**Louisiana**
**Department of Transportation and Development**
**Specifications**

# Beet Juice
# Liquid Organic Additive for Salt or Brine

## Description:

The following specification sets forth the requirements for an effective and environmentally safe liquid organic additive commonly known as Beet Juice. The material shall be mixed with either salt or brine and used as ice control (anti-icing/deicing) during applicable road and bridge maintenance.

## General Requirements:

Beet Juice shall come in liquid form and shall not be corrosive to bridges, bridge decks, and concrete.

## Specific Requirements:

Material shall be production grade meeting the following properties and requirements:

| Physical Property | Requirements |
|---|---|
| pH, ASTM E 70-90 | 5.0-10.0 |
| Specific Gravity | 1.27-1.35 |
| Total Settleable Solids | 1% Maximum |
| Solids Passing #10 Sieve | 99% Minimum |
| Freezing Point | -5°F Minimum |

Test methods shall be the latest in effect.

The material supplied shall have no constituents that would cause residual waste to meet the definition of a hazardous waste, as found in 40 CFR 261.

## Packaging and Identification Markings:

Additive shall be supplied in totes or in bulk as specified.

**Product ID 57631** – Tote, 250-275 Gallon
**Product ID 57632** – Bulk Order

Totes shall be either stainless steel or plastic with a 250 - 275 gallon capacity. Forklift openings shall be available on a minimum of two sides and designed in a manner that provides protection for the outlet vents and piping. Totes shall be constructed such that the bottom is slowed toward the outlet/bottom drain to allow all material to drain completely from the container.

Stainless steel totes shall be constructed of a minimum of 304 stainless alloy with an inner skin that is a minimum of 10-guage sheet thickness. All seams shall be welded. Stainless totes shall include a 2” leak free outlet, a minimum 23” top opening, a pressure vent, and a vacuum vent. The outlet shall consist of a 1” stainless steel full port ball valve and a 2” male camlock style quick connect fitting.

Plastic totes shall be constructed of UV stabilized HDPE resin. The tote shall sit inside of a tubular steel frame and pallet that is zinc or hot dip galvanized. Plastic totes shall include a 2" leak free bottom drain valve (outlet) and a 6" top fill valve (opening). The bottom drain valve shall consist of a 2" polypropylene full port bolted ball valve and a 2" male quick disconnect fitting with a dust cap. The top fill valve shall have a 6" screw cap style closure (lid) with a 2" bung incorporated into it to provide a vacuum vent.

### *Tote Identification*

Each tote shall bear a label with the following information thereon:

*Name and address of manufacturer*
*Trade name or trademark*
*Quantity in tote*
*Batch number*
*Date of manufacture*
*Purchase order number*
*Product ID*

### *Bulk Identification*

Bulk orders shall be supplied with documentation on company letter with the following information thereon:

*Name and address of manufacturer*
*Trade name or trademark*
*Quantity in tote*
*Batch number*
*Date of manufacture*
*Purchase order number*
*Product ID*

**Sampling and Acceptance:**

Acceptance will be based on visual inspection.

The materials will be sampled if the quality of the product is in doubt. A sample will consist of one (1) quart of material taken at random from the shipment in accordance with the sampling requirements of the LADOTD Materials Sampling Manual.