

# Liquid Anti and De-ice Chemicals (including additives)

## Vendor Checklist for Preliminary Screening

Minnesota Department of Transportation

Submitted by \_\_\_\_\_ Date \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Contact Person \_\_\_\_\_ Phone (    ) \_\_\_\_\_

To insure that chemicals for de-icing and anti-icing are evaluated for use by Mn/DOT, certain specific information is required. The following checklist has been formulated to insure that the vender and or manufacturer supply the required information. Mn/DOT intends to prescreen materials based on the information submitted prior to doing any laboratory or field evaluation. Other information may be required after the preliminary evaluation is started.

**Do Not Submit Product Samples with the Pre-screen Packet, and please label any proprietary information submitted.**

The following information is required both for finished products and for additives intended to enhance the performance or provide benefit to existing de-ice and anti-ice chemicals. The information received will be sent for review to the Mn/DOT Chemical Laboratory, Mn/DOT Safety Office, and the Mn/DOT Office of Environmental Services for pre-screen evaluation. **Upon request only**, a 1 gallon liquid sample or 2 pounds of the dry chemical will be made available for testing purposes.

Deicer tests will be: freezing point, solubility, ice melting capacity, ice penetration, ice undercutting, corrosive effects on metals, rapid evaluation on concrete, and frictional characteristics.

Anti-icer tests will be: freezing point, solubility, ice melting capacity, corrosive effects on metals, rapid evaluation on concrete, and frictional characteristics.

**NOTE: ALL INFORMATION REQUESTED BELOW MUST BE SUPPLIED BEFORE THE PROCESS FOR PRELIMINARY SCREENING CAN BEGIN.** Place a checkmark in the box when the information is placed in the preliminary test packet. Not supplying all information below will **immediately disqualify** the request for preliminary screening and further evaluation. When completed include this form in the prescreen packet.

Name of chemical/product for prescreen: \_\_\_\_\_

**(Note: A separate checklist must be completed for each product submitted. Liquid chemicals will be tested as they are received.)**

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

The following analyses for information purposes for liquid products or solid products that will be converted into a liquid product for application purposes. Testing of the following parameters shall be done in accordance with the testing methodology listed in the Pacific Northwest Snowfighters specifications.

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  
Senastrum capricornutum Algal Growth

List of chemical constituents in product - identification and quantification

Product Data Sheet

Most recent Material Safety Data Sheet for product

Most recent Material Safety Data Sheet for corrosion inhibitor (if applicable)

Status on the Pacific Northwest Snowfighters Qualified Products List.

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

List of agencies currently using the product.

pH data (liquid products only)

No product shall be submitted unless it is at least 70% less corrosive than sodium chloride (excluding additives to salt brine) using the National Association of Corrosion Engineers (NACE) Standard TM-01-69 (1995 rev.), modified to use 30ml of a 3% chemical product solution per square inch of coupon surface area. Test data and certification that the material meets corrosion criteria must be included.

Data that states that the following concentrations are not exceeded in the finished product (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	25.00 ppm	(Based on a 1:100 solution)
Cyanide	0.20 ppm	ppm = mg/L
Arsenic	5.00 ppm	
Copper	0.20 ppm	
Lead	1.00 ppm	
Mercury	0.05 ppm	
Chromium	0.50 ppm	
Cadmium	0.50 ppm	
Barium	10.00 ppm	
Selenium	5.00 ppm	
Zinc	10.00 ppm	

Return this form along with required information to:

Linda Taylor  
Minnesota Department of Transportation  
Maintenance Operations Engineer  
Mail Stop 722  
395 John Ireland Blvd.  
St. Paul, Minnesota 55155-1899  
(651) 282-2281

