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CANCELLATION
31 May 1954

CANADIAN GOVERNMENT SPECIFICATIONS BOARD

Provisional Specification
for

THINNER; 100 PER CENT AROMATIC (XYLOL), TYPE A

CGSB Provisional Specification 1-GP-92P, dated
24 February 1954 is cancelled as of 31 May 1954.

CANADIAN GOVERNMENT SPECIFICATIONS BOARD

*Provisional Specification
for

THINNER; 100 PER CENT AROMATIC (XYLOL), TYPE A**

1. DEFINITION

This specification applies to a 100 per cent aromatic thinner. The material shall be suitable for use with synthetic resin finishes. It is essentially a 10° xylol.

2. GENERAL

(a) The material shall be clear and free from suspended matter and water.

(b) The odor shall not be abnormally strong or offensive.

3. FLASH POINT

The flash point of the material shall not be less than 80°F.

Method 3.2

4. COLOR

The color shall not be darker than 21 Saybolt Chromometer.

Method 12.5

5. RESIDUE ON EVAPORATION

The residue on evaporation shall not exceed 0.4 per cent by weight.

Method 20.1

*This provisional specification has been issued for interim procurement of the Department of National Defence. It has not been approved by the Committee on Specifications for Paints, Pigments and Related Commodities nor the Canadian Government Specifications Board.

** This draft specification is based on U.S. Fed. Specification TT-X-916 (Grade A).

6. DISTILLATION RANGE

The limits of the distillation shall be as specified in the following table:

	<u>Min.</u>	<u>Max.</u>
Initial Boiling Point at 760 mm. pressure, °C.	135	
Dry point at 760 mm. pressure, °C.		145
	Method 28.1	

7. BENZOL

The material shall not contain benzol.

Method 65.1

8. SULFUR (COPPER STRIP TEST)

Corrosion of the copper strip shall not exceed No. 1.

Method 68.1

9. SPECIFIC GRAVITY

The specific gravity at 15.56°C. (60°F.) shall not be less than 0.860 nor more than 0.870 referred to water at the same temperature.

10. SOLVENT POWER

The Kauri-Butanol value of the material shall not be less than 95.

Method attached

11. ACIDITY

The residue after distillation shall not be acidic.

Method 80.1

12. SULFUR COMPOUNDS

The thinner shall be free from hydrogen sulfide and sulfur dioxide.

Method attached

13. METHODS OF SAMPLING AND TESTING

(a) Sampling shall be carried out in accordance with Section 1.1 of Schedule No. 1-GP-71: Methods of Testing Paints and Pigments.

(b) The methods of testing shall in all cases be those described in the same Schedule (or attached hereto) using the methods specified in each requirement.

Withdrawn/Retirée

Correspondence regarding this specification should be addressed to the Secretary, Canadian Government Specifications Board, National Research Council, Ottawa, Canada.

TEST METHODSKAURI-BUTANOL VALUE1. Preparation of Solution

1.1 Place 1 part by weight of pale, bold, kauri resin of grade XXXX, XXX or XX, ground to pea size or smaller, in a stainless steel kettle or beaker and add 5 parts by weight of C.P. normal butyl alcohol (boiling point $116^{\circ} - 118^{\circ}\text{C.}$). Heat the mixture slowly with occasional stirring until all of the kauri resin is in solution. Cool, add a little filter aid to the solution, and filter with suction or through a filter press.

2. Standardization

2.1 Weigh out 20 ± 0.1 grams of filtered kauri-butanol solution into a 250 milliliter Erlenmeyer flask. Place the flask in a water bath at $23^{\circ}\text{C. (73.5}^{\circ}\text{F.)} \pm 1.1^{\circ}\text{C. (2}^{\circ}\text{F.)}$. Add reagent quality toluol (boiling point $110^{\circ} - 111^{\circ}\text{C.}$) from a burette until a permanent slight cloud appears in the solution. The end point shall be taken as the point at which a sufficient cloud has developed in the mixture in the flask to observe the sharp outlines of 10 point print which has been placed directly beneath the water bath and observed through the liquid. Add C.P. normal butyl alcohol to the filtered kauri-butanol solution until the burette reading to achieve this end point is 105 milliliters of toluol at $23^{\circ}\text{C. (73.5}^{\circ}\text{F.)} \pm 1.1^{\circ}\text{C. (2}^{\circ}\text{F.)}$.

3. Procedure

3.1 Weigh out 20 ± 0.1 grams of the standardized kauri-butanol solution into a 250 milliliter Erlenmeyer flask and place in a water bath at $23^{\circ}\text{C. (73.5}^{\circ}\text{F.)} \pm 1.1^{\circ}\text{C. (2}^{\circ}\text{F.)}$. Run in the sample from a burette to the same end point as in the standardization of the solution. Report the number of milliliters required as the kauri-butanol value of the sample.

4. Volume Correction

4.1 If the kauri-butanol value is determined at any temperature other than $23^{\circ}\text{C. (73.5}^{\circ}\text{F.)} \pm 1.1^{\circ}\text{C. (2}^{\circ}\text{F.)}$, the volume of the sample (i.e., the kauri-butanol value) shall be corrected to the standard temperature by means of the following equation:

Milliliter correction = $0.0009 \times \text{milliliter titration (23}^{\circ}\text{C. - temperature of sample)}$

For example:

Temperature of sample	= 30°C.
Titration	= 42.0 milliliters
Correction	= $0.0009 \times 42.0 (23-30).$
	= -0.265
Corrected titration (kauri-butanol value)	= 41.7

Reagents -

- a. Lead Acetate Solution - A saturated solution of reagent-grade lead acetate in distilled water.
- b. Potassium iodate solution - A 10 per cent solution of reagent-grade potassium iodate in distilled water.
- c. Starch paper - Dip strips of filter paper in starch solution and dry.

Procedure

Make a qualitative test for hydrogen sulfide and sulfur dioxide at the time of performing the distillation test by hanging a strip of filter paper moistened with lead acetate solution and a strip of starch paper moistened with potassium iodate solution on the end of the condenser tube. Suspend the strips of paper in the upper part of the receiving cylinder in such a manner that the drops of the condensate will pass between the strips without touching them. If, at the end of the test, the lead acetate paper shows discoloration, hydrogen sulfide is present but not sulfur dioxide. If the lead acetate paper shows no discoloration but the starch iodate paper develops a blue color, sulfur dioxide is present but not hydrogen sulfide. If neither paper shows discoloration, neither hydrogen sulfide nor sulfur dioxide is present.