1. **SCOPE**

   1.1. **Description of Test**

   This method describes the test procedure for determining the moisture content and gradation of sodium chloride granular (i.e. road salt).

   1.2. **Application of Test**

   This test procedure is used to determine whether or not the moisture content and gradation of the material meets the Specification for Manufactured Materials SMM 602-1.

2. **APPARATUS AND EQUIPMENT**

   2.1. **Equipment**

   Balance - 0.01 g accuracy.

   Sieves - Canadian Metric Standard square mesh sieves (12.50 mm, 9.00 mm, 5.00 mm, 2.00 mm, 900 mm, 400 mm and 71 mm complete with catch pan).

   Sample splitter.

   Mechanical sieve shaker.

   Containers - metal pie plates, 200 mm diameter.

   Drying Oven - capable of 110° C.

3. **PROCEDURE**

   3.1. **Sample Preparation**

   Obtain a representative sample as per STP-112.
3.2. **Test Procedure**

Using a sample splitter, riffle sample down to 400 ± 50 g in size.

Transfer sample into container of known tare weight. Record weight and place in drying oven.

Dry the sample in the oven not exceeding 110° C for at least 1 hour or until the sample is observed to be at constant weight.

Remove the sample from the oven and let cool by standing at room temperature for 5 ± 1 minute.
Place the dried sample on the balance and record weight.

Nest the sieves in descending order of size with coarsest sieve at top and finest sieve complete with catch pan on bottom.
Place the dried sample on the top sieve, put the sieves in the mechanical shaker and shake for 5 minutes.

Weigh the material in the catch pan below the 71 um sieve and record the weight as passing this sieve. Add material retained on the 71 um sieve to the material on the balance pan and record total weight of material as passing the next larger sieve (ie 400 um).
Repeat this procedure until all the material from each larger sieve has been weighed.

4. **RESULTS AND CALCULATIONS**

4.1. **Calculation Formula**

Percent Passing = \( \frac{\text{weight of sample passing sieve}}{\text{total weight of sample}} \times 100 \)

Moisture Content = \( \frac{\text{wet weight} - \text{dry weight}}{\text{weight of dry sodium chloride}} \times 100 \)

4.2. **Reporting Results**

Report gradation of sodium chloride granular as percent passing each particular sieve for appropriate salt type tested (ie fine or mixed) on the Sodium Chloride Pay Adjustment Form.
New __ Revision X __ Date of Previous Document 91-05-14
Effective Date: __ - -

Description of Revision (Reason for Revision):
- Format of test procedure updated (ie: combined moisture testing procedure and sieve testing procedure into one standard test procedure)

Review/Implementation Process:
- Reviewed by the Materials Section of the Technical Standards and Policies Branch.
- Reviewed by the Lab Supervisor Committee.

Other Manuals/Policies Affected:
NIL

Follow Up/Training Required:
Nil

Comments/Concerns/Implications (Budget/Environment/Stakeholders):

Prepared and Recommended by Randy Schmidt 92-06-26
Geotechnical & Materials Engineer Date

Approval Recommended by R.A. Widger - -
Senior Materials Engineer Date

Approval Recommended by A.R. Gerbrandt - -
Dir., Technical Standards & Policies Br. Date

Approved by D.G. Metz - -
Assistant Deputy Minister, Infrastructure Date

Electronic File Updated - -
Update Mailed - -