-icing and anti-icing products.

Training Materials: examples of sand, de-icing and anti-icing products, WHMIS sheets for de-icing and anti-icing material, applicators for granular and liquid product.

Personal Protective Equipment: work boots, gloves.

- *Snow removal contracts will specify the type of abrasive, de-icing or anti-icing product to be used on a property.*

Lesson: *Snow removal contracts will specify the type of abrasive, de-icing or anti-icing product to be used on a property.*

Sand is an abrasive material applied to icy surfaces to improve traction. It works consistently at all temperatures, however large stockpiles of sand can freeze solid in the winter. Mixing salt into the sand will reduce the potential for freezing. In the spring, accumulations of sand must be cleaned up and can clog sewers and storm water drains.

De-icing chemicals are applied to melt surfaces on roads and walkways. **Salt** is a widely available and the most inexpensive de-icer, but is extremely corrosive to vehicles and damaging to plants and the environment. Government has introduced regulations to reduce the amount of salt applied to roads during the winter. Salt can be prewetted with liquid de-icing agents to both reduce the amount of salt needed and make it more effective at melting

snow and ice.

All chemical de-icers work by lowering the freezing point of water, but some products are more effective than salt at lower temperatures.

Anti-icing chemicals are proactively applied to the surface before a storm and significantly reduce the freezing point of water below its normal threshold. Pretreating a surface with anti-icers before a big storm prevents snow and ice from sticking, making removal easier.

Anti-icing products can be applied before a big storm to enhance road safety over the life of the storm. Liquid anti-icers are not applied in a heavy wash over the road, but more lightly. Using anti-icers reduces the need for abrasives such as sand and requires less clean-up in spring.

- *Because of the corrosive qualities of chemical de-icers, vehicles and spreaders should always be washed down after being used to apply de-icing products.*

