

## **SECTION 317**

### **WINTER SAND**

#### **INDEX**

- 317.01 SCOPE**
- 317.02 PHYSICAL AND GRADATION REQUIREMENTS**
- 317.03 SAMPLING AND INSPECTION**
- 317.04 USE OF PITS AND STOCKPILES**
- 317.05 ENVIRONMENTAL PROVISIONS**
- 317.06 MEASUREMENT FOR PAYMENT**
  - 317.06.01 Volume Measurement for Payment**
  - 317.06.02 Weight Measurement for Payment**
- 317.07 BASIS OF PAYMENT**

#### **317.01 SCOPE**

This specification covers the requirements for the supply, delivery and acceptance of winter sand.

#### **317.02 PHYSICAL AND GRADATION REQUIREMENTS**

Materials shall be natural or manufactured from natural aggregates and consist of sound, durable and predominately angular particles completely resistant to breakdown under traffic and freezing conditions.

Sand particles shall be clean, hard and free from organic matter, clay and deleterious materials such as shale, salts, ochre and schists.

Materials shall conform to the gradation requirements as given in Table 1. The gradation shall not show marked fluctuations from opposite extremes of the limiting sizes and the plotted curve shall flow in a manner free from acute changes in direction.

**TABLE 1**

**GRADATION REQUIREMENTS**

SIEVE SIZE	% PASSING BY DRY WEIGHT
6.35 mm	100*
4.76 mm	70 – 95
2.00 mm	50 – 80
0.420 mm	5 – 25
0.075 mm	0 - 6

\*In excess of 2.0% of the material retained on the 6.35 millimetre sieve will be cause for rejection of the material.

**317.03 SAMPLING AND INSPECTION**

Materials will be sampled and inspected by the Department at the designated stockpile locations. This acceptance shall not preclude further stockpile sampling, which may or may not lead to material rejection. Materials will not be sampled at the source.

When delivered, the maximum allowable moisture content for winter sand shall not be greater than 7%, when tested in accordance with ASTM D2216.

The quantity of these tests shall be determined by the Owner’s Representative. They shall be sufficient in number to ensure an acceptable product.

**317.04 USE OF PITS AND STOCKPILES**

The use of pits for the production of winter sand, together with the requirements for the stockpiling of the winter sand, shall be in accordance with the provisions of Section 310.

**317.05 ENVIRONMENTAL PROVISIONS**

The work shall be carried out in accordance with the environmental provisions of Section 310.

**317.06 MEASUREMENT FOR PAYMENT**

The measurement for payment will only be for those materials accepted for use under this specification.

**317.06.01 Volume Measurement for Payment**

Where the contract unit price table states that winter sand is to be stockpiled and the unit of measurement is stated in cubic metres, then such stockpiles shall be cross sectioned and the volume computed in cubic metres rounded to the nearest whole number.

The quantity to be measured shall be the number of cubic metres of stockpiled winter sand as shown on the cross section sheets between the graded base of the stockpile as cross sectioned before stockpiling begins and the cross sections made over the completed stockpile. The volume of this stockpile being computed by the average end area method of computation or as wedges or pyramids, as the case may be when terminating at grade points.

In the event cross sections determine excess material has been placed in the stockpile, the Contractor has 5 days after this determination is made to remove the sand if they so desire. The Department reserves the right to complete do a final cross section.

Engineering costs will be free on first quantity measurement and charged to the Contractor for additional engineering quantity measurements.

### **317.06.02 Weight Measurement for Payment**

Where the contract unit price table states that winter sand is to be stockpiled and the unit of measurement is stated in tonnes, then the material shall be weighed on scales.

The weighing of materials shall be in accordance with the requirements of Section 501. Only loads certified by the Department personnel as being placed in the works shall be included in the measurement for payment. The weight shall be computed in tonnes, rounded to one decimal place.

For quantities of winter sand less than or equal to 10000 tonnes, the Department will measure the material in stockpile by cross sectioning, calculating the number of cubic metres and converting the quantities to tonnes if the Contractor so desires. A standard conversion factor of 1.8 tonnes per cubic metre will be applied for winter sand measured in stockpile.

For quantities of winter sand greater than 10000 tonnes, the Contractor **must** provide weigh scales.

### **317.07 BASIS OF PAYMENT**

Payment at the contract price per cubic metre for winter sand shall be full compensation for all labour, materials, equipment-use and any other expenses to; provide a pit, obtain environmental approval, provide and transport pit samples to the Department's Materials Engineering Division in St. John's, clear, grub and strip the pit, process pit material to the required gradation and physical requirements, transport and place the material in the

stockpile, clean up the pit, pay any royalties for the material, and provide such other restoration to the pit as may be required, together with the provision of scales if required.