



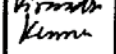

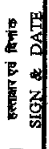

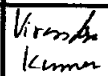


संस्थान क्रय विनिर्देश (हीप - हरिद्वार) <b>PLANT PURCHASE SPECIFICATION</b> (HEEP - HARDWAR)	HW54995 TG60358																								
	पृष्ठ का <b>Page 1 of 5</b>																								
SUPERSTUDIES INVENTORY NO	<b>ZINC NAPHTHENATE</b>																								
1.0 GENERAL :  This specification covers technical requirements of zinc naphthenate used for the preparation of accelerator solution for the treatment of various items used in VIP insulation.																									
2.0 COMPLIANCE WITH NATIONAL STANDARD :  There is no National standard covering this type of material. However, this standard is based on KUN 56.																									
3.0 PROPERTIES :  3.1 Appearance : Clear, light red-brown colour  3.2 Zinc content : ≈ 12% (As per test method indicated in Annexure -1)																									
4.0 ACCEPTANCE CRITERIA :  The material shall be accepted on the basis of test / compliance certificate furnished by the supplier.																									
5.0 PACKING :  5.1 Material shall be packed in closed air tight container of suitable size or as stated in the purchase order.  5.2 The containers shall be suitably packed so that there shall not be any damage during transportation.																									
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स्वत्वाधिकार एवं गोपनीय इस दस्तावेज में दी गई जानकारी भारत भारी बिजली-संयंत्रों की सीमा में गोपनीय है। इसे बिना लिखित अनुमति के किसी भी व्यक्ति को प्रसारित नहीं किया जानना चाहिए।																									
SIGN & DATE 21-11-02	<table border="1"> <tr> <td>नाम</td> <td>हस्ताक्षर</td> </tr> <tr> <td>NAME</td> <td>SIGNATURE &amp; DATE</td> </tr> <tr> <td>TSX</td> <td>KISHAN LAL</td> </tr> <tr> <td>अनुवादक</td> <td>TRANSLATED BY</td> </tr> <tr> <td>TGT</td> <td>U.K. GAIROLA</td> </tr> <tr> <td>निर्माणकर्ता</td> <td>WORKED BY</td> </tr> <tr> <td>GAJ</td> <td>M-SINGH</td> </tr> <tr> <td>जांचकर्ता</td> <td>CHECKED BY</td> </tr> <tr> <td>AGREED DEPTT</td> <td>NAME</td> </tr> <tr> <td>DATE &amp; SIGNATURE</td> <td>VIRENDRA KUMAR</td> </tr> <tr> <td>पर्यवेक्षणकर्ता</td> <td>SUPERVISED BY</td> </tr> <tr> <td>DATE &amp; SIGNATURE</td> <td>V.C. GOYAL</td> </tr> </table>	नाम	हस्ताक्षर	NAME	SIGNATURE & DATE	TSX	KISHAN LAL	अनुवादक	TRANSLATED BY	TGT	U.K. GAIROLA	निर्माणकर्ता	WORKED BY	GAJ	M-SINGH	जांचकर्ता	CHECKED BY	AGREED DEPTT	NAME	DATE & SIGNATURE	VIRENDRA KUMAR	पर्यवेक्षणकर्ता	SUPERVISED BY	DATE & SIGNATURE	V.C. GOYAL
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DATE & SIGNATURE	V.C. GOYAL																								
INVENTORY NO P-5958 REV. 02 (CREAFFIRMED) Dt. 27.07.07	स्वीकृति संस्थान मानक समिति APPROVED : <b>PLANT STANDARDS COMMITTEE</b>  निर्माण : PREPARED : ISE & CPL  जारी मानक विभाग ISSUED : STANDARDS DIVISION  दिनांक DATE																								

दिनांक एवं हस्ताक्षर अर्थ एवं DATE		<b>संस्थान क्रय विनिर्देश (हीप - हार्डवयर)</b> <b>PLANT PURCHASING SPECIFICATION</b> <b>(HEEP - HARDWAR)</b>		<b>HW-57998</b> <b>TG - 60358</b>	
				पृष्ठ का	Page 2 of 5
सामग्री सूची संख्या को अधिकारित करता है SUPERSEDES INVENTORY NO	<b>6.0 MARKING :</b>  Each consignment shall be labeled stating clearly :  Zinc Naphthenate Specification No. HW 57998 Supplier's name and grade Date of manufacture Quantity / lot No. BHEL Order No. Shelf life at $\leq 25^{\circ}\text{C}$				
<b>COPYRIGHT AND CONFIDENTIAL</b> The 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	<b>7.0 STORAGE :</b>  The material shall be stored in closed container in dry atmosphere at $\leq 25^{\circ}\text{C}$ and shall have shelf life of min. 5 years at temperature $\leq 25^{\circ}\text{C}$ .				
	<b>8.0 COMPLIANCE CERTIFICATE :</b>  Four copies of material the compliance certificates shall be supplied with each consignment, indicating the following information :  Zinc Naphthenate  Specification No. HW 57998  BHEL Order No.  Manufacturer's / Supplier's Name  Quantity  Batch / Lot No.				
स्वत्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की संपत्ति है इसका प्रयोग एवं आभ्यन्तर से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो, न किया जाए।	<b>9.0 ENVIRONMENTAL REQUIREMENTS :</b>  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 alongwith 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.				
हस्ताक्षर एवं दिनांक SIGN & DATE 1-11-02	REV.NO. 02	निर्माणकर्ता WORKED BY U.K.GAIROLA			7.8.02
सामग्री सूची संख्या INVENTORY NO P-5958		जांचकर्ता CHECKED BY VIRENDRA KUMAR			7.08.02

दिनांक एवं वास्तव्य DATE		<b>संस्थान क्रय विनिर्देश (टीएम - हार्डवेयर)</b>  <b>PLANT PURCHASING SPECIFICATION</b> <b>(HEEP - HARDWAR)</b>	<b>HW-5495</b> <b>TG - 60358</b>
कार्यालय की सूची संख्या का अधिसूचना क्रम है	SUPERSEDES INVENTORY NO.	पृष्ठ का <b>Page 3 of 5</b>	
<b>COPYRIGHT AND CONFIDENTIAL</b> The information on this document 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.		<b>10.0 REJECTION :</b>  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.  <b>11.0 LIST OF CROSS REFERRED DOCUMENTS : NIL</b>	
<b>स्वत्वाधिकार एवं गोपनीय</b> इस दस्तावेज में दी गई सूचना भारत भारती इलेक्ट्रिकल्स की संपत्ति है। इसका प्रयोग एवं प्रकाशना के बिना की जा सकती है। इस दस्तावेज को न किराया करे।			
दिनांक एवं SIGN & DATE  1-11-02			
कार्यालय की सूची संख्या INVENTORY NO. <b>P-5958</b>	REV.NO. <b>01</b>	निर्माणकर्ता WORKED BY <b>U.K.GAIROLA</b>	 <b>7-8-02</b>
		जांचकर्ता CHECKED BY <b>VIRENDRA KUMAR</b>	 <b>7-8-02</b>

दिनांक एवं हस्ताक्षर SIGN & DATE		<b>संस्थान क्रय विनिर्देश (टीम - हार्डवेयर)</b>	<b>HW-5998 TG - 60358</b>
SUPERSEDES INVENTORY NO.	<b>PLANT PURCHASING SPECIFICATION (HEEP - HARDWAR)</b>		
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electricals Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.	<b>ANNEXURE -1</b>		
स्वसाधिकार एवं गोपनीय इस दस्तावेज में दी गई सूचना भारत भारती इलेक्ट्रिकल्स की संपत्ति है। इसका प्रयोग एवं प्रसारण के बिना की जाये नहीं।	<b>TEST METHOD FOR THE DETERMINATION OF ZINC CONTENT IN ZINC NAPHTHENATE :</b>		
दिनांक एवं हस्ताक्षर SIGN & DATE 7-11-02	<b>1.0 PURPOSE OF TEST :</b>		
To determine the zinc content in the zinc naphthenate used for the treatment of resin poor mica tapes.			
<b>2.0 TEST APPARATUS AND REAGENTS :</b>			
<b>2.1 Muffle furnace with a maximum temperature of 1000°C approx.</b>			
<b>2.2 Oven with a maximum temperature of 300°C with air circulation.</b>			
<b>2.3 Analytical balance with 0.0001 gm accuracy.</b>			
<b>2.4 Quartz Silica Crucible</b>			
<b>2.5 Desiccator</b>			
<b>2.6 Ammonium chloride (Analytical grade)</b>			
<b>2.7 Sulphuric acid, LR grade, density = 1.84 g / cm<sup>3</sup></b>			
<b>3.0 TESTING PROCEDURE :</b>			
<b>3.1 Chemical treatment of zinc naphthenate with sulphuric acid :</b>			
Weigh about 2-3 gm of zinc naphthenate into a quartz silica crucible on analytical balance. Add about 5 ml of 98% concentrated sulphuric acid to the sample. Heat the mixture in an oven or hot plate at 100-110°C for about ½ hour, 150-160°C for about 1.5 hours and 190-200°C for a period till liquid mass is converted into black mass. Heat the black mass(carbonaceous matter) in muffle furnace at temperature of 600-700°C for about 1 hr. till all the carbonaceous matter is oxidised. Raise the temperature of furnace to 800-900°C for 1 hour, cool the crucible in desiccator to room temperature and weigh (X). The weight represents the zinc oxide and impurities obtained from the sample.			
<b>3.2 Sublimation of zinc oxide :</b>			
The zinc oxide containing impurities is thoroughly covered with ammonium chloride and fused further in the muffle furnace at 600-700°C for about 10 minutes. This process is repeated two three times till all the zinc oxide is completely sublimed. The sample is finally calcined in muffle furnace at 900°C for 30 minutes, cooled in desiccator for about 1 hr. and weighed (weight Y). This weight represents impurities in ash form.			
INVENTORY NO. P-5958	REV.NO. 01	निर्माजकर्ता WORKED BY U.K.GAIROLA	 7-8.02
		जांचकर्ता CHECKED BY VIRENDRA KUMAR	 7.8.02

दिनांक एवं आवक संख्या DATE		<b>संस्थान क्रय विनिर्देश (डीप - हार्डवयर)</b>  <b>PLANT PURCHASING SPECIFICATION</b> <b>(HEEP - HARDWAR)</b>	HW-54998 TG - 60358	
सापेक्षी सूची संख्या का अनुसंधान क्रम सं.	SUPERSEDES INVENTORY NO.	पृष्ठ का <b>Page 5 of 5</b>		
<b>COPYRIGHT AND CONFIDENTIAL</b> The information on this document is the property of Bharat Heavy Electricals Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.		<p><b>4.0 CALCULATION :</b></p> <p>The calculation of zinc content in zinc naphthenate carried out as follows :</p> $Zn = F \times A \times 100 / W$ <p>Where Zn = zinc content, in %</p> <p>A = weight of zinc oxide, in gm (X-Y)</p> <p>W = weight of sample of zinc naphthenate</p> <p>F = A factor representing a ratio of Zinc content to Zinc oxide (Zn / ZnO = 0.8034)</p> <p>Reporting : Average values of two samples shall be reported.</p>		
<b>स्वसाधिकार एवं गोपनीय</b> इस दस्तावेज में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की सम्पत्ति है इसका प्रस्ताव एवं अनुसंधान कार्य से किसी भी तरह प्रयोग, जो कि संश्लेषी के बिना से कॉपीराइट को न किया जाए।				
दिनांक एवं हस्ताक्षर SIGN & DATE  1-11-02				
सापेक्षी सूची संख्या INVENTORY NO. <b>P-5958</b>	REV.NO. <b>01</b>		निर्माणकर्ता WORKED BY U.K.GAIROLA	 7-8-02
			जांचकर्ता CHECKED BY VIRENDRA KUMAR	 7.08.02