

07050 Fast Dry Paint**Index**

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07050-1 Fast Dry Alkyd – Scope

This specification covers the requirements for white and yellow fast dry alkyd traffic paint suitable for airless and air atomized spray application on bituminous highways for marking traffic lines.

07050-2 Fast Dry Alkyd – General Requirements

This specification specifies the most efficient traffic paint possible with regard to service and cost. Service includes general appearance, color, night visibility, and durability. The composition of the paint shall be left to the discretion of the manufacturer, and it is their responsibility to formulate and produce a paint meeting the requirements specified herein.

Reflectorization of the paint lines will be obtained by the introduction of overlay-type glass beads during paint application. The application rate will be 550 grams of glass beads per litre of paint sprayed on the road surface.

The glass beads will be introduced or applied to the wet paint film by means of automatic spray guns and under air pressure.

2.1 Uniformity

The paint shall be homogenous and shall be well dispersed to a uniform and smooth consistency.

The paint shall be capable of easy application with an automatic spray gun. It shall flow evenly and smoothly without overspray, between 20°C to 60°C, using the internal atomization or airless spray.

2.2 Storage Stability

The paint shall not cake, liver, curdle, gel, thicken excessively, settle badly or show any objectionable properties for six months from date of delivery, in the original unopened container when stored at a temperature not exceeding 40°C. At the end of this time, it should be capable of being mixed without difficulty to a uniform condition by simple stirring.

2.3 Colour

After drying, the paint shall be free from dirt or tint, and shall match the colours specified in Subsection 3.4 Colour.

2.4 Packaging

The paint shall be packaged in 205 litre returnable “open head” drums or maximum 1230 litre tote tanks as specified in the order.

All containers are to be Canadian General Standards Board approved and certified for the transport of dangerous goods.

Each container shall be plainly marked showing quantity of content, lot and batch number, name and address of manufacturer, manufacturer’s code number for the paint and date of packaging.

Drums are to be good quality open head “returnable” type with 6.0 mil open top poly liners draped outside of containers with separate poly top.

Tote tanks will be mild steel construction with drum type lid. Tanks will contain 6.0 mil open top poly liners draped outside of tank with separate poly top. Outlet will be a 50 mm steel ball valve.

Container liners required for packaging are to be supplied by the supplier.

Tanks and drums are to be thoroughly cleaned including outlets and threaded connections, prior to refilling.

Top tied liners are not acceptable.

Supplier is to be responsible for transporting empty containers, tote tanks and liners returned to factory from City of Saskatoon storage compounds.

At the end of the season the supplier shall pick up the containers and tote tanks no later than December 15 of the current year.

The City of Saskatoon will be responsible for returning any containers and tote tanks to the supplier that are emptied after pick up date.

There will not be a deposit charge to the City of Saskatoon for delivered or returned containers.

The City of Saskatoon will not accept bent or damaged containers that are delivered to their site.

Colour of paint shall be clearly identified on each container. Containers shall be vapour-proof sealed.

2.5 Acceptance and Rejection

Paint furnished under contract shall be identical to any sample submitted for performance tests and subsequently approved. In the event that the traffic paint does not comply with these specifications or is not identical with the sample approved, the City shall return the paint to the manufacturer and the manufacturer shall be required to replace all such paint at their own expense, including all handling and transportation costs, with the replacement paint being received by the City within 48 hours of a reported problem. If the new supply is not received within the 48 hours or the replacement traffic paint is still not in compliance with the specifications, the City shall be entitled to reject the paint and seek a replacement product from an alternative supplier.

Supplier may be required to supply production quantities of paint prior to acceptance of total order for evaluation of drying characteristics as outlined in the specification requirements under Section 3.5 – Drying Properties.

2.6 Late Delivery

If the City of Saskatoon's Pavement Marking Program is jeopardized by late deliveries, the City retains the option to cancel the contract and procure material from alternate prequalified suppliers.

07050-3 Fast Dry Alkyd – Specific Requirements

3.1 Hiding Power

The paint shall flow evenly and smoothly and cover solidly in one coat when applied at a rate of 6.15 m² per litre when tested using a PFUND CRYPTOMETER.

3.2 Viscosity

The viscosity of the paint shall be 80-95 Krebs Units at 25°C in accordance with ASTM D562.

While the viscosity of the original test sample may be anywhere within the stipulated range, the viscosity of all paint purchased on the basis of these performance tests shall be within plus or minus 5 Krebs Units of the original test sample throughout the production of the entire order providing such variation shall be entirely within the specified limits.

The paint shall have acceptable spraying characteristics within the required working temperature ranges.

3.3 Settling Rate

The paint shall provide a rating of 6 or higher according to ASTM D869.

3.4 Colour

White paint shall conform to Federal Standard 595 B Colours, number 37925. The yellow paint shall conform to Saskatchewan Highways and Infrastructure Yellow Traffic Paint Standard number 88001-SM.

3.5 Drying Properties

The paint shall dry in not more than 3 minutes when pre-heated to 60°C and tested according to ASTM Method D711.

However, the paint must dry to no-traffic pick up in 30 seconds or less when heated to a temperature not exceeding 60°C, when applied to pavement by means of a conventional spray striping machine at a wet film thickness of $380 \pm 25 \mu\text{m}$; with the atmospheric temperature above 20°C.

3.6 Bleeding

The bleeding characteristics shall provide a rating of 6 or higher in accordance with ASTM D969 and ASTM D868.

3.7 Flexibility

The preparation of the test panels shall be in accordance with ASTM D609.

One coat of paint shall be applied to the clean abraded tin-plate panels. The coated panels shall then be air dried at room temperature for 18 hours and subsequently force dried in an oven for 1 hour at 105°C. The panels shall be removed from the oven and conditioned under room temperature for 24 hours.

The panels shall be bent to room temperature through 180 degrees over a 12.7mm mandrel in not less than 1 second and not more than 1.5 seconds while keeping the coated side uppermost. The bent area shall be examined under 10-power magnification. The paint shall not crack or peel when subjected to the bending test.

3.8 Solids by Volume

The Solids by Volume must be greater or equal to 50%, by comparing wet to dry film measurements, when tested in accordance with ASTM D2697.

3.9 Pigment Content by Mass

The total pigment content shall be greater than or equal to 50% by mass, when tested in accordance with ASTM D2371.

3.10 Retro-reflectivity

Suppliers must indicate the volume of solids for each sample provided.

07050-4 Fast Dry Waterborne – Scope

This specification covers the requirements for white and yellow fast dry acrylic water borne traffic paint suitable for airless and conventional spray application on bituminous highways for marking traffic lines.

07050-5 Fast Dry Waterborne – General Requirements

This specification specifies the most efficient traffic paint possible with regard to service and cost. Service includes general appearance, colour, night visibility, and durability. The composition of the paint shall be left to the discretion of the manufacturer, and it is

their responsibility to formulate and produce a paint meeting the requirements specified herein.

Reflectorization of the paint lines will be obtained by the introduction of overlay-type glass beads during paint application. The application rate will be 550 grams of glass beads per litre of paint sprayed on the road surface.

The glass beads will be introduced or applied to the wet paint film by means of automatic spray guns and under air pressure.

5.1 Uniformity

The paint shall be homogenous and shall be well dispersed to a uniform and smooth consistency.

The paint shall be capable of easy application with an automatic spray gun. It shall flow evenly and smoothly without overspray, between 20°C to 60°C, using the internal atomization or airless spray.

5.2 Storage Stability

The paint shall not cake, liver, curdle, gel, thicken excessively, settle badly or show any objectionable properties for six months from date of delivery, in the original unopened container when stored at a temperature between 5°C and 40°C. At the end of this time, it should be capable of being mixed without difficulty to a uniform condition by simple stirring.

5.3 Colour

After drying, the paint shall be free from dirt or tint, and shall match the colours specified in Subsection 3.4 Colour.

5.4 Packaging

The paint shall be packaged in 205 litre returnable “open head” drums or maximum 1230 litre tote tanks as specified in the order.

All containers are to be Canadian General Standards Board approved and certified for the transport of dangerous goods.

Each container shall be plainly marked showing quantity of content, lot and batch number, name and address of manufacturer, manufacturer's code number for the paint and date of packaging.

Drums are to be good quality open head "returnable" type with 6.0 mil open top poly liners draped outside of containers with separate poly top.

Tote tanks will be mild steel construction with drum type lid. Tanks will contain 6.0 mil open top poly liners draped outside of tank with separate poly top. Outlet will be a 50 mm steel ball valve.

Container liners required for packaging are to be supplied by the supplier.

Tanks and drums are to be thoroughly cleaned including outlets and threaded connections, prior to refilling.

Top tied liners are not acceptable.

Supplier is to be responsible for transporting empty containers, tote tanks and liners returned to factory from City of Saskatoon storage compounds.

At the end of the season the supplier shall pick up the containers and tote tanks no later than December 15 of the current year.

The City of Saskatoon will be responsible for returning any containers and tote tanks to the supplier that are emptied after pick up date.

There will not be a deposit charge to the City of Saskatoon for delivered or returned containers.

The City of Saskatoon will not accept bent or damaged containers that are delivered to their site.

Colour of paint shall be clearly identified on each container. Containers shall be vapour-proof sealed.

5.5 Acceptance and Rejection

Paint furnished under contract shall be identical to any sample submitted for performance tests and subsequently approved. In the event that the traffic paint does

not comply with these specifications or is not identical with the sample approved, the manufacturer shall be required to replace all such paint at their own expense, including all handling and transportation.

Supplier may be required to supply production quantities of paint prior to acceptance of total order for evaluation of drying characteristics as outlined in the specification requirements under Section 3.5 – Drying Properties.

5.6 Late Delivery

If the City of Saskatoons' Pavement Marking Program is jeopardized by late deliveries, the City retains the option to cancel the contract and procure material from alternate prequalified suppliers.

07050-6 Fast Dry Waterborne – Specific Requirements

6.1 Hiding Power

It shall flow evenly and smoothly and cover solidly in one coat when applied at a rate of 6.15 m² per litre when tested using a PFUND CRYPTOMETER.

6.2 Viscosity

The viscosity of the paint shall be 85-95 Krebs Units at 25°C in accordance with ASTM D562.

While the viscosity of the original test sample may be anywhere within the stipulated range, the viscosity of all paint purchased on the basis of these performance tests shall be within plus or minus 5 Krebs Units of the original test sample throughout the production of the entire order providing such variation shall be entirely within the specified limits.

The paint shall have acceptable spraying characteristics within the required working temperature ranges.

6.3 Settling Rate

The paint shall provide a rating of 6 or higher according to ASTM D869.

6.4 Colour

White paint shall conform to Federal Standard 595 B Colours, number 37925. The yellow paint shall conform to Saskatchewan Highways and Infrastructure Yellow Traffic Paint Standard number 88001-SM.

6.5 Drying Properties

The paint shall dry in not more than 3 minutes when pre-heated to 60°C and tested according to ASTM Method D711.

However, the paint must dry to no-traffic pick up in 30 seconds or less when heated to a temperature not exceeding 60°C, when applied to pavement by means of a conventional spray striping machine at a wet film thickness of $305 \pm 25 \mu\text{m}$; with the atmospheric temperature above 20°C.

6.6 Bleeding

The bleeding characteristics shall provide a rating of 6 or higher in accordance with ASTM D969 and ASTM D868.

6.7 Flexibility

The preparation of the test panels shall be in accordance with ASTM D609.

One coat of paint shall be applied to the clean abraded tin-plate panels. The coated panels shall then be air dried at room temperature for 18 hours and subsequently force dried in an oven for 1 hour at 105°C. The panels shall be removed from the oven and conditioned under room temperature for 24 hours.

The panels shall be bent to room temperature through 180 degrees over a 12.7mm mandrel in not less than 1 second and not more than 1.5 seconds while keeping the coated side uppermost. The bent area shall be examined under 10-power magnification. The paint shall not crack or peel when subjected to the bending test.

6.8 Solids by Volume

The Solids by Volume must be greater or equal to 55%, by comparing wet to dry film measurements, when tested in accordance with ASTM D2697.

6.9 Pigment Content by Mass

The total pigment content shall be greater than or equal to 50% by mass, when tested in accordance with ASTM D3723.

6.10 Retro-reflectivity

Suppliers must indicate the volume of solids for each sample provided.

End of Specification 07050