

SIGN & DATE दिनांक एवं हस्ताक्षर		संस्थान क्रय विनिर्देश (हीप : हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP: HARIDWAR)	HW27864 पृष्ठ 1 का 3 Page 1 of 3
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ALKYD POLYURETHANE IMPREGNATING VARNISH OF TEMP INDEX- 180°C

1. GENERAL:

This specification governs the technical requirements of an alkyd polyurethane impregnating varnish of temperature index 180°C. The varnish is used for impregnation of armatures and field winding of electrical machines (Electric motors, DC motors / generators, coils & transformers, welding sets etc.).

2. COMPLIANCE WITH NATIONAL STANDARDS AND BASIS:

There is no National Standard covering this type of material.

3. PROPERTIES: (For reference only)

3.1 Physical Condition : It shall be clear liquid and free from any foreign particle
 3.2 Appearance and Color : Brown Clear Liquid
 3.3 Density at 23°C : 1.07 gm/ml (Approx.)
 3.4 Viscosity at 23°C by IS 3944 / Cup 4 : 80 Seconds (Approx.)
 OR
 Viscosity at 23°C by ISO 2341 / Cup 6 : 42-52 Seconds (Approx.)


3.5 Solid Content : 45-47% (by weight)
 3.6 Flash Point : 38°C (Typical)
 3.7 Curing in Thick Layer : 120°/4Hrs (i.e. 4hrs at 120°C) + 150°C/8 Hrs. (i.e. 8hrs at 150°C)

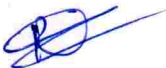
4. PACKING:


4.1 Material shall be packed in air tight tinned metal containers of suitable size.
 4.2 Material shall be suitably packed so that it is protected from dirt, dust and moisture and shall not be damaged during transportation.

SIGN & DATE दिनांक एवं हस्ताक्षर	P. 3473 04/12/20	TSX Sandeep Gupta 04/12/20 EME AJAY GUPTA 21.10.20 QAX Alighant 21.10.20	अनुवादक TRANSLATED BY निर्माककर्ता WORKED BY P D RAHUL जांचकर्ता CHECKED BY SUPARNA MAJUMDAR पर्यवेक्षककर्ता SUPERVISED BY RAJESH RANJAN	नाम NAME दिनांक एवं हस्ताक्षर SIGNATURE & DATE 15/10/2020 15/10/2020
INVENTORY NO. सामग्री सूची संख्या	P. 3473	सहमत विभाग AGREED DEPT. नाम NAME दिनांक एवं हस्ताक्षर DATE & SIGNATURE	स्वीकृति संस्थान मानकीकरण समिति APPROVED : PLANT STANDARDIZATION COMMITTEE	दिनांक एवं हस्ताक्षर SIGNATURE & DATE 15/10/2020 15/10/2020
CHANGE ADVICE NO.	TSX(CPL)-20-186	REV NO. 03 Dt. 15.10.20	निर्माण PREPARED : ISE & CPL जारी ISSUED : TSX	दिनांक DATE : Gr. NO. 2.29



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दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (हीप : हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP: HARIDWAR)		HW27864	
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SUPERSEDES INVENTORY NO. सामग्री सूची संख्या को अपडेटिंग करता है		<p>5. MARKING: Each consignment shall be labelled stating clearly: -</p> <p>Alkyd polyurethane impregnating varnish of Temperature index 180°C Supplier' Name and Grade Date of manufacture Quantity Batch no. / Lot no. Shelf life at <25°C</p> <p>6. TEST / COMPLIANCE CERTIFICATE:</p> <p>Four copies of test / compliance certificates shall be supplied with each consignment, indicating the following information:</p> <p>Alkyd polyurethane impregnating varnish of Temperature index 180°C BHEL Specification No. HW27864 BHEL Order No. Supplier's Name and Grade Quantity Date of Manufacture Shelf life at ≤ 25°C</p> <p>7. ACCEPTANCE CRITERIA:</p> <p>The material shall be accepted on the basis of compliance / test certificate furnished by the supplier and / or testing carried out at BHEL.</p> <p>8. STORAGE:</p> <p>The material shall be stored in sealed containers at ≤25°C and shall have shelf life of min. 01 year at temperature ≤ 25°C.</p>			
COPYRIGHT AND CONFIDENTIAL This information on this documents is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.		स्वाम्यधिकार एवं गोपनीय यह प्रलेख मे की गई सूचना भारत भारी उपकरण लिमिटेड की सम्पत्ति है। इसका प्रयोग एवं अपडेटिंग रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाय।			
दिनांक एवं हस्ताक्षर SIGN & DATE		09/12/20			
सामग्री सूची संख्या INVENTORY		REV. NO. 03		निर्माणकर्ता WORKED BY P D RAHUL	
P3473				जांचकर्ता CHECKED BY S MAJUMDAR	
				15-10-2020	
				15-10-2020	



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Sign & DATE SIGN & DATE		संस्थान क्रय विनिर्देश (हीप : हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP: HARIDWAR)			HW27864 पृष्ठ 3 का 3 Page 3 of 3	
SUPERSEDES INVENTORY NO. संपूर्ण सूची संख्या की अधिकाधिक संख्या	<p>9. ENVIRONMENTAL REQUIREMENTS:</p> <p>The supplier shall furnish material Safety data sheet(MSDS) covering all information relating to human safety and environmental impacts of the hazardous materials particularly during their transportation, storage, handling and disposal along with each supply. Each container shall be marked with corresponding symbol and minimum worded cautionary notice for flammable / corrosive / toxic / harmful / irritant and oxidizing etc. as applicable.</p> <p>10. REJECTION:</p> <p>BHEL reserves the right to reject the entire lot of the material, if found not to comply with these requirements. Parts of the lot which are found to be defective or not complying with these requirements can also be rejected at a later stage.</p> <p>11. LIST OF CROSS REFERRED DOCUMENTS: IS3944 / ISO 2431</p>					
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स्वत्वाधिकार पर गोपनीय इस प्रलेख में दी गई सूचना भारत भारती एलेक्ट्रिकल लिमिटेड की सम्पत्ति है। इसका प्रयोग एवं आसक्ति अन्य किसी भी प्रकार प्रयोग की बिना अनुमति के किये जाने की अनुमति नहीं है।						
Sign & DATE SIGN & DATE	04/12/20					
संपूर्ण सूची संख्या INVENTORY	REV. NO. 03		निर्माणकर्ता WORKED BY		P D RAHUL	
P-3473			जांचकर्ता CHECKED BY		S MAJUMDAR	
					15/10/2020 15/10/20	



हस्ताक्षर एवं दिनांक
SIGN & DATE



संस्थान क्रय विनिर्देश (हीप - हरिद्वार)
PLANT PURCHASE SPECIFICATION
(HEEP - HARDWAR)

HW 55173

पृष्ठ का
Page 2 of 3

सुपरसेडिंग नंबर
SUPERSEDES INVENTORY NO

SUPERSEDES OLD STANDARD UNDER SAME NUMBER

TABLE 1 : REQUIREMENTS FOR ORTHO-XYLENE

Sl. No.	Characteristics	Requirement	Test method
1.	Specific gravity at 20 / 20°C	0.876-0.879	Cl. 6 of IS : 82
2.	Acid Wash Test	To pass the test	Cl. 13 of IS : 82
3.	Distillation Range at 760 mm, Hg pressure for 98% distillate	142-145°C	Cl. 7 of IS : 82
4.	Copper Corrosion Test	To pass the test	Cl. 11 of IS : 82
5.	Flash Point (For reference)	24 °C	

5.0 PACKING AND MARKING :

5.1 The material shall be supplied in galvanized drums or as stated in BHEL order, which shall be leak proof, dry clean and free from contaminants soluble in ortho-xylene.

Each container shall bear the following information :

- Ortho-xylene, Spec. No. HW 55173
- BHEL Order No.
- Manufacture's / Supplier's Name.
- Trade Mark, if any.
- Batch No.
- Date of packing.
- Quantity.

5.2 Test Certificates : Unless otherwise stated, three copies of Test Certificates shall be supplied giving the following information :

- Ortho-xylene.
- BHEL Order No.
- Manufacture's / Supplier's Name.
- Trade Mark, if any.
- Batch No.
- Date of packing.
- Test results of clause 4.0.

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स्वत्वधिकार एवं गोपनीय

हस्ताक्षर एवं दिनांक
SIGN & DATE
30/8/01

सामग्री सूची संख्या
INVENTORY NO
P-3249

REV. 03

निर्माणकर्ता Worked by	VIRENDRA KUMAR	Virendra Kumar	30/8/01
जांचकर्ता Checked by	VK Goyal	VK Goyal	

SUPERSEDES OLD STANDARD UNDER
SAME NUMBER

6.0 STORAGE :

The material shall be stored in sealed drums placed in well ventilated covered area at room temperature < 40°C free from sources of naked flame, sparks etc..

7.0 ACCEPTANCE CRITERIA :

The material shall be accepted on the basis of results of tests as per clause 4.0

8.0 ENVIRONMENTAL REQUIREMENTS :

The supplier shall furnish Material Safety Data Sheet (MSDS) covering all information relating to human safety and environmental impacts of the hazardous materials particularly during their transportation, storage, handling and disposal along with each supply. Each container shall be marked with the corresponding symbol and minimum worded cautionary notice for flammable / corrosive / toxic / harmful / irritant and oxidizing etc. as applicable.

9.0 REJECTION :

BHEL reserves the right to reject the entire lot of the material, if found not to comply with these requirements. Parts of the lot which are found to be defective or not complying with these requirements at a later stage can also be rejected.

10.0 LIST OF CROSS REFERRED DOCUMENTS : IS - 82

संस्थाधिकार एवं गोपनीय
 स्वतंत्रता के अंतर्गत प्रकाशित करने के अधिकार को सुरक्षित रखने के लिए प्रयत्न किया जा रहा है।
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संस्थाधिकार एवं दिनांक SIGN & DATE	संस्थाधिकार एवं दिनांक SIGN & DATE
P-3249	30/10/11

REV. No - 03

निर्माणकर्ता Worked by	VIRENDRA KUMAR	Virendra Kumar	31-7-11
जांचकर्ता Checked by	V. C.	31-7-11



डॉक्यूमेंट सरवर पर जारी की गई है।
DOCUMENT RELEASED FROM SERVER/ CTA

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SIGN & DATE

डॉक्यूमेंट सरवर पर जमा कर दी गई है।
DOCUMENT DEPOSITED IN SERVER

हस्ताक्षर तिथि-
SIGN & DATE

संशोधन पत्र
CHANGE ADVICE FORM

फॉर्म DG (सी)



संशोधन सूचना संख्या
CHANGE ADVICE NO.
(1)
75X/1525-21-187

जारीकर्ता विभाग
ISSUING DEPTT.

उत्पाद का प्रकार
TYPE OF PRODUCT

जीएमएस/वीआर
एसपी/सीबीएम से
GMS / GRSP
/CBOM No.

मुद्रण वितरण
दिनांक
PRINT DELIVERY
DATE

स्वीकृतिकर्ता
APPROVED BY
SUPARNA MAJUMDAR
DGM(ISE&CPU)

शुद्धिकृत्य प्रतीक सं.
DESIGNATION
(DRAWING No. etc)
(7)

संशोधित पत्र
संख्या
REVISED
SHEET NOS.
(8)

संशोधन संख्या
REV. NO.
(9)

संशोधन का
कारण एवं
REASON FOR
CHANGE
(10)

संशोधन का विवरण
DETAILS OF REVISION

कैसे है
AS IT EXISTS
(11)

कैसे होना चाहिए
AS IT SHOULD BE
(12)

अन्य सीबीएम
वीआर एस से
वीआरएसपी से
वीआरएसपी की
लागू हो
OTHER CBOM
/GMS NOS./
GRSP NOS./
CBOM NOS.
WHERE
APPLICABILITY
(15)

टिप्पणी
REMARKS
(16)

ROUTE
(7a)

HW55173

ALL (4)

REVIEW

REAFFIRMED WITHOUT ANY CHANGE

CODES FOR REASON OF CHANGES:- 01- ENGINEERING ERROR INCLUDING D.O. ERRORS, 02- DESIGN UPGRADE/ADDITION (INCLUDING ADDITION OF VARIANT), 03- DESIGN REVIEW/INCLUDING CHANGES DUE TO CHANGE ADVICE IN OTHER DOCUMENTS, 04- TO MEET MANUFACTURING REQUIREMENTS, 05- TO MEET TECHNOLOGICAL MODIFICATIONS, 06- TO SUIT CUSTOMER DEMANDS, 07 TO SUIT STATUTORY REQUIREMENTS, 08 TO REPLACE DAMAGED/ TURN OUT ORIGINALS BY A FRESH ORIGINALS, 09- ANY OTHER

AGREED सहमति

(20)

प्रारंभिक
WORKED BY
(17)

नाम
NAME

हस्ताक्षर
SIGN

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DATE

अभियांत्रिकी
ENGG.

प्रौद्योगिकी
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गुणवत्ता
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DATE

विवरण के लिए देखें मानक संख्या HW0425199, (FOR DETAILS REFER PLANT STANDARD HW0425199)

शेड्यूल आ साइज आ