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Draft Jamaican Standard  
Specification  
for  
**Varnish: exterior and marine**

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**BUREAU OF STANDARDS JAMAICA**

**COMMENT PERIOD:  
28 JANUARY 2024 – 27 MARCH 2024**

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JS 275: 202X

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Product Certification Marks



Plant Certification Mark



Certification of Agricultural Produce (CAP) Mark



Jamaica-Made Mark

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Bureau of Standards Jamaica  
6 Winchester Road  
P.O. Box 113  
Kingston 10  
JAMAICA, W. I.  
Tel: (876) 926 -3140-5/ 618 – 1534 / 632- 4275  
Fax: (876) 929 -4736  
Website: [www.bsj.org.jm](http://www.bsj.org.jm)  
E-mail: [info@bsj.org.jm](mailto:info@bsj.org.jm)

Month 202X

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Jamaican standards establish requirements in relation to commodities, processes and practices, but do not purport to include all the necessary provisions of a contract.

The attention of those using this standard specification is called to the necessity of complying with any relevant legislation.

Amendments

No.	Date of Issue	Remarks	Entered by and date

## Contents

	Page
<b>Foreword</b>	<b>iv</b>
<b>Committee representation</b> .....	<b>iv</b>
<b>Acknowledgement</b> .....	<b>iv</b>
<b>Related documents</b> .....	<b>iv</b>
<b>1 Scope</b>	<b>1</b>
<b>2 Terms and definitions</b>	<b>1</b>
<b>3 Classification</b>	<b>1</b>
<b>4 Detailed requirements</b> .....	<b>2</b>
<b>5 Condition in container</b> .....	<b>3</b>
<b>6 Preparation for delivery</b> .....	<b>3</b>
<b>7 Patent</b> .....	<b>3</b>

## Foreword

This standard was developed to provide guidelines for manufacturers as well as users of the product. It specifies performance requirements as well as general and detailed physical requirements for marine spar varnish for exterior use on wood and steel.

This standard is voluntary.

## Committee representation

The preparation of this standard for the Standards Council established under the Standards Act 1969, was carried out under the supervision of the Paints and Surface Coatings Technical Committee, which at the time comprised the following members:

## Acknowledgment

Acknowledgement is made to the International Organization for Standardization (ISO) for permission to reproduce material from their standards.

## Related Documents

This standard makes reference to the following:

- a) *JS 349:2020 Jamaican Standard Specification for the labelling of goods: General requirements*
- b) *JS 350: 2020 Jamaican Standard Specification for the labelling of goods: Specific requirements for prepackaged goods*
- c) *JS 1 Part 23: 1993 (Affirmed 2017) Jamaican Standard Specification for the labelling of Commodities Part 23: Labelling of finishes*
- d) *ISO 554: 1976 Standard atmospheres for conditioning and /or testing- Specifications*
- a) *IS 525 Specification for varnish, finishing interior*

# Jamaican standard specification for varnish: exterior and marine

## 1. Scope

1.1 This standard establishes requirements for marine spar varnish for exterior use on wood and steel.

1.2 The varnish covered by this standard shall be oleoresinous with a long and or medium-length alkyd resin together with the necessary thinners and driers.

## 2. Terms and definitions

For the purpose of this standard the following definition applies:

### 2.1 alkyd resin

synthetic resin resulting from the polycondensation of polyacids and fatty acids (or oils) with polyhydric alcohols

### 2.2 coating material

A product, in liquid, paste or powder form, that, when applied to a surface, forms a layer possessing protective, decorative and/or other specific properties

### 2.3 oleoresinous

Liquid portion of a paint (coating material) consisting of drying oils and resins

### 2.4 sagging

Downward movement of a coating material during application and or drying in a vertical or an inclined position that results in irregularities in the dry coat

Note 1 to entry: Unwanted accumulation at the edge of a surface is called a fat edge.

### 2.5 skinning

Insoluble film formed on a coating material in the container

### 2.6 thinning

Reduction of the viscosity or consistency of a coating material using a solvent or diluent

### 2.7 undissolved matter

Finely distributed solid particles spread throughout a liquid coating material

### 2.8 varnish

liquid composition converted to a transparent or translucent solid film after application as a thin layer

Note 1 to entry: Varnish typically consists of resins dissolved in oil or solvents and is used as a finish or coating. Lacquer, polyurethane, and shellac are examples of varnish.

## 3. Classification

The varnishes shall be supplied in one class.

## 4. Detailed requirements

4.1 Varnishes made to this standard shall comply with the following:

	Requirements	Minimum	Maximum
4.2	Viscosity at 25°C		
	Centipoise (cP)	-	400
4.3	Drying time, hours		
	Touch dry	-	8
	Dry hard	-	24
4.4	Flash point, closed cup		
	°C	30	-
	°F	86	-
4.5	Volatile matter, %	-	55
4.6	Volatile Organic Content (VOC), g/L	-	450

**4.7 Skinning properties.** The varnish shall show no evidence of skin formation when tested in accordance with relevant accepted test method standard.

**4.8 Flexibility.** A film of varnish prepared and tested in accordance with relevant accepted test method standard. The film shall not crack or peel when subjected to the bending test using a 3.2 mm mandrel.

**4.9 Scratch hardness.** A film of varnish prepared and tested in accordance with relevant accepted test method standard and shall not scratch to show the bare metal.

**4.10 Alkali resistance.** The dried varnish film shall withstand the action of 3% sodium hydroxide solution for 24 hours at 27°C without showing any whitening, blistering, cracking, wrinkling or other visible defects.

**4.11 Water resistance.** A film of varnish applied to a tin-plate panel and immersed for 72 hours in water at 27°C, and a second film of varnish immersed for 6 hours in boiling water shall show no blistering, peeling, wrinkling, cracking or lifting. After subsequent drying for 2 hours, the films shall show no whitening, dulling, softening, loss of adhesion or other visible defects.

**4.12 Acid resistance.** The dried varnish film shall withstand the action of 2% (w/v) solution of concentrated sulphuric acid for 24 hours at 27°C without showing any blistering, peeling, wrinkling, cracking or lifting. After drying for 1 hour, the film shall show no signs of disintegration or loss of gloss.

**4.13 Accelerated storage stability.** When subjected to the storage stability test for 14 days at 60°C, the viscosity of the varnish shall not increase by more than 400 centipoise. The varnish shall comply with the requirements as given in 4.1.

#### 4.14 Applicability and appearance

**4.14.1 *Brushing.*** The varnish shall have suitable consistency and good brushing properties. The dried film shall show no ridges, sagging, brush marks or coarse particles and shall be uniform in appearance and gloss.

**4.14.2 *Spraying.*** When the varnish is applied by spraying after reduction with a thinner as recommended by the manufacturer, it shall display good spraying properties. The dried film shall show no sagging. The varnish shall not have an objectionable odour during and after application and shall have satisfactory recoat and drying time. There shall be no lifting, wrinkling, lack of uniformity or other visible defects.

### 5. Condition in container

**5.1** The varnish shall be supplied in a condition suitable for brushing and shall be satisfactory for spraying when reduced with a thinner recommended by the manufacturer.

**5.2** The varnish shall be clear, transparent, and free from skins, thickenings and undissolved matter.

**5.3** When stored in the original unopened container at temperatures ranging between 5°C and 37°C for one year from date of manufacture, the varnish shall not thicken nor skin and shall meet the requirements for applicability and appearance.

**5.4** For at least one year from the date of manufacture, the container in which the varnish is supplied shall show no sign of deterioration or rust except around the rim where a small amount of rust is permissible.

### 6. Preparation for delivery

**6.1** Commercial packaging, packing and marking shall be done in accordance with standard practice within the manufacturing industry.

**6.2** Labelling of containers with varnish shall be done in accordance with the requirements as detailed in JS 1 Part 23, JS 349 and JS 350.

**6.3** In addition to the requirements detailed in 6.1 and 6.2, each label shall carry the following information:

- (a) manufacturer's name and identifiable address;
- (b) date of minimum durability;
- (c) thinning instructions; and
- (d) type of varnish

### 7. Patent

The unique formula for the product(s) shall be exempted from the listing of ingredients to protect the intellectual property of paint companies once the ingredients do not pose a significant public health and safety risk.

END OF DOCUMENT

## **Standards Council**

The Standards Council is the controlling body of the Bureau of Standards Jamaica and is responsible for the policy and general administration of the Bureau.

The Council is appointed by the Minister in the manner provided for in the Standards Act, 1969. Using its powers in the Standards Act, the Council appoints committees for specified purposes.

The Standards Act, 1969 sets out the duties of the Council and the steps to be followed for the formulation of a standard.

### **Preparation of standards documents**

The following is an outline of the procedure which must be followed in the preparation of documents:

1. The preparation of standards documents is undertaken upon the Standard Council's authorisation. This may arise out of representation from national organisations or existing Bureau of Standards' Committees of Bureau staff. If the project is approved it is referred to the appropriate sectional committee or if none exists a new committee is formed, or the project is allotted to the Bureau's staff.
2. If necessary, when the final draft of a standard is ready, the Council authorises an approach to the Minister in order to obtain the formal concurrence of any other Minister who may be responsible for any area which the standard may affect.
3. The draft document is made available to the general public for comments. All interested parties, by means of a notice in the Press, are invited to comment. In addition, copies are forwarded to those known, interested in the subject.
4. The Committee considers all the comments received and recommends a final document to the Standards Council.
5. The Standards Council recommends the document to the Minister for publication.
6. The Minister approves the recommendation of the Standards Council.
7. The declaration of the standard is gazetted and copies placed on sale.
8. On the recommendation of the Standards Council the Minister may declare a standard compulsory.
9. Amendments to and revisions of standards normally require the same procedure as is applied to the preparation of the original standard.

### **Overseas standards documents**

The Bureau of Standards Jamaica maintains a reference library which includes the standards of many overseas standards organisations. These standards can be inspected upon request.

The Bureau can supply on demand copies of standards produced by some national standards bodies and is the agency for the sale of standards produced by the International Organization for Standardization (ISO) members.

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6 Winchester Road  
P.O. Box 113  
Kingston 10  
JAMAICA, W. I.