

1 GENERAL

1.01 RELATED REQUIREMENTS

- .1 Not used.

1.02 MEASUREMENT AND PAYMENT

- .1 Pavement marking to be incidental to surface paving operations and included in surface paving square metre unit price.

1.03 REFERENCE STANDARDS

- .1 ASTM International
 - .1 ASTM E 1360 90 2000 e1, Standard Practice for Specifying Color by Using the Optical Society of America Uniform Color Scales System.
 - .2 ASTM D 4797 88 2004 Standard Test Methods for Chemical and Gravimetric Analysis of White and Yellow Thermoplastic Traffic Marking Containing Lead Chromate and Titanium Dioxide.
- .3 Environment Canada (EC)
 - .1 Volatile Organic Compound (VOC) Concentration Limits for Architectural Coatings Regulations, SOR/2009-264.
- .4 Green Seal (GS)
 - .1 GS-11-Edition 3.2 (2015), Standard for Paints and Coatings.
- .5 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Safety Data Sheets (SDS).
- .6 Master Painters Institute (MPI)
 - .1 Architectural Painting Specification Manual.
 - .1 MPI #32, Traffic Markings Paint, Alkyd.
 - .2 MPI #97, Latex Traffic Marking Paint.
- .7 South Coast Air Quality Management District (SCAQMD)
 - .1 SCAQMD Rule 1113-16, Architectural Coatings.

1.04 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's printed product literature and data sheets for pavement markings and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit 2 copies of WHMIS SDS in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .3 Samples:
 - .1 Submit to DR if requested following material sample quantities at least 4 weeks prior to commencing work.
 - .1 Two 1 L samples of each type of paint.

- .2 One 1 kg sample of glass beads.
- .3 Sampling to MPI Painting Manual.
- .2 Mark samples with name of project and its location, paint manufacturer's name and address, name of paint, MPI specification number and formulation number and batch number.

1.05 CLOSEOUT SUBMITTALS

- .1 Operations and Maintenance Data: submit information on materials relative to work of this Section for inclusion in operations and maintenance manual.

1.06 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials off ground, indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect specified materials from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.

1.07 SITE CONDITIONS

- .1 Sustainable Design Provisions:
 - .1 Seasonal restriction for high VOC content traffic marking coatings.
 - .1 Traffic marking coating application between May 1st and October 15th subject to seasonal use restriction and have VOC concentration maximum 150 g/L.

2 PRODUCTS

2.01 MATERIALS

- .1 Alkyd Traffic Paint and Markings:
 - .1 To MPI #32, Alkyd traffic marking meeting requirements of ASTM D 4797.
 - .2 Traffic Marking Coatings: maximum VOC limit 450 g/L to SOR/2009-264 Schedule 1, to GS-11 Standard and to SCAQMD Rule 1113.
 - .3 Colour: to ASTM E 1360, yellow in accordance with MPI Architectural Painting Specification Manual.
 - .4 Upon request, DR will supply qualified product list of paints applicable to work. Qualified paints may be used but DR reserves right to perform further tests.
- .2 Latex traffic Paint and Markings:
 - .1 To MPI #97, Latex traffic marking meeting requirements of ASTM D 4797.
 - .2 Traffic Marking Coatings: maximum VOC limit 450g/L to SOR/2009-264 Schedule 1, GS-11 Standard and to SCAQMD Rule 1113.

- .3 Colour: to ASTM E 1360 yellow in accordance with MPI Architectural Painting Specification Manual.
- .4 Upon request, DR will supply qualified product list of paints applicable to work. Qualified paints may be used but DR reserves right to perform further tests.
- .3 Thinner: to MPI listed manufacturer.
- .4 Glass reflective beads: type suitable for application to wet paint surface for light reflectance.

3 EXECUTION

3.01 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrates and surfaces to receive pavement markings acceptable for product installation in accordance with MPI instructions prior to pavement markings application.
 - .1 Visually inspect substrate in presence of DR.
- .2 Pavement surface: dry, free from water, frost, ice, dust, oil, grease and other deleterious materials.
- .3 Proceed with Work only after unacceptable conditions rectified and approved by DR.

3.02 EQUIPMENT REQUIREMENTS

- .1 Paint applicator: approved pressure type with positive shut-off distributor capable of applying paint in single, double and dashed lines and capable of applying marking components uniformly, at rates specified, and to dimensions as indicated.
- .2 Distributor: capable of applying reflective glass beads as overlay on freshly applied paint.

3.03 TRAFFIC CONTROL

- .1 As per Section 01 35 14 - Traffic Control.

3.04 APPLICATION

- .1 Pavement markings: laid out by DR.
- .2 Unless otherwise approved by DR, apply paint when air temperature minimum 10 degrees C, wind speed maximum 50 km/h and no rain forecast within next 4 hours.
- .3 Apply traffic paint evenly at rate of 3 m² /L to form minimum 8 mil dry film thickness, in accordance with MPI Architectural Painting Specification Manual "Preparation of Surfaces" and "Application" for "Approved Product" listing.
- .4 Do not thin paint unless approved by DR.

- .5 Symbols and letters to dimensions indicated.
- .6 Paint lines of uniform colour and density with sharp edges.
- .7 Thoroughly clean distributor tank before refilling with paint of different colour.
- .8 Apply glass beads at rate of 0.5 kg/L of painted area immediately after application of paint.

3.05 TOLERANCE

- .1 Paint markings: within plus or minus 12 mm of dimensions indicated.
- .2 Remove incorrect markings as specified by DR.

3.06 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
 - .1 Remove insulation material spilled during installation and leave work area ready for application of wall board.

3.07 PROTECTION

- .1 Protect pavement markings until dry.
- .2 Repair damage to adjacent materials caused by pavement marking application.

END OF SECTION