MMA-Based Two-Component Profiled Road Marking Paint

Draft technical specification for procurement in 20 .....

About this document

This text is a model draft technical specification that contracting authorities may use in tenders for the procurement of goods. The dotted fields are to be filled in by the Contracting Authority. The text does not describe any brand or manufacturer; the Contracting Authority may amend the clauses according to its needs and the legislation in force. This is an English translation for information; the referenced standards and regulations are those in force in Türkiye.

1. GENERAL PROVISIONS AND SCOPE

1.1 For use in horizontal marking works to be carried out to ensure traffic order and safety on the roads of our city: ..... kg of MMA-based two-component profiled road marking paint

1.2 The paint shall have a TS EN 1871 certificate of conformity. The bidder shall submit this certificate to the Contracting Authority at the bidding stage.

1.3 The paint manufacturer shall hold ISO 9001:2015 and ISO 14001:2015 certificates. The bidder shall submit this certificate to the Contracting Authority at the bidding stage.

2. PROPERTIES OF THE MATERIAL

Two-component profiled road marking paint

2.1 The paint shall be manufactured from methyl methacrylate (MMA)-based reactive resin. Component A is the active paint and component B is the hardener (50% dibenzoyl peroxide); hardener shall be supplied together with the paint at 1–2% of the base component weight, depending on weather conditions.

2.2 The paint shall be applicable at surface temperatures between 5 °C and 40 °C.

2.3 After application, the road shall be opened to traffic within 30–45 min.

2.4 The classes given in Table 1 apply to the luminance factor.

Table 1: Luminance factor classes

Colour	Class	Luminance factor (β)
White	LF 6	≥ 0.80
Yellow	LF 2	≥ 0.50

2.5 The classes of the difference in luminance factor after UV ageing shall be as given in Table 2.

Table 2: Luminance difference class after UV ageing

Colour	Class	Δβ
White, yellow	UV-1	≤ 0.05

2.6 The colour shall comply with the chromaticity coordinates specified in TS EN 1871.

2.7 The storage life of the paint shall be at least 1 year.

2.8 For storage stability, the paint shall be tested in accordance with TS EN 1871 and shall obtain a rating of 4 or higher. The decision whether or not to have the storage stability test performed lies within the authority of the Contracting Authority.

2.9 The paint shall be suitable for application at a thickness between 2 mm and 5 mm without the need for any additive.

2.10 The paint shall not be affected by NaCl, $CaCl_2$ and similar chemicals used for snow control on roads, nor by oils and fuels falling on it from the traffic.

2.11 No colour change, cracking or deformation shall occur in the paint due to changes in climatic conditions.

2.12 The skid resistance class shall be S3 (SRT ≥ 55).

Physical and chemical analysis parameters

2.13 **Product viscosity (Daniel):** 13 ± 2 Daniel (23 ± 2 °C, 60 s).

2.14 **Binder content:** At least 19% (in accordance with TS EN 12802 Annex B).

2.15 **Rutile TiO_2 content:** At least 8% (for white; in the paint residue, in accordance with ASTM D 1394).

2.16 **Mineral filler and glass beads:** 69–74% (in accordance with TS EN 12802 Annex C + Annex E).

Packaging and labelling

2.17 The paint shall be filled in 25 kg tin containers with handles, stainless on the inside and enamelled on the outside.

2.18 The markings, labels and dimensions on the packaging shall comply with the legislation and regulations.

2.19 The label shall include the product name, batch number, production and expiry dates, and net quantity.

2.20 The containers shall be placed on 100 cm × 120 cm pallets, with no more than 3 containers on top of each other.

2.21 The drums on the pallet shall be wrapped with 3 layers of stretch film.

2.22 The products to be procured shall not contain lead compounds or heavy metals that are harmful to the environment and human health.

3. PACKAGING AND DELIVERY

3.1 The paint type of the materials on the pallet shall be indicated on a label affixed to the outer surface of the pallet so as to be easily visible from a distance of 2 metres.

3.2 The wooden pallets shall be manufactured so that they can be moved by forklifts.

3.3 The pallets shall be dimensioned so that two fit across the inner width of the truck bed, leaving a gap of no more than 5 cm between each of their sides and the truck bed; the contractor shall start production after the approval of the Contracting Authority has been obtained regarding the pallet dimensions specified in the technical specification, or any different ones it may propose, and the form and manner of packaging.

3.4 The materials covered by this Technical Specification shall be delivered in the specified quantities to the ..... Warehouse.

4. INSPECTION AND ACCEPTANCE PROCEDURES

4.1 Inspection and acceptance procedures shall be carried out in accordance with the provisions of the Regulation on Inspection, Examination and Acceptance Procedures for Goods Procurement (Mal Alımları Denetim, Muayene ve Kabul İşlemlerine Dair Yönetmelik).

4.2 The materials delivered by the contractor shall be subjected to a visual (physical) inspection at the places of delivery by the Inspection and Acceptance Committees to be established by the Contracting Authority to carry out the inspection and acceptance procedures for the materials delivered to the ..... Warehouse. If the result of the physical inspection is found satisfactory, the Contracting Authority, where it deems appropriate, is authorised to take samples from the manufactured materials and send them to the ..... Laboratory, with transport costs and all laboratory costs borne by the contractor.

4.3 The contractor shall deliver to the Contracting Authority, in full, the technical documents on the use and properties of the delivered materials.

4.4 Material rejected according to the laboratory inspection results shall be promptly taken back by the contractor from the warehouse to which it was previously delivered, upon notification to the contractor, and material in the same quantities and with the required properties shall be redelivered to the place from which it was taken. Material not complying with the provisions of the Technical Specification shall be permitted to be brought again, provided that this is within the official delivery period. Where the laboratory results become known after the delivery period of the work, the contractor shall be permitted, once more, to bring new material in place of the rejected batch, subject to a daily penalty of 0.5% and provided that this does not exceed 20 days. These newly delivered batches shall also be accepted if they are found to be compliant after laboratory inspection.

4.5 Final acceptance of the materials found to comply with the principles of the Technical Specification as a result of the laboratory inspection shall be carried out by the relevant Inspection and Acceptance Committee, and their entry into the warehouse shall be completed.

4.6 **Objection inspection:** Paint and glass bead material found non-compliant according to the laboratory inspection results may be replaced by the contractor in accordance with the principles set out above; alternatively, should the contractor object, a referee laboratory shall be designated by the Contracting Authority to carry out, for the objection inspection, the examinations and tests on the matters subject to objection on the samples previously taken from that material and kept by the Contracting Authority. The report issued by the referee laboratory on the matters subject to objection shall be final and binding.