

6324 OF Attachment E
PRICE ADJUSTMENTS FOR CORROSION INHIBITED LIQUID MAGNESIUM CHLORIDE
(CLEAR ROADS PRODUCT CATEGORY 1)

All testing will be conducted by NDOT and the field samples will be large enough for additional testing. Field samples will be retained for three months and records of the tests will be retained by NDOT.

- Price adjustments based on Ice Melting Capacity.** Field samples taken of the delivered material will be measured for ice melting capacity in accordance with the *Mechanical Rocker Test* (see Attachment F). If the test results are substantially below the Contractor's bid sample test result, the Contractor will be subject to price adjustments based on the total of the respective shipment, as follows:

Ice Melting Capacity		
Test Results		Pay
Any measurement that is not more than 30% below the Contractor's bid sample test result		100.0%
% below Contractor's bid sample test result	31% - 35%	87.5%
	36% - 40%	75.0%
	41% - 45%	62.5%
	46% - 50%	50.0%
	>50%	*

For example, if a Contractor's bid sample test result for ice melting capacity is 521 g/L, and the test result of a field sample yields 365 g/L, then the sample is within 30% of the bid sample test result and therefore within specification and there would be no price adjustment (100.0% pay).

* Test results in this range may constitute unacceptable material, and could result in rejection or require recovery and cleanup at the Contractor's expense.

- Price adjustments based on total settleable solids.** Field samples taken of the delivered material will be measured for percent total settleable solids, according to the Clear Roads Test Method C. If the test results are out of specification, the Contractor will be subject to price adjustments based on the total of the respective shipment, as follows:

% Settleable Solids	
Test Results	Pay
≤1.0	100.0%
1.1 - 1.8	87.5%
1.9 - 2.5	75.0%
2.6 - 3.3	62.5%
3.4 - 4.0	50.0%
>4.0	*

* Test results in this range may constitute unacceptable material, and could result in rejection or require recovery and cleanup at the Contractor's expense.

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- 3. Price adjustments based on solids passing #10 sieve.** Field samples taken of the delivered material will be measured for percent solids passing #10 sieve, according to the Clear Roads Test Method C. If the test results are out of specification, the Contractor will be subject to price adjustments based on the total of the respective shipment, as follows:

% Solids Passing #10 Sieve	
Test Results	Pay
≥99.0	100.0%
98.8 - 98.9	87.5%
98.5 - 98.7	75.0%
98.3 - 98.4	62.5%
98.0 - 98.2	50.0%
<98.0	*

* Test results in this range may constitute unacceptable material, and could result in rejection or require recovery and cleanup at the Contractor's expense.

- 4. Price adjustments based on percent concentration of magnesium chloride.** Field samples taken of the delivered material will be measured for magnesium chloride content, according to the Clear Roads Test Method A, as modified by the State of Nebraska. Product must contain 25.0% - 30.0% magnesium chloride; a buffer of 1% will be allowed in test results. If the test results are out of specification, the Contractor will be subject to price adjustments based on the total of the respective shipment, as follows:

% Concentration of Magnesium Chloride		
Test Results		Pay
24.0% - 31.0%		100.0%
23.8% - 23.9%	31.1% - 31.3%	87.5%
23.5% - 23.7%	31.4% - 31.5%	75.0%
23.3% - 23.4%	31.6% - 31.8%	62.5%
23.0% - 23.2%	31.9% - 32.0%	50.0%
<23.0%	>32.0%	*

For example, if a test result of a field sample yields 31.2%, then the sample is out of specification by 0.2% and the price adjustment would therefore be 87.5% pay.

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5. **Price adjustments based on potential of hydrogen (pH).** Field samples taken of the delivered material will be measured for pH according to ASTM D1293, and will be tested at one part product and four parts distilled water. If the test results are out of specification, the Contractor will be subject to price adjustments based on the total of the respective shipment, as follows:

pH		
Test Results		Pay
6.0 - 9.0		100.0%
5.7 - 5.9	9.1 - 9.3	87.5%
5.5 - 5.6	9.4 - 9.5	75.0%
5.2 - 5.4	9.6 - 9.8	62.5%
5.0 - 5.1	9.9 - 10.0	50.0%
<5.0	>10.0	*

* Test results in this range may constitute unacceptable material, and could result in rejection or require recovery and cleanup at the Contractor's expense.

6. **Price adjustments based on corrosion rate.** Field samples taken of the delivered material will be measured for the corrosion rate according to the Clear Roads Test Method B. If the test results are out of specification, the Contractor will be subject to price adjustments based on the total of the respective shipment as follows:

Corrosion Rate (% less corrosive than NaCl)	
Test Results	Pay
≥70.0	100.0%
65.0 - 69.9	87.5%
60.0 - 64.9	75.0%
55.0 - 59.9	62.5%
50.0 - 54.9	50.0%
<50.0	*

* Test results in this range may constitute unacceptable material, and could result in rejection or require recovery and cleanup at the Contractor's expense.