

Winter Chemical Certification

Anti and De-ice Chemicals (including additives)

Mn/DOT- Office of Maintenance

Certifying winter chemical is important so that your existing and new products are available on State contracts (Salt, Pretreated Salt or Alternative Chemicals). This document outlines the procedure and requirement for certifying winter chemical for use in the Minnesota. *All chemicals need to be certified every five years and must be on the PNS Qualified List. New product can be submitted anytime before April 15th for the upcoming winter season.* This deadline was set to make sure that the proper testing and evaluation can be completed in a timely manner and that products are certified before contract bids are due.

A checklist and sample label has been developed to assist the vendors and/or manufacturer in supplying the required information. Below outlines the certification process:

1. **Vendor Submittal** - All information, data and samples are received by Mn/DOT.
2. **Prescreening Process** - The information submitted will be reviewed by the Mn/DOT Maplewood Laboratory, Safety Office, Office of Maintenance, and the Office of Environmental Services.
3. **Lab verification testing and environmental assessment** will be completed (approximately 60-90 days). The following lab tests will be conducted:
 - Deicer tests: freezing point, solubility, ice melting capacity and frictional characteristics.
 - Anti-icer tests: freezing point, solubility, ice melting capacity and frictional characteristics.
4. **Field Testing** – the product is approved for field testing and will be added to the Mn/DOT's Approved Winter Chemicals List under "Testing". The chemical will be evaluated in a field test environment for at least one winter season.
5. **Product Certification**- Products that perform well in the field tests will be added to the Mn/DOT Approved Winter Chemical List. Products may be removed from the qualified list if field problems are experienced (ie. leaching, equipment problems, variation in product, etc.) or if product formulation was changed without Mn/DOT approval.

The Winter Chemical Certification Checklist has been put together to aid you in compiling your certification packet. Place a checkmark in the box when the information is assembled and include a copy of the checklist with your submittal. *The processing of your request will put on hold until all the certification information and samples are received.*

Certification information should be submitted to:

Mn/DOT – Office of Maintenance

Mail Stop 722

395 John Ireland Blvd.

St. Paul, Minnesota 55155-1899

(651) 366-3578

Attn: Linda Taylor

If you have questions or need assistance, please contact Linda Taylor at (651) 366-3578.

Winter Chemical Certification Checklist

Submitted by _____ Date _____

Company _____

Address _____

Contact Person _____ Phone () _____

Name of chemical/product for prescreen: _____

(Note: A separate checklist must be completed for each product submitted.)

- Written certification that no **detectable** quantities of the following chemicals are contained in the product:
 - Dioxins
 - Furans
 - Polychlorinated Biphenyls (PCBs)
 - Octachlorostyrene
 - Hexavalent Chromium
 - Polyaromatic Hydrocarbons,
 - Radioactive materials
 - Registered Pesticides

- PNS Testing Report and Data**
Testing of the following parameters shall be done in accordance with the testing methodology listed in the Pacific Northwest Snowfighters' specifications, include lab test results, reports and data.
 - Ammonia – Nitrogen
 - Total Kjeldahl Nitrogen
 - Nitrate and Nitrate as Nitrogen
 - Biological Oxygen Demand
 - Chemical Oxygen Demand
 - Frictional Analysis
 - Toxicity Testing:
 - Rainbow Trout or Fathead Minnow Toxicity Test
 - Ceriodaphnia Dubia Reproductive and Survival Bioassay
 - Selenastrum Capricornutum Algal Growth
 - Corrosion Testing – “Test Method B” in Appendix A of the “PNS Snow and Ice Control Chemical Products Specifications and Test Protocols”.

- Product Data Sheet**, include the pH data for liquid products. The product data should should include any special handling instructions and percent of active ingredient.

Winter Chemical Certification Checklist cont.

- Material Safety Data Sheet** for product and corrosion inhibitor (if applicable)

- Status on the Pacific Northwest Snowfighters Qualified Products List**
Date Approved: _____ Date Test Status: _____

- List of chemical constituents in product**
The chemical constituents need to be identification and quantification. The finished product should not exceed the following concentrations (If product to be purchased is premixed with salt brine, provide the following concentrations for both the salt brine alone and the finished premixed product):

Phosphorus	0.10 ppm		(Based on a 1:100 solution)
Cyanide	0.20 ppm		ppm = mg/L
Arsenic	0.05 ppm		
Copper	0.20 ppm	Lead	0.01 ppm
Mercury	0.0005 ppm	Chromium	0.50 ppm
Cadmium	0.50 ppm	Barium	10.00 ppm
Selenium	5.00 ppm	Zinc	10.00 ppm

- Recommended field application rates** and application technique in chart form if available (e.g. dilution rate, pretreatment technique, etc.).

- Explain how the new product fulfills an existing need** or added value to our current Mn/DOT's winter chemical toolkit.

- References and contact information** for agencies currently using the product.

- Lab Sample**
Submit three – 8 ounce samples for liquid chemicals or 5 pounds for dry chemicals will be properly labeled (use sample label provided) along with a copy of the product data sheet to the Mn/DOT Maplewood Lab.

Lab Samples

Product samples shall be submitted to the Mn/DOT's Materials Lab concurrently with the Winter Chemical Certification Packet. Please label all samples using the sample label below and identify any proprietary information.

Mn/DOT requires three- 8 ounce liquid sample or five (5) pounds of the dry chemical will be submitted to the Mn/DOT's Maplewood Laboratory. The sample must be clearly labeled and a copy of the product data sheet.

The product sample should be sent to the Mn/DOT's Maplewood Lab at:

Office of Materials and Road Research
1400 Gervais Avenue, MS 645
Maplewood, Minnesota 55109
Attn: Winter Chemical Certification

Please use the sample label below on all samples submitted to the Mn/DOT's Maplewood lab for lab testing. The sample label should be filled out and attach to ***each*** sample submitted to ensure that your product can be processing upon receipt.

Vendor: _____	Date: _____
Address: _____	

Contact Name: _____	
Phone Number: _____	
Product Name: _____	
<i>Remember to include the Product Data Sheet</i>	