

Maintenance Advisory

From Jon W. Reincke, Engineer of Operations

MDOT
 Division of Operations
 Maintenance
 6333 Lansing Road
 Lansing, MI 48917

For questions regarding this advisory, contact:

Justin Droste
 TSMO Maintenance
 Section Engineer
 517-636-0518
DrosteJ@michigan.gov

James Roath
 Roadway
 OperationsEngineer
 517-230-5361
RoathJ1@michigan.gov



Liquid Deicing Chemical Purchase Guidance

The use of liquid chemicals for winter operations in Michigan has increased over the past few years. Using liquid chemicals for anti-icing and pre-wetting can make a winter operations program more effective and efficient. There are many de-icing chemicals available in Michigan and choosing a chemical that is effective, environmentally friendly and economical can be challenging. The following criteria have been created to assist contract agencies in selecting liquid chemicals for winter operations.

Any anti-icing/de-icing liquids used on MDOT Trunkline must meet one of the following three criteria.

1. Must be a product contained under the statewide MDOT contract
 OR
2. Product is listed on the Clear Roads Qualified Products List: Qualified Products List- Clear Roads List, (Categories 1 – 3) and is competitively priced with product listed in item #1.
 OR
3. Any other chloride based product that meets the requirements below and is competitively priced with product listed in item #1.

Criteria 3 products must be tested in accordance with the methods referred to in the current statewide contract. Test results from an independent laboratory shall be submitted. No products will be accepted that contain hazardous constituents in excess of the following established total concentration limits as listed in Table 1,

Table 1

Hazardous Constituent	*(ppm)	Hazardous Constituent	*(ppm)
Arsenic	5.00	Lead	1.00
Barium	100.00	Mercury	0.05
Cadmium	0.20	Total Phosphorus	2500.00
Chromium	1.00	Selenium	5.00
Copper	1.00	Zinc	10.00
Cyanide	0.20		

*Maximum Concentration Limit, parts per million (ppm)

Additionally, the pH of liquid chemical products shall be within the range of 6 to 9.

The product shall not contain greater than 1.0% (V/V) Total Settleable Solids and shall have ninety-nine percent (99.0%) of the Solids Passing through a Number 10 sieve after being stored at 0° F +/- 2° F for 168 hours. The product shall have a minimum storage life of one year, without degradation or addition of stabilizers or inhibitors. The product must have a freeze point of -20° F or below.