



Corporate Identity Number (CIN)
L74899DL1964GOI004281

BHARAT HEAVY ELECTRICALS LIMITED
(A Govt. of India Undertaking)
FSIP Industrial Area Jagdishpur, District: Amethi,
UP-227817, India

Notice Inviting Tender

Tender Enquiry No: 2200024

Dtd. 28/05/2022

E-Tender are invited in Two Part Bid System for supply of Paint & Primer

(I) General:

1. The tender will be under two-part bid system. The first part would be techno commercial bid and the second part would be the price bid. Price bid would be opened for only those suppliers who qualify in the techno commercial bid. BHEL reserves the right to go for reverse auction for techno-commercially qualified bidders through electronic media. The suppliers who qualify in the techno commercial bid would be contacted by our authorized service provider for web based reverse auction.

Mode of Submission of offer: Being e-tender, offer will be submitted online through e-tender portal: <https://eprocurebhel.co.in/nicgep/app>

Important dates are given below:

EVENT	SCHEDULE
Last Date & Time for receipt of tender	Date : 08.06.2022 Time : 12.00 hrs (IST)
Tender opening date & Time	Date : 08.06.2022 Time : 15.30 hrs (IST)

2. E procurement Service Provider details:

In case of any difficulty faced while registering on BHEL's e-Procurement portal developed by NIC, queries may be addressed to email ID and Contact No provided below. These details are also available on 'Contact Us' page of the portal

Sl. No.	Email Id	Contact No.
1	support-eproc@nic.in	0120-4001002, 0120-4001005 and 0120-6277787

The process of utilizing e-procurement necessitates usage of DSC (Digital Signature Certificate) (Class 3- SHA2- 2048 BIT SIGNING & ENCRYPTION) and you are requested to procure the same immediately, if not presently available with you. Please note that only with DSC, you will be able to login the e-procurement secured site and take part in the tendering process.



Corporate Identity Number (CIN)
L74899DL1964GOI004281

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

**FSIP Industrial Area Jagdishpur, District: Amethi,
UP-227817, India**

3. Offer to be submitted only on e-procurement portal. Hard copy of offer is not required to be submitted to BHEL FSIP. **Any offer received in Hard copy shall not be accepted and straightway rejected by BHEL FSIP.**
4. The offer shall be submitted as per the instructions of tender document and as detailed in this NIT. Price shall not be mentioned by them anywhere in the techno-commercial offer. Price shall be furnished in the relevant price schedule only. In case of any clarification, bidder may contact us.
5. The process of utilizing e-procurement necessitates usage of DSC (Digital Signature Certificate) and you are requested to procure the same immediately, if not presently available with you. Please note that only with DSC, you will be able to login the e-procurement secured site and take part in the tendering process.
6. **Tender Fee & EMD:** NIL
7. **Item Description and Scope of Supply:**

Sl. No.	Item Description	UoM	Qty.	Delivery
1	AA5610026237 SYNTHETIC ENAMEL PAINT (LONG OIL ALKYD) TO IS 2932 SMOKE GREY SHADE NO: 692 OF IS5	LTR	600	On FOR basis within 4 weeks from date of PO
2	FU5670001990 THINNER FOR ALKYL BASED PAINT SPEC: AA56701	LTR	200	
3	AA5610035554 HIGH BUILD BLACK COAL TAR EPOXIDE PAINT WITH ACCELARATOR 20 Ltr. PACK IN TWO PACK SYSTEM (15+5=20) Ltr., SPECIFICATION:- AA56135	LTR	500	On FOR basis within 4 weeks from date of PO

8. Pre-Qualifying Requirement (PQR) condition:

- a. **Financial Capability:** Average annual financial turnover during the last 03 financial years, ending March 2021 at least **Rs 0.69 Lakhs**. Audited balance sheet and profit & loss account is required to be submitted as a documentary proof. Not required if valid documents are already furnished/ available with BHEL jagdishpur.



Corporate Identity Number (CIN)
L74899DL1964GOI004281

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

**FSIP Industrial Area Jagdishpur, District: Amethi,
UP-227817, India**

- b. **Past Experience:** The bidders should have supplied **Paint OR Primer** in past 03 (three) years (from the last day of the previous month of tender submission). Copies of purchase order/ delivery challan is required to be submitted as a documentary proof.
- c. **For Manufacturers:** Certification/ declaration of being manufacturer along with valid ISO 9001 certificate or equivalent along with manufacturing process chart.

For Re-sellers (Trader/ Dealer/ Distributor/ Agent etc): Authorization letter from their OEM/ Principal/ manufacturer is mandatory.

Note: Procurement directly from the manufacturer / suppliers shall be preferred. However, if the OEM / Principal insists on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacturer / supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer/ supplier could bid directly but not both. In case bids are received from both the manufacturer/ supplier and the agent, bid received from the agent shall be ignored.

Note- Vendor to submit PQR document along with offer. Bidders who qualifies in above qualifying requirement shall be eligible for techno-Commercial evaluation of the offer.

9. Terms and Conditions

- a. Evaluation shall be carried out on group wise basis i.e. item 1 & 2 will be evaluated together and 3rd will be evaluated separately.
- b. Delivery will be on FOR basis within 4 weeks from date of PO.
- c. Freight and insurance will be in supplier scope. Bidder to quote prices including freight & Insurance charges.
- d. Deviation in qty. is permissible up to +/-10% for each item.
- e. Supplier to guarantee for 1 year against any manufacturing defect from the date of supply.
- f. Shelf Life: The product to be supplied must have min 1 year shelf life. On the date of supply, Min 1 year usable shelf life should be available/balance.
- g. TC is required as per Specification.
- h. Final inspection shall be done at BHEL FSIP Jagdishpur.
- i. RA shall not be conducted for this tender enquiry.
- j. "For this procurement, the local content to categorize a supplier as a Class I local supplier / Class II local supplier / Non-Local Supplier and purchase preference to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part II bids against this NIT"

Only 'Class I local supplier' and 'Class II local supplier' as defined under the order shall be eligible



Corporate Identity Number (CIN)
L74899DL1964GOI004281

BHARAT HEAVY ELECTRICALS LIMITED
(A Govt. of India Undertaking)
FSIP Industrial Area Jagdishpur, District: Amethi,
UP-227817, India

to bid in procurements under this tender.

- i) Currency for evaluation of this tender enquiry is INR.
- j) Vendor to send dispatch documents in 3 sets (Invoice, TC, GC and Shelf Life Certificate etc) along with material.
- j) Rest terms and conditions will be as per GTAC.

10. Attachment to Tender Enquiry:

Sl. No.	Description	Annexure/Enclosure
1.	General terms & Conditions (GTAC) of T.E.	Annexure: I
2.	Deviation Sheet	Annexure: II
3.	Specification	Annexure: III
4.	Tender Checklist	Annexure: IV

11. Contact person details:

Piyush Kumar Mishra
Dy. MGR –MM/Purchase
Phone: 05361-224136
Mob: 09453025414
E-mail: piyush.kumar@bhel.in



GENERAL TERMS AND CONDITIONS OF ENQUIRY

GTC/FSIP/PUR/01 Rev:01

Sl. No.	Description
1	General:
A	These General Terms & Conditions (GTC) shall apply to all enquiries, notice inviting tenders, request for quotations concerning the supply of goods and / or rendering of services to Bharat Heavy Electricals Ltd., Jagdishpur (hereinafter referred to as BHEL or the Purchaser) or its Projects / Customers. Special / supplementary terms and conditions of enquiry, if any, will override the conditions in this annexure.
2	General Instructions - Common for Indigenous & Foreign enquiries
A	Through E- procurement-
	<ol style="list-style-type: none"> 1. Offer shall be submitted by the bidders in single / two parts as called in Tender enquiry. 2. Bid Part - I Technical cum Commercial bid Bid Part - II Price bid 3. Suppliers shall quote price on BHEL/authorised third party service provider e-procurement site. Any deviation from the price format shall be clearly brought out in the offer Bid part-I. <p>The offer shall be uploaded on BHEL e-procurement site using Class III digital signature. Bidders to put sign and seal on all the uploaded documents. The quotation should be uploaded on the site before due date and time.</p> <p>Part-I of the bid shall contain complete item-wise scope of supply as offered vis-à-vis the scope of supply as per enquiry, all commercial terms and conditions etc. It is expected that bidders shall meet all our technical and commercial requirements and shall not deviate from them.</p>
B	Through Tender Room
B1	Sealed bids are invited for scope of Supply / Services as detailed in the enquiry. The quotation should be neatly typed and free from over writing/ erasures. Any correction or addition must be authenticated. The bid should be submitted in English or Hindi language. Relevant enclosures, supporting documents, catalogue, samples, if any, as required as per Notice Inviting Tender (NIT) conditions shall be sent along with technical offer. Rate should be quoted in the units asked for in the enquiry. The rates should be quoted both in figures and words. In case of discrepancy in figures and words, the rates quoted in words shall be considered.
B2	Bids shall be submitted in a Sealed cover with Enquiry No., Due date and Bidder's name indicated on the cover. In case of Two part Bid, technical bid containing technical offer, mandatory documents filled-in & signed; and un-priced copy of the tender should be kept in one envelope. Price Bid containing only the price (as called for in the price format where required) should be kept in a separate envelope. Both envelopes indicating Part-I or Part-II as the case may be to be put in a bigger envelope, which should be addressed to In charge, Tender Box, Administrative Building BHEL FSIP, Industrial Area Jagdishpur, Dist. Amethi-227817, (U.P.) India. Enquiry No., due date and bidder's name must be mentioned on all envelopes. Offer must reach tender box of BHEL FSIP Jagdishpur by 15.00 PM IST on the enquiry due date.
B3	Offer received after 15.00 PM IST of the due date will be termed as "Late Tender" and shall not be considered.
B4	Bidder can also submit offer through email, if called for in the enquiry, at the email address indicated in the enquiry. Such email offers shall be sent only on designated email-id to reach before 15.00 PM IST on the tender due date. BHEL will not be responsible for incomplete offers and the ones delivered late through e-mail.
C	Commercial Conditions quoted by the vendor in any place including as stated in bidder's 'General Terms and Conditions' if any, shall not be binding on the Purchaser and the conditions contained in this annexure, including special conditions, if any, for this enquiry shall only prevail.
D	<p><u>Wherever Reverse Auction is called for</u></p> <p>REVERSE AUCTION (RA): "BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among the techno-commercially qualified bidders. Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered for RA. In case any bidder(s) do (es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking."</p> <p><u>Wherever Reverse Auction is not called for</u></p> <p>PRICE BID OPENING: Tender shall be finalized via price bid opening of all the techno-commercially qualified bidders in place of RA.</p>



GENERAL TERMS AND CONDITIONS OF ENQUIRY

GTC/FSIP/PUR/01 Rev:01

	Price bid should contain only price of item. Anything other than price of item shall be invalid. <i>Tender finalization mode (RA or Price bid opening) shall be specified in Special / supplementary terms and conditions of enquiry.</i>
E	The goods offered shall confirm to BHEL specifications and / or National/International standards as mentioned in the Enquiry and the bidder is required to confirm his unconditional acceptance to the same. Vendors, seeking deviations from the specifications and any other conditions, may indicate the same clearly on a separate sheet, with reasons for such deviations. BHEL reserves the right to reject the offer with deviations or load the deviations suitably for evaluation.
F	Offers shall be submitted directly by vendor or his authorized agent only. Unsolicited offers shall be summarily rejected.
G	Bid in single part or techno-commercial bid in two-part system (as the case may be) will be opened on the due date. In case of two part bid, price bids of techno-commercially acceptable bidder(s) only shall be opened on the assigned date.
H	In case of changes in scope and / or technical specification and / or commercial terms & conditions, having price implication, techno-commercially acceptable bidders shall be asked by BHEL to submit the impact of such changes on their price bids. In case a bidder opts to submit revised price bid instead of impact called for, then latest price bid shall prevail.
I	The bidders will submit Integrity Pact, duly signed by its authorized signatory, where called for in the enquiry.
J	Wherever the enquiry is issued to unregistered vendor, the bidder shall visit ' www.bhel.com and online filled up "Supplier Registration Form" on BHEL link (http://supplier.bhel.in) along-with all the supporting documents to be submitted.
K	BHEL expects that the bidder must respond to the enquiry. Regret letter, with valid reasons for not participating in the tender will be submitted where the bidder is unable to submit offer. Repeated lack of response on the part of vendor (Four non responses) may lead to his deletion from BHEL's approved vendor list.
L	Goods shall be properly packed to avoid transit damage. Suitable markings shall be provided to identify the goods with that of the PO No. and the consignee details.
M	Goods shall be consigned to Store Officer, BHEL, FSIP, IA Jagdishpur Dist- Amethi (U.P.) India, unless otherwise specified in the PO.
N	All corrigenda, addenda, amendments, time extensions, clarifications etc. to the tender will be hosted on BHEL website (www.bhel.com)/ https://eprocure.gov.in/epublish/app/ https://eprocurebhel.co.in/nicgep/app eProcurement website only.
O	In the course of evaluation, if more than one bidder happens to occupy L-1 status, effective L-1 will be decided by soliciting discounts from the respective L-1 bidders. In case more than one bidder happens to occupy the L-1 status even after soliciting discounts, the L-1 bidder shall be decided by a toss / draw of lots, in the presence of the respective L-1 bidder (s) or their representative(s). Ranking will be done accordingly. BHEL's decision in such situations shall be final and binding.
P	The Purchaser can consider awarding tendered quantities among more than one bidder (after acceptance of L1 price by the other bidders) in the manner and proportion disclosed in the tender conditions. Purchaser can also consider awarding of part of the tendered quantity to other than L-1 bidder at L1 counter offered rates, if the quantity offered by the L-1 bidder is less than the quantity tendered for. BHEL can also award order to L1 bidder/counter offer accepted bidders in case any bidder is not supplying/delaying the supplies and in this case the distributed quantity shall not be considered in loading share. The loading of Order shares on suppliers will also be subject to their performance (Quality, Delivery and Service) for the supplies made against Purchase Orders. The suppliers with consistence good performance will be preferred over poor performance supplier and encouraged with more order share. Depending upon performance in supplies BHEL shall go to redistribute the pending orders/shares of poor performer to other suppliers whose performance in supplies is better.
Q	The bidder shall submit price bid strictly in the price format, wherever provided for, in the enquiry. Any attempt on the part of the bidder to alter the contents of the price bid format in any manner, which in the opinion of BHEL can vitiate the tendering process, will lead to rejection of the bid, <i>besides BHEL taking appropriate punitive action as deemed fit.</i>



GENERAL TERMS AND CONDITIONS OF ENQUIRY

GTC/FSIP/PUR/01 Rev:01

R	In case the bidder decides to sub-contract part of his activity / work to some of his vendors, details of such intended subcontracting shall be mentioned in the bid. This will however not absolve the bidder from his contractual obligations and responsibilities.
S	Wherever the minimum reserved capacity is called for in the tender, the offers of such bidders, who do not quote for the minimum reserved capacity, are liable to be rejected.
3	Delivery Terms
A	Indigenous Purchase
	Goods shall be delivered on 'FOR Destination' basis (with freight and insurance in bidder scope) to the named destination unless otherwise called for in the enquiry.
B	Foreign Purchase — Imports
B1	<ol style="list-style-type: none"> 1. Goods shall be despatched by Sea, unless stated otherwise in the enquiry or purchase order. 2. Terms of Delivery for Sea shipment shall be on CFR / CIF basis with 14 days' detention free period for FCL (Full Container Load) Cargo of GP & HC Containers. 3. For other cases - Other than GP & HC Containers, LCL Cargo shall be delivered at Nhava Sheva (JNPT) & Break-bulk Cargo at Mumbai (MPT). 4. For Air consignments, the terms of delivery shall be FCA at BHEL nominated Airport. 5. Freight amount shall be indicated separately in the offer in case of CIP/CFR/CIF. 6. The number of detention free days and destination charges payable to shipping line must be mentioned in your offer and also on the Bill of Lading. 7. Offer received on FOB basis may be considered on an exceptional basis. BHEL will load freight, marine insurance & shipping line port handling charges etc. to work out landed cost at Sea Port. 8. Please visit BHEL Bhopal website www.bhelbpl.co.in for details of named Air ports and Sea ports. Name of the gateway port so chosen by the Seller shall be indicated by the Bidder in his offer.
B2	<ol style="list-style-type: none"> 1. For delivery of FCL (Full Container Load) cargo, the Bidder shall provide minimum 14 days' detention free period from the date of delivery at Port of Discharge / Place of Delivery (in case of ICD). Wherever the detention free period offered is less than 14 days, the bids shall be loaded for the period short of 14 days' period. 2. <u>Port Congestion charges or any additional charges claimed by the shipping line at Port of Discharge / Place of Delivery shall be to the Seller's account.</u>
4	Vendor's particulars & logistics information (Bidder to give details against each of the provisions)
A	Name of the vendor's executive to deal with this tender / project
B	E-mail address of the contact person
C	Telephone no. of the contact person
D	Name of location from where the goods shall be offered for inspection and dispatch
5	Additional logistics information for Imports
A	Bid currency
B	Charges applicable at discharge port up to BHEL's CFS (Container Freight Station) to be indicated in your offer and on the B/L
C	Name of Airport in the country of dispatch for FCA delivery terms
D	Estimated number, type & size of containers for delivery of tendered



GENERAL TERMS AND CONDITIONS OF ENQUIRY

GTC/FSIP/PUR/01 Rev:01

	quantity (applicable where the goods are to be sent in FCL)	
E	No. of packages with cumulative gross weight and CBM volume (applicable for LCL & Break-bulk shipment)	
F	Approx. distance in km. from Vendor's works to Port of Loading	Sea port /Air port
6	Delivery Schedule & Completion date	
A	<ul style="list-style-type: none"> • Instead of writing specific date against delivery offered, bidder shall commit delivery period in number of days / weeks/ months to suit the delivery period indicated in the enquiry. • Commencement of delivery period shall be reckoned from the date of PO / LOI or any other agreed milestone. • Seller shall deliver the goods in the manner and schedule agreed under the Purchase order. • Goods shall be delivered within contractual period or any extension thereof, if any, granted by the Purchaser. • If delivery is linked to approval of documents, time for submission of such documents to be indicated and delivery period to be indicated from approval of documents. This delivery schedule will be considered for processing delivery extension, wherever applicable. • BHEL reserves the right to cancel the order if material is not delivered within PO scheduled delivery. • In case of unsatisfactory performance on quality / delivery BHEL will have right to discontinue the contract in part or full. 	
B	In case of foreign supplies, the date of Bill of Lading (B/L) or AWB shall be taken as actual date of delivery.	
C	In case of Indigenous bidders, the date of delivery at named destination in India shall be taken as contractual delivery completion date where delivery terms are FOR destination. In case of 'Ex-works' delivery terms, the date of LR / RR shall be the contractual delivery completion date.	
7	Transit Insurance	
	Except where delivery terms are agreed on CIF basis for Imports & FOR destination basis for indigenous purchases, transit insurance will be covered by BHEL under its Open Marine Transit Insurance Policy. Seller shall inform dispatch particulars with value of consignment to the Purchaser within 07 days of dispatch for BHEL to arrange insurance coverage in its policy. Failure on the part of seller to inform dispatch particulars will make him liable to pay for any transit damages / losses suffered by the Purchaser.	
8	Force Majeure	
	<p>Notwithstanding anything contained in the contract, neither the Seller nor the Purchaser shall be held responsible for total or partial non-execution of any of the contractual obligations, should the obligation become unreasonably onerous or impossible due to occurrence of a 'Force Majeure' which directly affects the obligations to be performed by the Purchaser or the Seller; Such events include war, military operations of any nature, blockages, revolutions, insurrections, riots, civil commotions, insurgency, sabotage, acts of public enemy, fires, explosion, epidemics, quarantine restrictions, floods, earthquake, or acts of God, restrictions by Govt. authorities; over which the Seller or the Purchaser has no control.</p> <p>The party claiming to be affected by force majeure shall notify the other party in writing without delay, within two weeks on the intervention and on the cessation of such circumstance. Extension of time sought by the Seller along with supporting evidence and so granted by the Purchaser for the supply/ work affected, if any, shall not be construed as waiver in respect of remaining deliveries. Rescheduling of deliveries on account of force majeure conditions, if so agreed by the Purchaser, will not entail the Seller to claim any increase in the price on whatsoever account.</p> <p>Notwithstanding above provisions, Purchaser shall reserve the right to cancel the order/ Contract, wholly or partly, in order to meet the overall project schedule and make alternative arrangements. If deemed necessary, Purchaser may takeover partly processed material at a mutually agreed price.</p>	
9	LD/Penalty for delayed performance.	
A	<p>Subject to force majeure conditions,</p> <p>I. LD shall be 0.5 % of the total order value per week of delay or part thereof subject to a maximum of 10% of the total order value.</p>	



GENERAL TERMS AND CONDITIONS OF ENQUIRY

GTC/FSIP/PUR/01 Rev:01

	<p>II. In case of staggered delivery schedule, LD shall be 0.5 % of the undelivered portion per week of delay or part thereof subject to a maximum of 10% of the total order value. However, even if a staggered delivery schedule for Capital Machine / BOPs is agreed, the LD cap will be levied on total order value and not undelivered portion of the order value.</p> <p>III. In case of any amendment/ revision, the LD shall be linked to the amended / revised PO value.</p> <p>Any deviation from the above LD clause shall be specified separately in the NIT. Any loading on LD/penalty clause shall be to the extent to which it is not agreed to by the bidder (at offered value). The same shall be intimated separately prior to price bid opening.</p> <p>Note: “Recovery of LD will include GST as applicable”.</p>
	In case the contractually agreed delivery date falls on a holiday in BHEL FSIP Jagdishpur, the next working day shall be taken as contractual delivery date for compliance and applicability of LD / penalty.
B	Risk Purchase
	If the material is not supplied within the agreed delivery period, BHEL reserves the right to cancel the order and purchase the material from alternate source (s) at the Risk and Cost of the Seller. In such an event, it shall be obligatory on the part of seller to make good any loss suffered by the purchaser.
10	Indian Agents and Agency commission
A	BHEL prefers to deal directly with Foreign vendor, wherever required, for procurement of Goods. However if the Foreign Principal desires to avail services of an Indian Agent, then the Principal should ensure compliance to "regulatory guidelines" which will require submission of an agency agreement.
B	The CFR / CIF price quoted will be deemed to be inclusive of Indian Agency commission. Agency commission as disclosed by the bidder in his quoted CFR / CIF price will be paid in Indian Rupees on receipt & acceptance of Materials or it's installation at destination, as the case may be. The lower of the 'TT buying rate prevailing on the date of technical bid opening or price bid opening shall be considered for computation of Agency commission.
C	In a tender either the Indian Agent on behalf of Principal / OEM or the Principal / OEM itself can bid, but both cannot bid simultaneously for same item / product in the same Tender. In case bids are received from both the Principal / OEM and the agent, bid received from the agent will be ignored.
D	If an agent submits Bid on behalf of the Principal / OEM, the same agent shall not submit bid on behalf of another Principal / OEM in the Tender, for the same Item / Product.
11	Documentation:
A	Indigenous Purchase
	Seller shall arrange to send to the consignee, Original Tax invoice (Buyer's copy and duplicate for Transporter), Commercial invoice in duplicate, consignee copy of LR & 2 sets each of Packing list, Test certificate, Guarantee / Warranty certificate, O & M manuals (where applicable), immediately on despatch of the goods. The distribution of such documents will be specified in the Purchase order.
B	Foreign Purchase — Imports
	<p>A. Vendor to share immediately Bill of lading with Import Invoice and packing list of material at mssea@bhel.in and incorporate following detail in the bill of lading:</p> <p>a. Import & export Code (IEC) of importer;</p> <p>b. GST Identification No (GSTIN) of importer;</p> <p>c. Official email id of importer (to be used for correspondence by shipping lines and Customs) – mssea@bhel.in to be included.</p> <p>B. Seller shall send 1 set of following documents, in English, within 7 days of B/L date / 1 day of AWB date by courier to the Purchaser.</p> <p>1. Express / Original 'Clean on board' Bill of Lading / AWB.</p> <p>2. One set of Commercial Invoice, Packing list indicating container-wise Gross weight, Net weight, CBM volume, No. of packages with Dimensions of each package.</p>



GENERAL TERMS AND CONDITIONS OF ENQUIRY

GTC/FSIP/PUR/01 Rev:01

	<p>3. Original Certificate of Country of Origin issued by Chamber of Commerce.</p> <p>4. One set of Original Test Certificates and O&M Manual where called for.</p> <p>5. Fumigation / Phyto Sanitary Certificate wherever cargo is packed in wooden packing or packing of plant origin material is used.</p> <p>6. Supplier should additionally forward 2 sets of original documents mentioned at point 1 to 5 along with original bill to Lading through any international courier service / registered airmail or AWB by captain's mail within three days of obtaining the same directly to the following:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>(i) AGM (M.S) Regional Operations Division BHEL 14th Floor Centre-1 World Trade Centre, Cuffe Parade Colaba, Mumbai 400 005 INDIA E-mail: mssea@bhel.in</p> </td> <td style="width: 50%; vertical-align: top;"> <p>(ii) SDGM (FIN) Administrative Bldg. BHEL, FSIP, IA Jagdishpur Amethi, 227817, UP, India E-mail : shashi.kumari@bhel.in</p> </td> </tr> </table> <p>And confirm forwarding details to DGM (MM), BHEL, FSIP, IA Jagdishpur 227817, Amethi , UP, India at nasaifi@bhel.in /pk Yadav@bhel.in/vjain@bhel.in.</p> <p>7. In case the Seller decides to negotiate all 3 originals of B/L / AWB along with all original documents through negotiating Bank, non-negotiable documents (NNDs) consisting of copy of B/L / AWB & documents mentioned at Sl. no. 11- B2 to B5 will be sent by e-mail to the Purchaser at his e-mail address given in the PO with one copy to be mailed at nasaifi@bhel.in & vjain@bhel.in (for sea shipment). Other documents, as required, will be separately indicated in the Purchase Order. Additional expenditure, if any, incurred by the Purchaser by way of detention / demurrage, resulting out of delay attributable to the Seller in providing Negotiable documents, will be recovered from the Seller.</p> <p>In case any discrepancy is raised by bankers / BHEL with respect to documents submitted, vendor to facilitate clearance of goods through Delivery Order.</p>	<p>(i) AGM (M.S) Regional Operations Division BHEL 14th Floor Centre-1 World Trade Centre, Cuffe Parade Colaba, Mumbai 400 005 INDIA E-mail: mssea@bhel.in</p>	<p>(ii) SDGM (FIN) Administrative Bldg. BHEL, FSIP, IA Jagdishpur Amethi, 227817, UP, India E-mail : shashi.kumari@bhel.in</p>
<p>(i) AGM (M.S) Regional Operations Division BHEL 14th Floor Centre-1 World Trade Centre, Cuffe Parade Colaba, Mumbai 400 005 INDIA E-mail: mssea@bhel.in</p>	<p>(ii) SDGM (FIN) Administrative Bldg. BHEL, FSIP, IA Jagdishpur Amethi, 227817, UP, India E-mail : shashi.kumari@bhel.in</p>		
C	General		
	<p>1. For Hazardous chemicals, the materials safety data sheet (MSDS) is to be submitted.</p> <p>2. All certificates as called must be sent. BHEL may test any goods supplied and their decision is final irrespective of supplier's certificates. If test certificate and guarantee certificate are not received along with the document and stipulated in these specifications, BHEL reserves the right to get the material tested and recover the expenses from the supplier without awaiting supplier's confirmation</p>		
12	Pricing Terms:		
	Prices once quoted shall remain firm within the validity or any extension thereof for placement of order, till complete execution of the order, without any escalation / increase for any reason, whatsoever, unless specifically provided for in the Enquiry & PO. In case of foreign vendors, the quoted price shall be taken as inclusive of Third Party Inspection and testing charges as called for in the NIT.		
13	Price Validity :		
	Unless stated otherwise in the enquiry, offer shall be valid for a period of 90 days from the date of Techno- commercial (Part-I) bid opening date.		
14	Taxes & Duties - Indigenous Purchase:		
A	Vendor to ensure timely remittance of SGST, CGST, IGST as applicable in time as per law.		
B	Vendor to ensure compliance to filing of monthly GST sales return including BHELs supplies by 10 th of next calendar month in the online GST portal wherever applicable.		
C	Vendors to declare filing of timely returns and GST remittance / likely remittance / ITC adjustment along with invoice.		
D	Vendor to submit invoices compliant with GST invoice Rules		
E	Vendors to comply with all statutory provisions as may be applicable at the time of despatch / sale. Any additional financial liability to BHEL on account of non-compliance by vendors shall be borne by them and shall be adjusted / recovered from the vendors. BHEL reserves the right to review the existing offers / contracts for any revision in terms, which may arise due to change in any statutory provisions to ensure that the benefit accrues to BHEL.		



GENERAL TERMS AND CONDITIONS OF ENQUIRY

GTC/FSIP/PUR/01 Rev:01

F	Vendor to ensure TAX INVOICE submission along with consignment
G	<p>In respect of cases where the liability to discharge GST is on BHEL under reverse charge mechanism, vendors have to ensure timely submission of invoices and delivery of material / services to BHEL, so that there is no mismatch on both activities. In case there is any additional financial liability on BHEL on account of default on the part of the vendor on submission or delivery of material / services the same shall be passed on to them.</p> <p>In respect of free issue material by BHEL, vendors have to return the processed material within the time line as per the provisions of GST. In case of any additional tax liability on BHEL on account of non-compliance by the vendor, the additional financial implications on BHEL shall be passed on to the vendor.</p>
H	Vendors to provide the applicable HSN / SAC codes as called for in the enquiry
15	Taxes & Duties - Foreign Purchase — Imports
	The offered prices shall be inclusive of all the Taxes and duties as applicable in the country of bidder / country of dispatch for the quoted CFR / CIF price.
16	Payment Terms-
A	Indigenous: 100% payment in 90 days of receipt (45 days for MSE including NSIC / Udyog Aadhar/UDYAM/EM-II/DIC along with valid CA certificate, registered suppliers as per relevant act in force), subject to acceptance of material at BHEL, on direct presentation of the documents. In case of despatch of material to site directly, site certification for receipt of materials is required unless otherwise provided for in the PO.
B	Foreign: 100% direct Payment payable on 90 th day of B/L / AWB.
	<p>Any deviation from the above payment terms, if accepted (by BHEL), shall be loaded as per below point:</p> <p>(i) 'Base rate of SBI (as applicable on the date of bid opening; Techno-commercial bid opening in case of two part bids) + 6%' shall be considered for loading for the period of relaxation sought by bidders.</p> <p>(ii) Wherever LC payment terms are not offered in NIT and the same is insisted by bidder(s), all LC related bank charges to be incurred by BHEL shall also be loaded.</p> <p>(iii) In case of deviation w.r.t. LC payment terms offered in NIT, the loading shall be done for all LC related bank charges to be incurred by BHEL.</p>
C	<p>Foreign vendors to submit declaration of Permanent Establishment and Business Connection (PEBC) for remittances purpose. Declaration to be submitted in formats in either Annexure A or B whichever is applicable as per their transaction entered into with BHEL.</p> <p>In the absence of certificates from the vendor, withholding tax at applicable rates along with surcharge and cess will be recovered at the time of remittance to the vendor.</p>
D	Foreign vendors to submit Tax Residency Certificate (TRC) & Form 10 F (for obtaining DTAA benefits) as per Annexure C in respect of services. The TRC (tax residency certificate) is to be issued by the authorities of the government of vendor's country. If the informative part of the format (other than residency) is not furnished by the authorities the same may be furnished by the vendor as a declaration.
17	Inspection of Goods
A	The Seller shall give adequate notice, of 1 week or as mutually agreed period, in writing to the Purchaser (in case Customer inspection is involved) or BHEL appointed TPIA about the date and place at which the goods will be ready for inspection/ testing, as provided for in the contract.
B	<p>Purchaser or his authorized representative shall be entitled to carry out inspection of material and Workmanship / Surveillance Audit at Seller's premises or at his sub-contractor's premises at all reasonable times during execution of contract; Such inspection, examination and testing, if made, shall not absolve the Seller from his obligations under the contract.</p> <p>Wherever required, BHEL may carry out testing at BHEL's testing Lab and in case of any rejection during such testing, replacement / rectification, as required, will have to be done by Supplier.</p> <p>If BHEL carries out any rectification of such rejected material, such cost will be recovered from Supplier's Bills.</p> <p>In case of Customer inspection as Supplier's Works, inspection clearance to be obtained from Customer and submitted to BHEL.</p>



GENERAL TERMS AND CONDITIONS OF ENQUIRY

GTC/FSIP/PUR/01 Rev:01

C	BHEL's representative from unit or Corporate Quality (CQ) is authorised to carry out audits along with TPIA at vendor's works before clearing the items for despatch.
D	All costs related to inspections and re-inspections shall be borne by the Seller. In case of inspection by BHEL and / or BHEL's customer, the cost of to & fro passage and Boarding & Lodging shall be borne by the Purchaser / Customer, unless otherwise specifically agreed. In case of foreign vendors, the cost of third party inspection, where called for, shall be deemed to be included in the quoted price. Seller shall be responsible to provide assistance such as labour, materials, electricity, fuels, stores, apparatus, instruments at his cost, as may be required and as may be reasonably demanded to carry out such tests effectively.
E	<p>REJECTION: If any goods are rejected, BHEL shall be at liberty to take action as per following at the risk and cost of supplier:</p> <p>a) Allow the supplier, wherever mutually agreed, to rectify the rejected goods at BHEL's works within reasonable time as fixed by BHEL.</p> <p>or</p> <p>b) Allow the supplier to make free replacement within a specified period. Rejected goods can be lifted by the supplier there after.</p> <p>or</p> <p>c) In case payment has been done, allow supplier to refund equivalent value of rejected material by NEFT / RTGS or furnish Bank Guarantee for same amount before lifting the rejected goods. Fresh replacement shall be regulated as per terms and condition of the original Purchase Order.</p> <p>In case payment has not been done, allow the supplier, wherever mutually agreed, to rectify the rejected goods at supplier's works within reasonable time as fixed by BHEL.</p> <p>or</p> <p>d) Take alternate procurement action from elsewhere and recover the difference in total cost to BHEL including services, if any, incurred by BHEL in this regard from the supplier. The supplier shall not be entitled to any gain on repurchase.</p> <p>or</p> <p>e) Terminate the contract either in part or in whole at the discretion of BHEL and recover the loss, if any, from the supplier.</p> <p>or</p> <p>f) Any goods rejected by BHEL must be removed by the supplier after making payment through NEFT / RTGS within 45 days from the date of intimation of rejection or 30 days after receipt of the intimation of rejection whichever is earlier. If vendor fails to lift or allow despatch of rejected material at his cost within 90 days from the intimation of rejection, his claim on rejected material shall cease.</p>
	<p>REJECTION: The supplier shall arrange replacement/repair within one month from the date of rejection intimation upon failure on supplier's part to comply. BHEL will take whatever appropriate action they may think fit in addition to repair/return of rejected material at the cost and risk of the supplier.</p>
18	Guarantee / Warranty and corresponding Repairs / Replacement of Goods
	<p>Manufacturer's works test / infection certificates shall be furnished along with the guarantee that material conforms strictly to the specification for general & special conditions as laid down in the purchase order. Goods shall comply with the specifications for material, workmanship and performance. The warranty shall be for a period of 12 months from the date of receipt. If the delivery is found non-compliant during the warranty period, leading to rejection, the Seller shall arrange free replacement / repair of goods, within one month from the date of intimation or any mutually agreed period. The rejected goods shall be taken away by the Seller at his cost and replaced on Delivered Duty Paid (DDP) (FOR - BHEL Stores / designated destination basis) within such period. In the event of the Seller's failure to comply, Purchaser may take action as appropriate, including Repair / Replenish rejected goods & disposal of rejections, at the risk & cost of the Seller.</p> <p>In case the defects attributable to Seller are detected during processing of the goods at purchasers/ his subcontractor's works, the Seller shall be responsible for free replacement / repair of the goods as required by the purchaser.</p>
19	Evaluation and Loading Criteria:



GENERAL TERMS AND CONDITIONS OF ENQUIRY

GTC/FSIP/PUR/01 Rev:01

	<p>Evaluation of the tender shall be on the basis of delivered cost, i.e. 'total cost to BHEL' w.r.t the technical scope and commercial conditions finalized after techno-commercial clarifications (after considering, inter alia, Customs Duty and GST / Other taxes as applicable). Exchange rate (TT selling rate of State Bank of India) applicable on the date of Part-I bid opening shall be considered for evaluation of foreign bids. If the relevant day happens to be a bank holiday in India, then the FOREX rate as on the previous bank working day shall be taken for evaluation.</p> <p>Foreign suppliers shall ensure that the benefits as applicable under Comprehensive Economic Partnership Agreement (CEPA) with Government of India are disclosed in the bid & relevant documents such as Certificate of Country of Origin, issued by the appropriate authority in the country of Export is provided by the vendor along with dispatch documents. Bids shall be evaluated with such applicable benefits. In the event of Seller failing to provide appropriate documents for Purchaser to avail disclosed concessional duty benefits in India, financial loss, so incurred, will be to the Seller's account.</p>
	The evaluation currency for this tender shall be INR.
20	Variation of orders
	No variation to the Purchase order is permitted unless authorised in writing and signed by or on behalf of purchase executive, BHEL Jagdishpur.
21	Sub-contract
	BHEL's order or part there off, if further to be subcontracted in exceptional circumstances the details of subcontracting and to whom to be subcontracted shall be furnished to BHEL and written permission shall be obtained from BHEL. However, it shall not absolve the supplier of the responsibility of fulfilling BHEL order requirements.
22	Recovery / deductions of amount from supplier
	<p>A) Any amount on account of recovery from consignor / supplier under any condition shall be liable to be adjusted against any amount payable to the consignor / supplier against bills.</p> <p>B) For any deficiency in supplies where deduction is involved, an amount as decided by BHEL, shall be deducted from supplier's bills.</p>
23	Safety clause for Purchase Orders
	<p>The vendors shall maintain and ensure sufficient safety measures as required for inspections and test like HV test. Pneumatic test, Hydraulic test Spring test, Bend test, Material handling and safe working environment etc. to enable Inspection Agency for performing inspection.</p> <p>The vendor shall ensure that all the safety precautions specified in factories Act 1948 chapter-IV Section-21 to 41 are complied with respect to equipment's to be inspected.</p> <p>If any test equipment is found not complying with proper safety requirement, then the inspection agency may withhold inspection, till such time the desired safety requirements are met.</p>
24	Non-Disclosure Agreement
	<p>All Drawing and technical documents relating to the product or it's manufacture submitted by one party to the other, prior or subsequent to the formation of contract, shall remain property of the submitting party. Drawing, technical documents or other technical information received by one party, shall not without the consent of the other party, be used for any other purpose than that, for which they were provided. Such technical information shall not without the consent of the submitting party, otherwise be used or copied, reproduced, transmitted or communicated to a third party. Patterns supplied by BHEL will remain BHEL's property which shall be returned by the bidder on demand to BHEL. Bidder shall in no way share or use such intellectual property of BHEL to promote his own business with others. <u>BHEL reserves the right to claim damages from the bidder, or take appropriate penal action as deemed fit against the bidder, for anv infringement of the provisions contained herein.</u></p>
	<p>DRAWINGS, PATTERNS & TOOLS: All drawings, patterns & tools supplied by BHEL or made at BHEL's expense are BHEL's property. These cannot be used or referred to any other party and must only be used in the execution of BHEL's orders. These should be preserved at the supplier's cost for a period of not less than 5 years. Patterns & tools should be returned to BHEL within 90 days of issue of the same.</p>
25	Settlement of Disputes & Arbitration
A	All questions / interpretations regarding subject matter of the Contract shall be decided by the Purchaser on the request of the Seller and the decision of the Purchaser shall be final.
B	In case of dispute, steps shall be taken by the parties to the contract to settle the same through negotiations.



GENERAL TERMS AND CONDITIONS OF ENQUIRY

GTC/FSIP/PUR/01 Rev:01

C	In case, dispute is not settled in negotiations, it shall be referred to Conciliator appointed by the competent authority of the Purchaser.
D	<p>Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract, then, either Party may, by a notice in writing to the other party refer such dispute or difference to the sole arbitration of an arbitrator appointed by Head of the BHEL Unit/Region/Division issuing the Contract. The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties. Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or Statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be Lucknow.</p> <p>The cost of arbitration shall be borne as per award of the Arbitrator.</p> <p>Subject to the arbitration in terms of Clause above, the Courts at Lucknow shall have exclusive jurisdiction over any matter arising out of or in connection with this Contract.</p> <p>Notwithstanding the existence or any dispute or differences and / or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.</p>
	<p>In case of Contract with Public Sector Enterprise (PSE) or Government Department, the following shall be applicable: In the event of any dispute or difference relating to the interpretation and application of the provisions of the Contract, such dispute or difference shall be referred by either Party for arbitration to the sole arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the arbitrator shall be binding upon the Parties to the dispute, provided, however, any Party aggrieved by such award may make further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so authorized by Law Secretary, whose decision shall bind the Parties hereto finally and conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.</p>
E	The Seller shall continue to perform the contract, pending settlement of dispute(s).
26	Applicable Laws and Jurisdiction of Courts
	Indian laws both substantive and procedural, for the time being in force, including modifications thereto, shall govern the Contract including Arbitration proceedings. The competent Courts at Lucknow in the State of Uttar Pradesh, India shall have sole jurisdiction.
27	RIGHT OF REJECTION /NON- PLACEMENT OF PO: BHEL reserves the right to accept the offers in part or in full, or cancel the Tender enquiry without assigning any reason.
28	Performance Bank Guarantee (PBG) / Security Deposit (SD)-(If applicable)
A	Wherever PBG/SD (covering equipment / system / work performance guarantee) is called for in the Notice Inviting Tender (NIT) deviation shall not be accepted.
B	Bank Guarantee wherever called for, shall be in the BHEL prescribed format. In case the order is to be placed in foreign currency, the BG must also be in Foreign currency, so specified by the Purchaser.
C	Wherever Security Deposit (covering contract performance) is called for in the NIT, deviation shall not be accepted.
D	Composite 'Contract Performance Bank Guarantee' of matching value / validity, where both Security Deposit and Performance Bank Guarantee are required, shall not be construed as deviation.
E	Wherever the contract is for supply of Goods processed on labour basis from BHEL supplied materials, the materials shall be issued against a suitable Bank guarantee as specified in the Enquiry.
29	Benefits earmarked for Purchase from Micro & Small Enterprises (MSEs) — Indigenous Purchase
A	MSE bidders shall submit along with bid relevant documents w.r.t. their respective MSE status as per extant norms. Date to be reckoned for determining the deemed validity will be the last date of Technical bid submission. Non- submission of such document will lead to consideration of their bid, at par with other bidders and MSE status of such bidders shall be shifted to Non- MSE supplier till the supplier submit these documents.



GENERAL TERMS AND CONDITIONS OF ENQUIRY

GTC/FSIP/PUR/01 Rev:01

B	<p>In tender, participating MSEs quoting price within price band of L1+15% shall also be allowed to supply a portion of requirement by bringing down their price to L1 price in a situation where L1 price is from someone other than a MSE and such MSE shall be allowed to supply up to 25% of total tendered value. In case of more than one such MSE, the supply shall be shared proportionately. A quantum of 6.25% out of 25% quantity, so earmarked, will be reserved for MSE's owned by SC / ST entrepreneurs who submit their bid with relevant documents provided that in event of failure of such MSE(s) to participate in tender process or meet tender requirements and L1 price, 6.25% sub-target for procurement earmarked for MSE(s) owned by SC or ST entrepreneurs shall be met from other MSE(s).</p> <p>Special provision for Micro and small enterprises owned by Women in following cases: - 3% reservation for women owned MSEs under following conditions</p> <ol style="list-style-type: none"> i. In case of Proprietary MSE, proprietor is woman. ii. In case of partnership MSE, the woman partner is holding at least 51% share in the unit. iii. In case private limited companies, at least 51% share is held by woman promoters. <p>In case of indivisible tender the full quantity shall be awarded to L1.</p>
C	<p>If an enterprise falling under MSE category as defined in the MSMED Act 2006, graduates to a higher category from its original category or beyond the purview of the Act, it shall continue to avail all non-tax benefits of its original category notified by the Ministry of Micro, Small and Medium Enterprise for a period of three years from the date of such graduation to the higher category.</p>
D	<p>MSE suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either EM II certificate having deemed validity (five years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with attested copy of a CA certificate (As per BHEL Format, where deemed validity of EM II certificate of five years has expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of bid opening (Part 1 in case of two part bid). Non submission of such documents will lead to consideration of their bid at par with other bidders. No benefits shall be applicable for this enquiry if any deficiency in the above required documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazetted officer</p>
30	<p>Integrity Pact (IP) — Independent external monitors (IEM) For tenders in which integrity pact is applicable, following points stand valid :</p>
A	<p>IP is a tool to ensure that activities and transactions between the company and its bidders / contractors are handled in a fair, transparent and corruption free manner. A panel of Independent External Monitors (IEMs) have been appointed to oversee implementation of IP in BHEL.</p> <p>The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory who signs in the offer) along with techno commercial bid. Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this pact would be a preliminary qualification.</p> <p>Name : ----- Address : ----- mail : -----</p> <p style="text-align: right;">} As indicated in NIT / enquiry :201__</p>
B	<p>Please refer section 8 of the IP for roles and responsibilities of IEMs. In case of any complaint arising out of tendering process, the matter may be referred to the IEM mentioned in the tender.</p> <p>NOTE: No routine correspondence shall be addressed to the IEM (phone / post / e-mail) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarifications / issues shall be addressed directly to the tender issuing (procurement) department.</p>
31	<p>Fraud Prevention Policy : The Bidder along with its associate / collaborators / sub-contractors / sub-vendors / consultants / service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website www.bhel.com and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.</p>
32	<p>GSTN nos. of vendors as well as GSTN No of BHEL must be mentioned on the invoices/bills of the materials. Please note that correct HSN code as well as rate of GST be mentioned in the invoice/bills.</p>
33	<p>BHEL FSIP GSTIN Reg. No: 09AAACB4146P22C State Code: 09 (Uttar Pradesh)</p>



GENERAL TERMS AND CONDITIONS OF ENQUIRY

GTC/FSIP/PUR/01 Rev:01

34	<p>(a) Right of Acceptance: BHARAT HEAVY ELECTRICALS LIMITED JAGDISHPUR reserves the right to reject any or all the bids/quotations without assigning any reason thereof. BHEL also reserves the right to increase or decrease the tendered quantities. Bidders should be prepared to accept order for reduced quantity without any extra charges.</p> <p>(b) Right of Rejection /Non- Placement of PO: BHEL reserves the right to accept the offers in part or in full or cancel the Tender enquiry/PO without assigning any reason.</p> <p>(c) Wherever BHEL business interest will contradict with any supplier, offer of that supplier may be rejected.</p>
35	<p>Integrity Commitment: The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL website www.bhel.com. Integrity commitment, performance of the contract and punitive action thereof :</p>
A	<p>Commitment by BHEL : BHEL commits to take all measures necessary to prevent corruption in connection with the tender process and execution of the contract. BHEL will during the tender process treat all bidder's in a transparent and fair manner, and with equity.</p>
B	<p>Commitment by bidder / Supplier / Contractor :</p> <ul style="list-style-type: none"> - The bidder / supplier / contractor commit to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under any provision of the Indian Penal code, 1860 or any other law in force in India. - The bidder / supplier / contractor will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and shall adhere to relevant guidelines issued from time to time by govt. of India / BHEL - The bidder / supplier / contractor will perform / execute the contract as per the contract terms & conditions and will not default without any reasonable cause, which causes loss of business / money / reputation to BHEL.
C	<p>If any bidder / supplier / contractor during pre-tendering / tendering / post tendering / award / execution / post execution stage indulges in mal-practices, cheating, bribery, fraud or / and other misconduct or formation of cartel so as to influence the bidding process or influence the price or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India, then action may be taken against such bidder / supplier / contractor as per the extant guidelines of the company available on www.bhel.com and / or under applicable legal provisions.</p>
d	<p>Defaulter suppliers shall be treated as per Guidelines for Suspension of the Business Dealing with suppliers/contractors.</p>
36	<p>Deviation: Any of the terms and conditions not acceptable to supplier, shall be explicitly mentioned in the tender. Otherwise, it will be treated as that all those terms and conditions as mentioned in the tender are acceptable in Toto.</p>
37	<p>Benefits earmarked to suppliers for Purchase under ' MAKE IN INDIA'</p>
	<p>Compliance to MAKE IN INDIA circular issued by GOI: "For this procurement, the local content to categorize a supplier as a Class I local supplier / Class II local supplier / Non-Local Supplier and purchase preference to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part II bids against this NIT" (Format Attached).</p>
	<p>As part of minimizing import content, Government of India, vide order no P-45021/2/2017-B.E.-II dated 15.06.2017, under the subject – Public Procurement (Preference to Make in India) -- has set the initiatives to encourage and promote indigenously manufactured goods within India and services provided by sources within India. . In line with this, bidders who manufacture the goods and provide services within India (otherwise referred as local suppliers) are given purchase preference and are entitled to benefits in the tender</p>
A	<p>Definitions</p>
(i)	<p>Local content means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value , in percent . Presently, the minimum local content required is</p>



GENERAL TERMS AND CONDITIONS OF ENQUIRY

GTC/FSIP/PUR/01 Rev:01

	50%. The nodal ministry may prescribe a higher or lower percentage in respect of any particular item and may also prescribe the manner of calculation of local content.
(ii)	Local supplier means a supplier or service provider whose product or service offered for procurement meets the minimum local content as prescribed
(iii)	Margin of Purchase Preference means the maximum extent to which the price quoted by a local supplier may be above the L1 for the purpose of purchase preference. Presently the margin of Purchase preference is 20%.
B	Conditions under which preference is given
(i)	In procurement of goods in respect of which the Nodal ministry has communicated that there is sufficient local capacity and local competition, and where the estimated value of procurement is Rs 50 lakhs or less, only local suppliers shall be eligible. If the estimated value of procurement of such goods is more than Rs 50 lakhs, provisions of 37(B) (ii) and 37(B)(iii) shall apply.
(ii)	If the procurement of goods are not covered by 37(B)(i) and are divisible in nature, the following procedure shall be followed :
a	If L1 is a local supplier, the order for full quantity shall be awarded to local supplier
b	If L1 bid is not from a local supplier, 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the local suppliers, shall be invited to match the L1 price for the remaining 50% quantity, subject to the local supplier's quoted price falling within the margin of purchase preference, and the order for that quantity shall be awarded to such local supplier subject to matching the L1 price. In case such lowest eligible local supplier fails to match the L1 price or accepts less than offered quantity, the next higher local supplier within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and the order shall be awarded accordingly. In case some quantity is still left uncovered on local suppliers, then such balance quantity may also be ordered on the L1 bidder.
iii	If the procurement of goods are not covered by 37(B)(ii) and are not divisible in nature, and in procurement of services where the bid is evaluated on the price alone, the following procedure shall be followed :
a	If L1 is a local supplier, the order shall be awarded to local supplier
b	If L1 bid is not from a local supplier, then the lowest bidder among the local suppliers, will be invited to match the L1 price, subject to the local supplier's quoted price falling within the margin of purchase preference, and the order shall be awarded to such local supplier subject to matching the L1 price. In case such lowest eligible local supplier fails to match the L1 price, the local supplier with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on, and the order shall be awarded accordingly. In case none of the local suppliers within the margin of preference match the L1 price, then the order may be awarded to the L1 bidder.
C	Exemption of small purchases
	Notwithstanding anything contained at clause 37B above, procurements where the estimated value of procurement is less than Rs 5 lakhs are exempt and purchase preference shall not be accorded in such cases.
D	Verification of local content
(i)	The local supplier, at the time of tender, bidding or solicitation, shall be required to provide self-certification that the item offered meets the minimum local content and shall give details of the location(s) at which the local value addition is made.
(ii)	In cases of procurement for a value in excess of Rs 10 crores, the local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.



GENERAL TERMS AND CONDITIONS OF ENQUIRY

GTC/FSIP/PUR/01 Rev:01

(iii)	False declarations shall be in breach of code of integrity and shall invite action as per guidelines for Suspension of Business dealings with Suppliers
E	In case of any disputes / clarifications, the extant guidelines of Government of India shall prevail.
38	Model Clauses for Tenders
I	Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.
II	"Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
III	"Bidder from a country which shares a land border with India" for the purpose of this Order means: -
a	An entity incorporated, established or registered in such a country; or
b	A subsidiary of an entity incorporated, established or registered in such a country; or
c	An entity substantially controlled through entities incorporated, established or registered in such a country; or
d	An entity whose beneficial owner is situated in such a country; or
e	An Indian (or other) agent of such an entity; or
f	A natural person who is a citizen of such a country; or
g	A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
IV	The beneficial owner for the purpose of (iii) above will be as under:
1	In case of a company or limited liability Partnership, the beneficial owner is the natural person (s) who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means. Explanation –
A	"Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. Of shares or capital or profits of the company
B	"Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholder's agreements of voting agreements;
2	In case of a partnership firm, the beneficial owner is the natural person (s) who, whether acting alone or together, or through one or more juridical of capital or profits of the partnership;
3	In case of an unincorporated association or body of individuals, the beneficial owner is the natural person (s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property of capital of profits of such association or body of individuals;
4	Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
5	In case of trust, the identification of beneficial owner (s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
V	An agent is a person employed to do any act for another, or to represent another in dealings with third person.
39	Conciliation
	BHEL and bidder agree that if at any time (whether before, during or after the arbitral or judicial proceedings), any disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the terms & conditions of order, which the parties are unable to settle mutually), arise inter-se the parties, the same may, be referred by either party to Conciliation to be



GENERAL TERMS AND CONDITIONS OF ENQUIRY

GTC/FSIP/PUR/01 Rev:01

	<p>conducted through Independent Experts Committee to be appointed by competent authority of BHEL from the BHEL panel of Conciliators</p> <p>Notes:</p> <ol style="list-style-type: none"> 1. No serving or a retired employee of BHEL/Administrative Ministry of BHEL shall be included in the BHEL Panel of Conciliators. 2. Any other person(s) can be appointed as Conciliator(s) who is/are mutually agreeable to both the parties from outside the BHEL Panel of Conciliators. <p>The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof. The details of Conciliations shall be governed by the BHEL Conciliation scheme 2018.</p>
40	Clause for Suspected Cartel Formation
	The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines.
41	<i>Important Note: The bidder will, when presenting his bid, declare whether other family firms or sister concern affiliates/subsidiary firms are participating in same tender, so as to eliminate the possibility of cartel formation. Format for declaration is attached.</i>
42	Submission of Performance Security for execution of the contract
	Bidder agrees to submit performance security required for execution of the contract within the time period mentioned. In case of delay in submission of performance security, enhanced performance security which would include interest (SB/ rate + 6%) for the delayed period, shall be submitted by the bidder. Further, if performance security is not submitted till such time the first bill becomes due, the amount of performance security due shall be recovered as per terms defined in NIT I contract, from the bills along with due interest.
43	<u>If supplier does not mention against any terms of "General Terms and conditions", "Special/supplementary terms and conditions" and NIT terms. It shall be summarily concluded that respective terms are acceptable to supplier and no further clarification shall be asked.</u>

PREFERENCES/BENEFITS FOR MSEs:

Following preferences/benefits shall be given to MSEs in line with Public procurement policy for Micro and Small Enterprises (MSEs), 2012:

1. The tender documents shall be issued free of cost to MSEs.
2. MSEs are exempted from payment of Earnest Money Deposit (EMD).
3. In tender, Micro and Small Enterprises quoting within the price band of L1+15% shall be allowed to supply the requirement up to 25% of the tender quantity subject to condition that such Enterprises bring down their price to L1 price where L1 price is from other than a Micro and Small Enterprise. If L1 offer is from a Micro / Small Enterprise, this provision will not be applicable. In case more than one Micro and Small Enterprise is there within this span, the supply shall be shared proportionately to the tender quantity. For availing the advantage of L1+15%, bidder to provide the MSME certificate prior to price bid opening.

Under above following provision is categorised as below:

- **Special provision for Micro and small enterprises owned by SC or ST: -**

Sub target of 25% (i.e. 6.25% out of 25%) would be earmarked for procurement from Micro and Small Enterprises owned by the Scheduled Caste or Scheduled Tribe Entrepreneurs provided that in event of failure of such Micro and Small Enterprises to participate in the tender process or meet the tender requirements and the L1 price, the 6.25% sub-target for procurement ear-marked MSE owned by Scheduled Caste or Scheduled Tribe Entrepreneurs shall be met from other MSE Enterprises.

- **Special provision for Micro and small enterprises owned by Women in following cases: - 3% reservation for women owned MSEs under following conditions**
 - i. In case of Proprietary MSE, proprietor is woman.
 - ii. In case of partnership MSE, the woman partner is holding at least 51% share in the unit.
 - iii. In case private limited companies, at least 51% share is held by woman promoters.

MSE suppliers can avail the intended benefits only if they submit along with offer, attested copies of either EM-II certificate having deemed validity (Five years from date of issue of acknowledgement in EM-II) or valid NSIC certificate/ DIC certificate/ Udyog aadhar or EM-II certificate along with attested copy of a CA certificate (format enclosed as per annexure-I where deemed validity of EM-II certificate of 5 years has expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of bid opening (part-I in case of two part bid). Non submission of such documents will lead to consideration of their bids at par with other bidders. MSE status of such suppliers shall be shifted to non MSE supplier till the supplier submits the documents. This provision for MSE will apply subject to the condition that the participating MSE meets the tender requirements.

ANNEXURE- I

Certificate by Chartered Accountant on Letter Head

This is to Certify that M/s.
(Hereinafter
 referred to as 'company') having its registered office at
is registered under MSMED Act 2006, (Entrepreneur Memorandum
 No (Part-IIdated: Category:
 (Micro/Small) (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as on date as per
 MSMED Act 2006 is as follows:

I. For Manufacturing Enterprises: Investment in plant and machinery (i.e. original cost excluding land and
 building and the items specified by the Ministry of Small Scale Industries vide its notification
 No.S.O.1722(E) dated October 5, 2006 :

Rs.Lacs

2. For Service Enterprises: Investment in equipment (original cost excluding land and building and furniture,
 fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act,
 2006:

RsLacs

(Strike off whichever is not applicable)

The above investment of Rs. Lacs is within permissible limit of Rs. -----Lacs for
 Micro/Small (Strike off which is not applicable) Category under MSMED Act 2006.

Or

The company has been graduated from its original category (Micro/ Small) (Strike off which is not applicable)
 and the date of graduation of such enterprise from its original category is ----- (dd/mm/yyyy) which is
 within the period of 3 years from the date of graduation of such enterprise from its original category as notified
 vide S.O. No. 3322(E) dated 01.11.2013 published in the gazette notification dated 04.11.2013 by Ministry of
 MSME.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant

DECLARATION BY VENDOR

We declare that the following family firms or sister concern affiliates/subsidiary firms are participating in the tender No

1.

2.

3.

.....

I, hereby declare on behalf of M/s and the family firms or sister concern affiliates/subsidiary firms listed above that we are not indulging in cartel formation for enquiry No

(.....)

For M/s

(Seal & Sign)

Self-Declaration on Class I/Class II/Non Local under Make in India
(Valid for tender value greater than or equal to 5 Lakhs and Less than or equal to 10 Crores)

I, hereby declare on behalf of M/s that my firm is under Class I ()/Class II ()/Non Local () as per Make in India Government Preferences.

(.....)

For M/s

(Seal & Sign)



CORPORATE PURCHASING SPECIFICATION

AA56135

Rev No.05

PREFACE SHEET

HIGH BUILD BLACK COAL TAR EPOXIDE PAINT

FOR INTERNAL USE ONLY
REMOVE THIS PREFACE BEFORE ISSUE TO SUPPLIERS

Equivalent/Comparable Standards

User Plants and Replaced Plant Specifications/References

- | | |
|--------------------|-------------|
| 1) HEP, BHOPAL | : HE 5043 |
| 2) HEEP, HARIDWAR | : --- |
| 3) HPEP, HYDERABAD | : HY0211190 |

Revisions:


Rev No.05	Amd No.	Reaffirmed
Dt:26-05-2012	Dt:	Year:2019

APPROVED:

INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(CPO+NM)

Prepared HEP, Bhopal	Issued Corp.R&D	Dt. of 1 st Issue 01-01-1980
-------------------------	--------------------	--

This page intentionally left blank

	CORPORATE PURCHASING SPECIFICATION	AA56135
		Rev No. 05
		PAGE 1 of 3

HIGH BUILD BLACK COAL TAR EPOXIDE PAINT

1 GENERAL

This specification governs the quality requirements of two pack anticorrosive High Build Black Coal Tar Epoxide Paint which shall be capable of being brushed or sprayed by suitable thinning with the recommended thinner, if any, so as to obtain a dry film thickness of 4 to 5 mils (100-125µm) per coat.

2 APPLICATION

Suitable for application where high humidity, total immersion in water, severe saline atmospheric condition and chemically corrosive environments prevail.

3 COLOUR

Black

4 COMPLIANCE WITH NATIONAL STANDARDS

Assistance has been derived from IS: 14948 in preparation of this specification.

5 FINISH

Smooth and uniform (See note at clause 9).

6 FREEDOM FROM DEFECTS

The paint shall remain free from defects like hard setting of pigments, skinning when kept in closed container and livering (excess viscosity build up) during its rated shelf life.

The dried paint film shall be free from defects like bittyness, floating of pigments, surface haze, orange peeling, colour fading, wrinkles, etc.

7 CHEMICAL COMPOSITION

The paint shall be composed of suitable grade of coal tar pitch, epoxy resins and accelerator in appropriate proportions to comply with the requirements of this specification. The infra-red spectrograph of epoxy resin used in binder shall be strictly adhered to that of type approved sample. Pigments and extenders used in the composition shall be resistant to chemicals and water.

8 TEST SAMPLES

Tender samples will not be required when once the type approval (Clause 10) is given and the Supplier concerned declares that the material for which the tender is given is of the same quality as the type-approved sample.

Representative samples of the material shall be drawn and treated as prescribed in IS: 101.

9 PROPERTIES

The paint shall be so thinned as to obtain a dry film thickness of 4 to 5 mils per coat. When tested in accordance with relevant parts and clauses of IS: 101 and Appendix-1 to this specification, the test samples shall show the following properties.

Revisions:			APPROVED: INTERPLANT MATERIAL RATIONALISATION COMMITTEE – MRC(CPO+NM)		
Rev No.05	Amd No.	Reaffirmed	Prepared HEP, Bhopal	Issued Corp.R&D	Dt. of 1 st Issue 01-01-1980
Dt:26-05-2012	Dt:	Year:2019			

AA56135

Rev No. 05

PAGE 2 of 3

CORPORATE PURCHASING SPECIFICATION**9.1 Drying Time at room temperature**

- Surface dry : 4 hours maximum.
- Hard dry : 16 hours maximum.

9.2 Scratch Hardness (type Test)*

After the film is cured for 7 days under ambient conditions and tested under a load of 1200 g, no such scratch as to show the base metal shall be produced.

9.3 Flexibility And Adhesion (Type Test)*

The film shall not show sign of damage, detachment or cracking when tested after 7 days curing under ambient conditions.

9.4 Flash Point

Not below 25°C.

9.5 Pot Life (Appendix-1)

4 to 8 hours, min.

9.6 Epoxy Resin Content

25% minimum by mass.

9.7 Volume solid

64%, minimum

9.8 Recoating Property

The painted film shall be capable of receiving one more coat of the same paint between 24 and 96 hours of applying the first coat.

9.9 Effect of Boiling Water for 48 Hours on cured film (Type Test)

No softening or peeling off, of the film shall take place.

9.10 Effect of heating at 150°C + 2°C in air for 48 hours

No softening or peeling off, of the film shall take place.

*Note: Scratch hardness, flexibility and adhesion and finish tests shall be conducted on painted grit blast steel panel while the other conditions of IS: 101 remaining unchanged.

10 TYPE APPROVAL

Samples:

Samples for type approval testing shall be accepted only from those manufacturers whose manufacturing and testing facilities are considered satisfactory to ensure continuous supply of good product.

11 TEST CERTIFICATES

Unless otherwise stated, three copies of test certificates shall be supplied along with each consignment:

In addition, the supplier shall ensure to send one copy of the test certificates along with the dispatch documents to facilitate quick clearance of the material.

The test certificates shall bear the following information:

- AA56135, Rev. 05: HIGH BUILD BLACK COAL TAR EPOXIDE PAINT
- BHEL Order No.
- Batch / Lot No.
- Supplier's/ Manufacturer's Name and Trade mark, if any

	CORPORATE PURCHASING SPECIFICATION	AA56135
		Rev No. 05
		PAGE 3 of 3

- Date of manufacture and expiry
- Test results of clauses 7 and 9

12 KEEPING PROPERTY:

When stored in a covered dry place in the original sealed container under normal temperature conditions, the base and accelerator when mixed in appropriate proportions shall retain the properties prescribed in this specification for a period of 12 months after the date of manufacture, which shall not be earlier than one month from the scheduled delivery date mentioned in BHEL order.

13 PACKING AND MARKING

Unless otherwise stated, base and accelerator shall be packed separately in steel containers of appropriate capacities.

If stated in BHEL order, the recommended thinner shall also be supplied in sufficient quantity.

Each container shall bear the following information:

- AA56135: HIGH BUILD BLACK COAL TAR EPOXIDE PAINT
- BHEL Order No.
- Batch / Lot No.
- Supplier's/ Manufacturer's Name and Trade mark, if any
- Quantity
- Date of manufacture and expiry

14 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 corresponding symbol and minimum worded cautionary notice for flammable / corrosive / toxic / harmful / irritant and oxidizing etc. as applicable.

15 REFERRED STANDARDS (Latest Publications Including Amendments)


- 1) IS: 101

APPENDIX – 1


DETERMINATION OF POT LIFE (CLAUSE 9.6)


About 100 ml of the mixed paint prepared by mixing the base and accelerator in the recommended proportions is taken in a beaker. The paint shall be such that it should be usable by brush under a specified pot life of 6 - 12 hours at room temperature.

In order to see if the paint has jelled or not, a small quantity of the mixed paint is dissolved in the recommended thinner. It should not dissolve if the paint has jelled and vice-versa.

	CORPORATE PURCHASING SPECIFICATION		AA 567 01		
			Rev. No. 05		
			PAGE 1 OF 3		
<p align="center">PETROLEUM HYDROCARBON SOLVENT (GR.: 145/205)</p> <p>1.0 GENERAL: This specification governs the quality requirements of Petroleum hydrocarbon solvent, Gr.: 145/205, low aromatic.</p> <p>2.0 APPLICATION: Suitable for use in paint industry in general. This solvent is used as a thinner for all Alkyd Based paints</p> <p>3.0 COMPLIANCE WITH NATIONAL STANDARDS: The material shall comply with the requirements of the following material standard and shall also meet the requirements of this specification. IS: 1745 – 1978(RA-2005) : Petroleum hydrocarbon solvents Gr.: Solvent 145 / 205, low aromatic</p> <p>4.0 FREEDOM FROM DEFECTS: The material shall be clear and free from sediments suspended matters and undissolved water..</p> <p>5.0 COMPOSITION: The material shall be a petroleum distillate.</p> <p>6.0 TEST SAMPLES: Test samples shall be supplied for testing and approval as per IS: 1447.</p> <p>6.1 To draw a representative sample, the contents of the container selected for sampling shall be mixed as thoroughly as possible by shaking or stirring or both or by rolling, so as to bring all portions into uniform distribution.</p> <p>6.2 The samples shall be taken in a suitable, clean, dry air-tight glass bottle of one liter capacity. It should be almost but not completely filled by the sample.</p> <p>6.3 In case of failure of first sample, two samples shall be drawn from other two drums of the same consignment at random and failure of the second sample in complying with the specification will lead to the rejection of the whole consignment.</p> <p>7.0 PROPERTIES: When tested in accordance with the test methods shown against each clause, the test samples shall show the following properties:</p> <p>7.1* Colour (Say bolt) (IS: 1448-Part 14): + 20, minimum</p> <p>7.2 Copper Strip Corrosion Test (IS: 1448-Part 15): Not worse than No. 1, at 50°C for 3 hours.</p> <p>7.3 Density (IS: 1448-Part 16): g per ml, at 15°C: Not limited but to be reported.</p>					
Revisions: As per 40 th MOM of MRC -CPO			APPROVED: INTERPLANT MATERIAL RATIONALISATION COMMITTEE-MRC (CPO)		
Rev. No. 05	Amd.No.	Reaffirmed	Prepared BHOPAL	Issued Corp. R&D	Dt. of 1st Issue JANUARY, 1981
Dt.26.05.2012	Dt:	Year:			

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.

AA 567 01	CORPORATE PURCHASING SPECIFICATION	
Rev. No. 05		
PAGE 2 OF 3		
<p>7.4 Flash Point (Abel) (IS: 1448-Part 20): 35⁰ C, minimum.</p> <p>7.5 Residue on Evaporation (IS: 1448-Part 29): 5 mg per 100 ml, maximum.</p> <p>7.6 Aromatic Content (IS: 1448-Part 48): 40% by volume, maximum.</p> <p>7.7 Distillation Range:</p> <p>7.7.1 Initial boiling point (IS: 1448-Part 18): 145⁰ C, minimum.</p> <p>7.7.2 Final boiling point: 205⁰C. maximum</p> <p>7.7.3 50% by volume at, in °C: Not limited but to be reported.</p> <p>7.7.4 95% by volume at a temperature: Not limited but to be reported.</p> <p>8.0 TEST CERTIFICATES:</p> <p>Unless otherwise specified, Three copies of test certificates shall be supplied along with each consignment.</p> <p>In addition the supplier shall ensure to send one copy of test certificates along with the despatch documents to facilitate quick clearance of the material.</p> <p>The test certificates shall bear the followings information</p> <p>AA 567 01, Rev.No.05 : Petroleum Hydrocarbon Solvent, Gr.: 145/205, Low aromatic BHEL Order No. Manufacturer's/Supplier's Name. Trade Mark, if any. Batch No. Date of Manufacture and expiry Test results of clauses 7.0</p> <p>9.0 Acceptance Criteria: Material shall be accepted on the basis of test results furnished by supplier and testing at BHEL in respect of Cl 7.3, 7.5, 7.7.1, 7.7.2.</p>		

	CORPORATE PURCHASE SPECIFICATION	AA 567 01
Rev. No. 05		
PAGE 3 OF 3		
<p>10.0 PACKING AND MARKING:</p> <p>The material shall be packed in mild steel made, road tankers which shall be thoroughly cleaned before filling.</p> <p>Each container shall marked with the following information: AA 567 01 : Petroleum Hydrocarbon Solvent, Gr.: 145/205, Low aromatic BHEL Order No. Manufacturer's/Supplier's Name. Trade Mark, if any. Batch/Lot No. Date of Manufacture Quantity supplied.</p> <p>A caution label "FLAMMABLE" together with the corresponding symbol for labelling dangerous goods.</p> <p>11.0 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 alongwith each supply.</p> <p>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>12.0 REFERRED STANDARDS (Latest Publications Including Amendments):</p> <p>1. IS : 1447 2. IS: 1448 3.IS:1745</p>		

इंटरनेट

मानक



Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

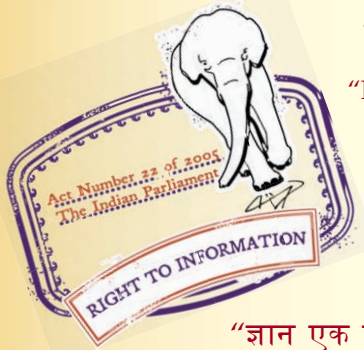
“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 2932 (2003): Enamel, Synthetic, Exterior : (a) Undercoating (b) Finishing [CHD 20: Paints, Varnishes and Related Products]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



BLANK PAGE



भारतीय मानक

इनैमल, संशिलष्ट, बाहरी :

(क) अधलेपन (ख) परिसज्जा — विशिष्ट
(तीसरा पुनरीक्षण)

Indian Standard

ENAMEL, SYNTHETIC, EXTERIOR :
(a) UNDERCOATING (b) FINISHING —
SPECIFICATION
(*Third Revision*)

ICS 87.040

© BIS 2003

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

FOREWORD

This Indian Standard (Third Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Paints, Varnishes and Related Products Sectional Committee had been approved by the Chemical Division Council.

Composition requirement has been simplified making it more performance oriented; requirement for freedom from unsaponifiable synthetic hydrocarbon resin has been deleted. Also, changes made in this standard through various amendments have been amalgamated in this revised version.

Through Annex G, a testing programme has been added in this revision, for the guidance of purchasers.

For satisfactory results, it is desirable that primer, undercoating and the finishing enamel are obtained from the same manufacturer.

The composition of the Committee responsible for the preparation of this standard is given in Annex H.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

ENAMEL, SYNTHETIC, EXTERIOR :
(a) UNDERCOATING (b) FINISHING —
SPECIFICATION
(Third Revision)

1 SCOPE

This standard prescribes requirements, methods of sampling and test for the material commercially known as enamel, synthetic, exterior: (a) undercoating (b) finishing, colour as required used in painting system for protection and decoration.

2 REFERENCES

The standards listed in Annex A contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated in Annex A.

3 TERMINOLOGY

3.1 For the purpose of this standard, the definitions given in IS 1303 and that given below shall apply.

3.1.1 *Registered Sample* — Sample supplied in advance by a prospective supplier and registered by the testing agency, after testing as per all requirements of this standard. A complete record of its performance shall be kept in respect of all tests.

4 CLASSES

The material shall be supplied in brushing consistency but shall be suitable for application by brushing and air spraying thinning with petroleum hydrocarbon solvent to grade 145/205 low aromatic grade (*see* IS 1745) or suitable thinner as agreed to between the purchaser and the supplier.

5 COLOUR CATEGORIES

For the purpose of registration of the samples of the material, the colour categories given in Table 1 shall be employed.

6 REQUIREMENTS

6.1 Composition

6.1.1 General

The material shall be based on synthetic alkyd resin, free from natural rosin or its derivatives or its

modifications in any form when tested in accordance with IS 101 (Part 9/Sec 2). In case of disputes, test to be carried out as prescribed in Annex B. It shall be of such a composition as to satisfy the requirements of this standard.

6.1.2 Total Non-volatile Content

The total non-volatile matter including pigments, extenders and vehicles, when tested as per IS 101 (Part 8/Sec 2) shall not deviate by more than ± 2 units by mass from the recorded data of registered sample. This applies to both undercoating and finishing enamels.

6.2 Condition in Container

6.2.1 At Delivery

At the time of delivery the paint shall be in such a condition that manual stirring readily produces a uniform product.

6.2.2 During Storage

During the 12 months storage period, the rating for degree of settling shall not drop to 0, when tested as per IS 101 (Part 6/Sec 2).

6.3 Freedom from Coarse Particles

The paint shall be free from coarse aggregates, suspended particles of gel and foreign matter, when tested as per IS 101 (Part 1/Sec 2).

6.4 Skin Formation

The paint shall show no skin formation, when examined visually at the time of delivery.

6.5 Thinning Properties

The paint shall be capable of being readily mixed with the petroleum hydrocarbon, solvent grade (*see* IS 1745) or with a suitable thinner as agreed to between the purchaser and the supplier, without showing any precipitation.

6.6 Application Properties

The paint shall normally be supplied in a condition

Table 1 Colour Categories and Wet Opacity Requirements
(Clause 5)

Colour Category No.	Colour Shade	ISC No. as per IS 5	Shade Recommended for Registration of Samples	Wet Opacity Requirement, Min, m ² /10 litre
(1)	(2)	(3)	(4)	(5)
1	White	—	White	130
2	Black	—	Black	260
3	Dark violet	796	Dark violet	80
4	i) Sky blue	101		
	ii) Turquoise blue	102		
	iii) Oriental blue	174	Turquoise blue	160
	iv) Light admiral grey	697		
	v) Phirozi	176		
	vi) Satin blue	177		
5	i) Eau-de-nil	216		
	ii) Opaline green	275		
	iii) Apple green	281	Apple green	210
	iv) Bus green	299		
6	i) Peacock blue	103		
	ii) Azure blue	104	Traffic blue	200
	iii) Traffic blue	169		
7	i) Oxford blue	105	Oxford blue	100
	ii) Navy blue	106		
8	Aircraft blue	108	Aircraft blue	170
9	French blue	166	French blue	150
10	i) Sea green	217	Sea green	170
	ii) Verdigris green	280		
11	i) Sage green	219	Sage green	160
	ii) Light olive green	278		
	iii) Aircraft grey green	283		
12	i) Grass green	218		
	ii) Traffic green	267	Traffic green or Grass green	150
	iii) India green	284		
	iv) Brilliant green	221		
13	i) Light brunswick green	225		
	ii) Middle brunswick green	226	Middle brunswick	220
	iii) Deep brunswick green	227		
	iv) Lincoln green	276		
	v) Cypress green	277		
	vi) Forest green	282		
14	i) Olive green	220		
	ii) Light bronze green	222		
	iii) Middle bronze green	223		
	iv) Deep bronze green	224	Olive green	220
	v) Steel furniture green	279		
	vi) Scamic	294		
	vii) Olive drab	298		
15	Canary yellow	309	Canary yellow	100
16	i) Lemon	355	Golden yellow	100
	ii) Golden yellow	356		
17	i) Pale cream	352		
	ii) Deep cream	353		
	iii) Light stone	361		
	iv) Portland stone	364		
	v) Vellum	365	Pale cream or deep cream	110
	vi) Light straw	384		
	vii) Light biscuit	385		

Table 1 (Concluded)

(1)	(2)	(3)	(4)	(5)
	viii) Champagne	386		
	ix) Sunshine	387		
	x) Beige	388		
	xi) Jasmine yellow	397		
	xii) Light salmon pink	442		
	xiii) Salmon pink	443		
18	Primrose	354	Primrose	100
19	Light buff	358	Light buff	160
20	i) Middle buff	359		
	ii) Deep buff	360	Deep buff	200
	iii) Middle stone	362		
21	i) Dark stone	363		
	ii) Light brown	410		
	iii) Middle brown	411	Light brown	140
	iv) Golden brown	414		
	v) India brown	415		
	vi) Leaf brown	489		
22	i) Dark brown	412		
	ii) Orange brown	439		
	iii) Venetian red	445		
	iv) Red oxide	446	Gulf red	200
	v) Deep Indian red	448		
	vi) Light purple brown	449		
	vii) Gulf red	473		
	viii) Beech brown	490		
23	i) Nut brown	413		
	ii) Chocolate	451	Net brown	220
	iii) Service brown	449		
24	Terra cotta		444	Terra cotta 160
25	i) Fire red	536		
	ii) Signal red	537		
	iii) Post office red	538	Post office red or signal red	60
	iv) Crimson	540		
	v) International orange	592		
26	Maroon	541	Maroon	130
27	i) Traffic yellow	368		
	ii) Light orange	557	Deep orange	120
	iii) Traffic red	570		
	iv) Deep orange	591		
28	India saffron	574	India saffron	120
29	i) Silver grey	628		
	ii) Quaker grey	629		
	iii) French grey	630		
	iv) Light grey	631		
	v) Dark admiral grey	632	Light grey or aircraft grey	200
	vi) Smoke grey	692		
	vii) Aircraft grey	693		
	viii) Dove grey	694		
30	i) RAF blue grey	633		
	ii) Slate	634		
	iii) Lead	635	RAF blue grey	230
	iv) Middle graphite	671		
	v) Dark blue grey	695		

856479/2022/FSIP-FP_PRDN

suitable for application by brushing, either as supplied or when thinned with not more than 5 percent by volume of petroleum hydrocarbon solvent (*see* IS 1745) or with another suitable thinner as agreed to between the purchaser and the supplier. The paint may also be supplied in a condition suitable for spraying when thinned with not more than 20 percent by volume of the aforementioned thinner.

6.7 Durability**6.7.1 Registered Sample**

6.7.1.1 When prepared and tested as prescribed under **C-3** up to a period of 12 months preferably at National Test House, Kolkata, a film prepared from the sample for registration of the material shall satisfy the requirements of the test.

6.7.1.2 A film of the sample for registration shall be prepared and tested in accelerated weathering apparatus using carbon/xenon arc, as prescribed under **C-4**. It shall be examined every third day for a period of 21 days and a complete record of its performance maintained.

6.7.1.3 QUV apparatus may be used as an alternative when tested with an approved sample for a period of 200 h.

NOTE — As a precaution against inadvertent accidents, it is recommended that the outdoor exposure test (*see* **C-3**) and the accelerated weathering test (*see* **C-4**) are carried out in duplicate.

6.7.2 Sample from Bulk Supply

The characteristics of a film of the material prepared from a representative sample of the bulk supply as prescribed in **C-2** tested in the accelerated weathering apparatus (*see* **C-4**) and examined every third day for a period of 21 days shall not deviate more than the limits specified in **6.7.2.1** and **6.7.2.2**.

6.7.2.1 Gloss (specular 60°) retention of bulk supply shall be within ± 10 units of that of the recorded data of registered sample.

6.7.2.2 The results of observation on characteristics of the colour, cracking, checking, spotting etc, of the bulk supply sample shall not be less than rating of 8 when evaluated as per **C-3.2**.

6.8 Resistance to Acid (for Finishing Only)

A film of the material, when tested as prescribed in Annex D, shall not show signs of disintegration or change of colour to a rating not less than 8, taking the original colour as 10. The loss of gloss shall not be more than 50 percent of the original gloss.

6.9 Resistance to Alkali (for Finishing Only)

A film of the material, when tested as prescribed in

Annex E, shall not show signs of disintegration or change of colour to a rating not less than 8, taking the original colour as 10. The loss of gloss shall not be more than 50 per cent of the original gloss.

6.10 The material shall also comply with the requirements given in Table 2.

7 PACKING AND MARKING**7.1 Packing**

Unless otherwise agreed to between the purchaser and the supplier, the enamel shall be packed in suitable metal containers (*see* IS 1407 and IS 2552).

7.2 Marking

7.2.1 Each container shall be marked with the following:

- a) Name and type of the material;
- b) Indication of the source of manufacture;
- c) Volume of the material;
- d) Lot number or batch number in code or otherwise; and
- e) Month and year of manufacture.

7.2.1.1 The material when intended for defence purposes, shall be marked in accordance with IS 5661.

7.2.2 BIS Certification Marking

The container may also be marked with the Standard Mark.

7.2.2.1 The use of the Standard Mark is governed by the provisions of *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

8 SAMPLING**8.1 Preparation of Test Samples****8.1.1 For Registration**

The sample shall be submitted in three different containers each containing not less than 500 ml of the material.

8.1.1.1 As testing to the requirements of this standard covers a period of more than 12 months, the supplier is advised to submit samples for registration sufficiently in advance within the period from October to December of the year, so that outdoor exposure test can be started during the period stipulated in **C-3.1**.

Table 2 Requirements for Enamel, Synthetic, Exterior
(a) Undercoating (b) Finishing
(Clause 6.10)

SI No.	Characteristics	Requirements		Methods of Test	
		Undercoating	Finishing	Ref to IS 101	Annex/Other Standard
(1)	(2)	(3)	(4)	(5)	(6)
i)	a) Consistency	Smooth, uniform and suitable for brushing without appreciable drag on the brush		Visual	—
	b) Viscosity by ford cup No. 4 at 27 ± 2°C	80-120 s	80-120 s	(Part 1/Sec 5)	—
ii)	Mass, in kg/10 litres, <i>Min</i>	11.5	9.0	(Part 1/Sec 7)	—
iii)	Drying time, h, <i>Max</i>			(Part 3/Sec 1)	—
	a) Surface dry	2	4		
	b) Hard dry	8	12		
	c) Tack free	24	24		
iv)	a) Finish	Smooth and matt to egg shell gloss	Smooth and glossy	(Part 3/Sec 4)	—
	b) Gloss 60°	0 to 20	Above 71	(Part 4/Sec 1)	—
v)	Fineness of grind	Not more than 50 microns	Not more than 15 microns	(Part 3/Sec 5)	—
vi)	Colour	Approximate match with ISC No. 385 or 635	Close match to the specified IS colour or to an agreed colour	(Part 4/Sec 2)	—
vii)	Scratch hardness after 48 h air drying (1 000 g)	No such scratch as to show bare metal		Clause 3 of (Part 5/Sec 1)	—
viii)	Flexibility and adhesion	No visible damage or detachment after 48 h of air drying	No visible damage or detachment after 96 h of air drying	Clause 2 of (Part 5/Sec 2)	—
ix)	Flash point	Not below 30°C	Not below 30°C	(Part 1/Sec 6)	—
x)	Composition:				
	a) Volume solids percent, <i>Min</i>	40	35	(Part 8/Sec 6)	—
	b) Phthallic anhydride content of non-volatile vehicle, percent by mass, <i>Min</i>	20	20	—	Clause 11 of IS 354 (Part 2)
xi)	Accelerated storage stability test, at 60°C, 96 h	Shall pass the test	Shall pass the test	—	Annex F
xii)	Keeping properties	Not less than one year from date of manufacturing	Not less than one year from date of manufacturing	(Part 6/Sec 2)	—

8.1.2 Tender Sample

The supplies may dispense with sending a tender sample standard provided that he declares that the material, for which the tender is given, of the same quality as the sample previously registered in his name.

8.1.3 Bulk Supply Sample

Representative samples of the materials shall be drawn and treated as prescribed in IS 101 (Part 1/Sec 1).

8.2 Criteria for Conformity

A lot shall be declared as conforming to the

requirements of this standard if the test results of the composite samples satisfy the requirements as prescribed in 6.

9 TEST METHODS

9.1 Test shall be conducted as prescribed in various parts of IS 101 and various Annexes to this standard. References to the relevant clauses of these standards are given in col 5 of Table 2, 6.1, 6.2 and 6.3.

9.2 Quality of Reagents

Unless specified otherwise, pure chemicals and

distilled water (*see* IS 1070) shall be employed in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

9.3 Comparison with the performance of the registered sample shall be carried out on the basis of records maintained for the registered samples (*see* 6.7.1).

9.4 For match against Indian Standard colours, IS 5 shall be used.

10 GENERAL PROVISIONS

10.1 Supply

Unless otherwise agreed by the purchaser, the paint supplied shall not differ significantly from the registered sample in either composition or performance.

10.2 Vendor's Certificate

10.2.1 When required by the purchaser, the vendor shall certify that each batch of the paint supplied has been manufactured to the same formula as the registered sample and/or that it has been indicated by

test to be not inferior to the approved sample.

10.2.2 Alternatively, the vendor may give following information and may declare compliance with registered sample:

- a) Description of paint,
- b) Vendor's product reference,
- c) Lot identification,
- d) Quantity in lot, and
- e) Date of manufacture.

10.2.3 A certificate/declaration may relate to more than one lot.

10.3 Tests

10.3.1 The frequency and procedure to establish compliance of the paint material with this specification may vary depending on the agreement between the purchaser and the supplier.

10.3.2 The kind of testing programme as indicated in Annex G, may be taken for guidance, where thought appropriate.

ANNEX A

(Clause 2)

LIST OF REFERRED INDIAN STANDARDS

IS No.	Title	IS No.	Title
5 : 1994	Colours for ready mixed paints and enamels (<i>fourth revision</i>)	(Part 2/Sec 1) : 1988	Test on liquid paints (chemical examination), Section 1 Water content (<i>third revision</i>)
101	Methods of sampling and test for paints, varnish and related products:	(Part 3/Sec 1) : 1986	Tests on paint film formation, Section 1 Drying time (<i>third revision</i>)
(Part 1/Sec 1) : 1986	Test on liquid paints (general and physical), Section 1 Sampling (<i>third revision</i>)	(Part 3/Sec 4) : 1987	Tests on paint film formation, Section 4 Finish (<i>third revision</i>)
(Part 1/Sec 2) : 1987	Test on liquid paints (general and physical), Section 2 Preliminary examination and preparation of samples for testing (<i>third revision</i>)	(Part 3/Sec 5) : 1987	Tests on paint film formation, Section 5 Fineness of grind (<i>third revision</i>)
(Part 1/Sec 3) : 1986	Test on liquid paints (general and physical), Section 3 Preparation of panels (<i>third revision</i>)	(Part 4/Sec 1) : 1988	Optical tests on paint films, Section 1 Opacity (<i>third revision</i>)
(Part 1/Sec 5) : 1989	Test on liquid paints (general and physical), Section 5 Consistency (<i>third revision</i>)	(Part 4/Sec 2) : 1989	Optical tests on paint films, Section 2 Colour (<i>third revision</i>)
(Part 1/Sec 6) : 1987	Test on liquid paints (general and physical), Section 6 Flash point (<i>third revision</i>)	(Part 4/Sec 3) : 1988	Optical tests on paint films, Section 3 Light fastness test (<i>third revision</i>)
(Part 1/Sec 7) : 1987	Test on liquid paints (general and physical), Section 7 Mass per 10 litres (<i>third revision</i>)	(Part 4/Sec 4) : 1988	Optical tests on paint films, Section 4 Gloss (<i>third revision</i>)
		(Part 5/Sec 1) : 1988	Mechanical tests on paint films, Section 1 Hardness tests (<i>third revision</i>)

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
(Part 5/Sec 2): 1988	Mechanical tests on paint films, Section 2 Flexibility and adhesion (<i>third revision</i>)	296 : 1986	Sodium carbonate, anhydrous (<i>third revision</i>)
(Part 6/Sec 1): 1988	Durability tests on paint films, Section 1 Resistance to humidity under conditions of condensation (<i>third revision</i>)	354 (Part 2) : 1986	Methods of sampling and test for resins for paints : Part 2 Special test methods for alkyd resins (<i>second revision</i>)
(Part 6/Sec 2): 1989	Durability tests on paint films, Section 2 Keeping properties (<i>third revision</i>)	513 : 1994	Cold-rolled low carbon steel sheets and strips (<i>fourth revision</i>)
(Part 6/Sec 4): 1991	Durability tests on paint films Section 4 Degradation of coatings (pictorial aids for evaluation)	1017 : 1983 1070 : 1992 1303 : 1983	Chamois leather (<i>second revision</i>) Reagent grade water (<i>third revision</i>) Glossary of terms relating to paints (<i>second revision</i>)
(Part 8/Sec 2): 1990	Tests for pigments and other solids Section 2 Pigments and non-volatile matter (<i>third revision</i>)	1407 : 1980 1745 : 1978	Round paint tins (<i>second revision</i>) Petroleum hydrocarbon solvents (<i>second revision</i>)
(Part 8/Sec 6): 1993	Tests for pigments and other solid Section 6 Volume solids	2074 : 1992	Ready mixed paint, air drying, red oxide-zinc chrome, priming (<i>second revision</i>)
(Part 9/Sec 2): 1993	Test for lacquers and varnish, Section 2 Rosin test	2552 : 1989	Steel drums (galvanized and ungalvanized) (<i>third revision</i>)
266 : 1993	Sulphuric acid (<i>second revision</i>)	5661 : 1970	Code of practice for packing and marking of packages of paints, enamels, varnishes and allied products
285 : 1992	Laundry soaps (<i>third revision</i>)		

ANNEX B

(Clause 6.1.1)

TEST METHOD FOR TOTAL ROSIN ACIDS CONTENT OF COATING VEHICLES

B-0 GENERAL

Libermann storch test for Halphen-Hicks test for detection of rosin also gives colouration with bleeding pigments (for example, Post Office Red) which may be confused with the presence of rosin. If the rosin content estimated by method described below is less than 1 percent, the paint sample should be considered free from rosin. The proposed method covers the determination of total rosin acids content of rosin esters, varnishes and alkyd resins, unmodified by such materials as maleic or fumaric acid or phenols. Total rosin acids determined include free rosin, esterified rosin and metallic salts of rosin.

NOTE — This method is primarily designed for material containing 0.5 to 5 percent rosin on non-volatile basis.

B-0.1 Outline of the Method

B-0.1.1 The sample of separated vehicle is saponified

with potassium hydroxide-ethylene glycol reagent and acidified with hydrochloric acid. Heat is applied to hydrolyze metallic driers. This is necessary when metallic rosins are present.

B-0.1.2 The mixture described in **B-0.1.1** is extracted with toluene. The rosin and fatty acids and unsaponifiables pass into the toluene layer. The aqueous layer will contain certain dibasic acids, polyhydric alcohol and other water-soluble products of saponification.

B-0.1.3 The toluene is removed by evaporation, the residue weighed and the rosin acids are determined by a selective esterification and titration method.

B-1 APPARATUS

B-1.1 Air condenser 700 mm, with a 24/40 standard taper joint.

B-1.2 Burette — Automatic type having a capacity of 25 ml, for the standard potassium hydroxide solution, fitted with soda-lime trays to protect against absorption of atmospheric carbon dioxide.

B-1.3 Erlenmeyer Flasks — 250 and 500 ml capacity with 24/40 ground joints.

B-1.4 Separating Funnels — Three of 1 litre capacity.

B-1.5 Steam Bath — Located in a fume hood for evaporation of volatile solvents.

B-1.6 Moisture Collection Trap — Constructed

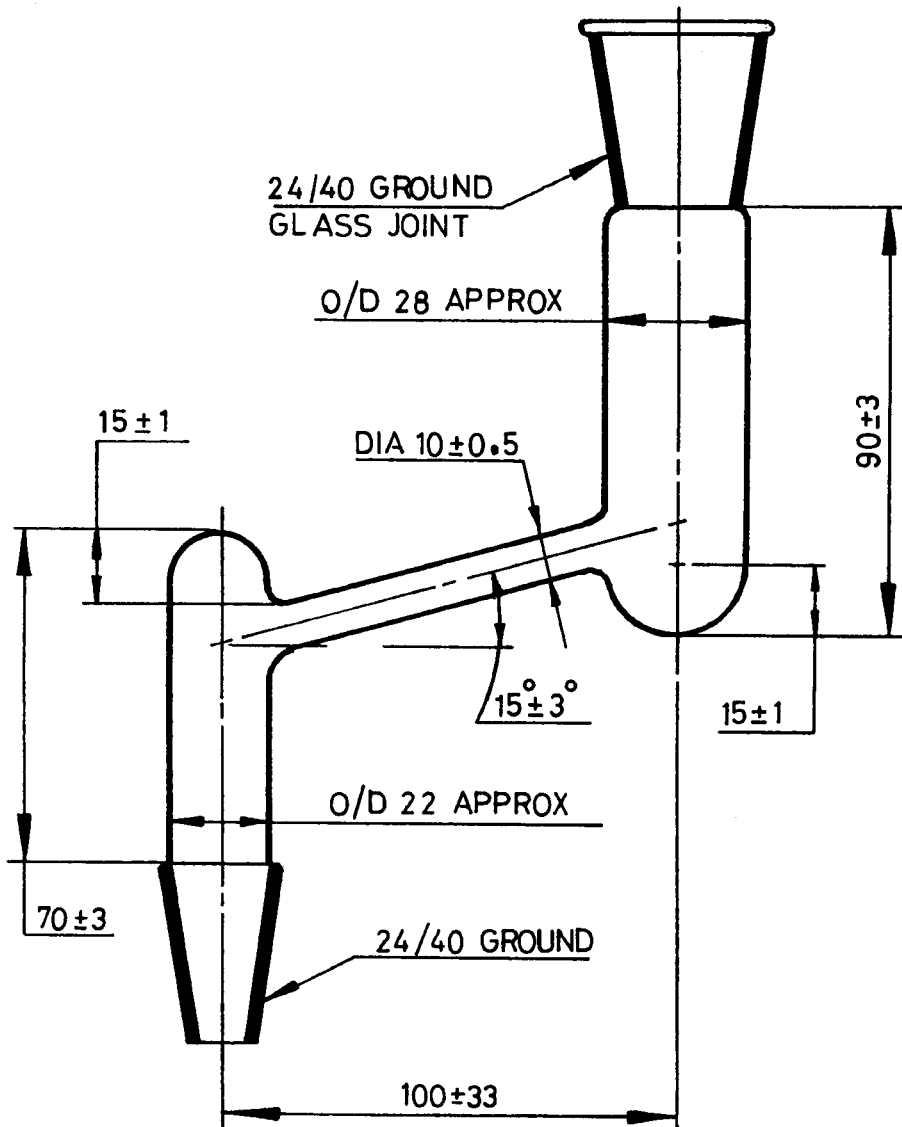
according to details shown in Fig. 1. Wrap with 12.7 mm asbestos tape.

B-1.7 Pipette — Automatic, 50-ml capacity.

B-2 REAGENTS

B-2.1 Toluene

B-2.2 Butyl Alcohol Sulphuric Acid Esterification Reagent — Add 500 ml of *n*-butyl alcohol, 500 ml of toluene and 3.3 ml (6 g) of sulphuric acid to a 2-litre round bottom flask with ground joint, connect to a moisture trap and condenser and reflux on a hot plate



All dimensions in millimetres.

FIG. 1 MOISTURE COLLECTION TRAP

for 30 min to distil out the water and to form butyl-sulphuric acid. Cool and store in a glass stoppered bottle.

B-2.3 Ethyl Alcohol

B-2.4 Hydrochloric Acid — Concentrated (sp gr 1.19).

B-2.5 Potassium Hydroxide — Ethylene Glycol Solution (132 g/l)—Dissolve 132 g of potassium hydroxide pellets in 1 litre of ethylene glycol in a 2-litre Erlenmeyer flask. Insert a thermometer and boil to eliminate water until the temperature of the liquid reaches 190 to 195°C. Cool and store in a rubber stoppered bottle.

B-2.6 Potassium Hydroxide, Alcoholic Standard Solution (13.3 g/l) — Dissolve 13.3 g of potassium hydroxide pellets in 1 litre of alcohol. Standardize against potassium acid phthalate primary standard.

B-2.7 Sulphuric Acid — Concentrated

B-2.8 Thymol Blue Indicator Solution (10 g/l) — Mix 1 g of thymol blue indicator with 100 ml of ethyl alcohol.

B-3 PROCEDURE

B-3.1 Transfer to a 500 ml Erlenmeyer flask an amount of sample, weighed to the nearest 0.001 g, containing approximately 10 ± 1 g of non-volatile material. Add 150 ml of the potassium hydroxide ethylene glycol solution and swirl to disperse the sample. Add a boiling stone, attach a condenser and reflux on a hot plate for 2 h.

B-3.2 After refluxing, remove the flask from the hot plate and cool to room temperature under tap water. Add 100 ml of water and while cooling under tap water, add 40 ml of the hydrochloric acid. Place on the hot plate again, reflux for 5 min and cool under tap water.

B-3.3 Transfer the sample quantitatively to a 1 litre separating funnel with the aid of a total of 150 ml of water, followed by two 25 ml rinse with toluene. Shake, allow the layers to separate, and draw off the lower aqueous layers into a second 1 litre separating funnel. Extract with a third 50-ml portion of toluene. Draw off and discard the water layer. Combine the benzene extracts, and wash with three 50 ml portions of water. Measure the pH of the third water wash. If it is less than 3.8, repeat with a fourth water wash. Discard the wash waters.

B-3.4 Transfer the washed toluene extract to a weighed (to the nearest 0.001 g) 250-ml Erlenmeyer flask, with the aid of 25 ml of toluene. Evaporate the toluene on the steam bath, preferably with the aid of a gentle stream of

inert gas to volume of approximately 20 ml. Add 5 ml of anhydrous ethyl alcohol and evaporate to dryness, to remove any water present by azeotropic distillation.

B-3.5 Cool and weigh to the nearest 0.001 g. To avoid oxidation, do not try in an oven, also the retention of a small amount of toluene does not affect the final calculation.

B-3.6 Using an automatic pipette, accurately measure 50 ml of the esterification reagent into the flask. Connect the flask to the moisture collections trays and condenser. Place on a hot plate to boiling and reflux for 20 min. At the end of heating period, allow the flask to cool somewhat, then remove and cool to room temperature.

B-3.7 Add 10 drops of thymol blue indicator solution and titrate with the alcoholic potassium hydroxide solution to a blue end-point.

B-3.8 Make a blank titration on 50 ml of the esterification solution, after refluxing in the same manner.

B-4 CALCULATION

B-4.1 In order to apply properly the esterification correction factors to the isolated rosin acids- fatty acids mixture, it is necessary first to calculate the percent of rosin acids in the dried toluene extract, and then to correct this value to the on-volatile sample basis.

Rosin acids in dried toluene extract, $y = [(A - B) N \times 30.24 \times 1.018] S - 0.3$ percent by mass

where

A = alcoholic potassium hydroxide solution required for titration of the sample, in ml;

B = alcoholic potassium hydroxide solution required for titration of blank, in ml;

N = normality of potassium hydroxide solution used;

S = mass of dried toluene extract, in g;

30.24 = molecular mass of abietic acid multiplied by 100 and divided by 1 000;

1.018 = experimentally determined factor to correct for slight esterification of resin acid; and

0.3 = experimentally determined factor to correct for unesterified fatty acids.

Rosin acids in alkyd vehicle,

non-volatile basis, percent = $(S \times Y)/(W \times T)$

where

- S = mass of dried toluene extract, in g;
- W = mass of original alkyd vehicle taken for analysis, in g;
- T = non-volatile content of the vehicle,

expressed as a decimal; and

- Y = percent of resin acids in dried toluene extract.

NOTE — If it is desired to express the total rosin acids as commercial rosin, use 35.00 instead of 30.24 as the factor in the calculation.

ANNEX C

(Clauses 6.7.1.1, 6.7.1.2, 6.7.2.2 and 8.1.1.1)

TEST METHOD FOR DURABILITY

C-0 GENERAL

C-0.1 Outline of the Method

The durability of the material is determined by ascertaining actual behaviour of suitably prepared test panels in normal outdoor exposure test for a specified period and evaluating the results of the exposure by a suitable method of rating for various characteristics of the film of the material. Apart from this, the material is also evaluated by an accelerated weathering test wherein a prepared panel is subjected to controlled exposure to heat, light and water in the artificial weathering apparatus.

C-1 TEST PANELS

C-1.1 The panel shall be mild steel plate, 1.25 mm thick and free from surface defects (*see* IS 513). Panels for the outdoor exposure test shall be 300 mm × 300 mm in size and for the accelerated weathering test 150 mm × 75 mm. The panels shall be cleaned as prescribed in IS 101 (Part 1/Sec 3) and the back and edges of the panels shall be protected with two coats of a suitable paint.

C-2 PREPARATION OF TEST PANELS

C-2.1 In the painting procedure outlined under C-2.2, the air drying of the films shall be done at room temperature and at a relative humidity of not more than 70 percent.

C-2.2 The surface of the test panels to be exposed shall be prepared as follows, taking care that total dry film thickness of the complete system shall be between 75 and 100 microns:

- a) Apply one coat of ready mixed paint red oxide-zinc chrome primer (conforming to IS 2074) by brushing after a coat of undercoat;
- b) Rub down lightly with waterproof emery paper No. 280/320, wipe off the surface using a piece of clean and dry soft cloth and then apply the brushing one coat of the under coating enamel conforming to this standard and allow to air-dry for 24 h;
- c) Rub down, wet, with waterproof emery paper No. 280/320, wipe off the surface using a piece of clean and dry soft cloth and then apply the brushing one coat of the finishing enamel conforming to this standard and allow to air-dry for 24 h; and
- d) Rub down, wet, with waterproof emery paper No. 320, wipe off water and, when the surface is dry, apply by brushing a second coat of the finishing enamel and allow to air dry for 7 days before subjecting to exposure test.

NOTE — The primer, undercoat and the finishing enamels shall be from the same source.

C-3 NORMAL OUTDOOR EXPOSURE TEST

C-3.0 Subject the samples for registration and the tender samples, if supplied, to normal outdoor exposure test in the manner described under C-3.1.

C-3.1 Expose in the open the test panels, prepared in the manner prescribed under C-1 and C-2 in duplicate at an angle of 45° facing South. Commence the exposure not earlier than the third week of January and not later than the first week of April.

C-3.1.1 Examine the condition of the exposed films at monthly intervals for the first quarter and thereafter quarterly for the rest of the period for the following characteristics:

- Colour;
- Checking, cracking and flaking;
- Chalking; and
- Spotting.

C-3.1.2 For the above examinations, wash the right hand half of the surface of the two test panels by pouring water and then wiping with a soft cloth or chamois leather (*see* IS 1017). Adequate time for cooling of the panels to room temperature shall be allowed prior to washing examine the same half of the test panels at each examination. As an aid in the examination, a magnifying glass may be used, but the evaluation shall be based on an assessment with the unaided eye. At the end of the stipulated period for durability test, examine the two halves of the test panels. The sample shall be considered satisfactory if the material surface underneath as well as condition of the film in both the halves, the one washed periodically as well as the one washed only for the final examination is satisfactory by the method of evaluation described in **C-3.2**. Stray film failure, due to extraneous causes other than climate, shall be ignored.

C-3.2 Evaluation and Rating of Film Characteristics of Test Panel

C-3.2.1 The test panels before and after the specified periods of exposure tests shall be assessed for the various film characteristics as prescribed in **C-3.2.2** to **C-3.2.8**.

C-3.2.2 Colour

The colour of the test panel shall be compared against the stipulated shade as given in IS 5. The initial rating for a good colour match shall be 10. The colour retention on exposure shall be expressed and recorded as the abbreviation of the type of colour change followed by the numerical rating as given below:

<i>Numerical Value</i>	<i>Rating</i>	<i>Type of Colour Change</i>
10	Good match	D — Darkening
9	Satisfactory	F — Fading
8 to 7	Slight colour change	B — Blueing
6 to 5	Definite colour change	R — Reddening
4 to 3	Bad colour change	Y — Yellowing

<i>Numerical Value</i>	<i>Rating</i>	<i>Type of Colour Change</i>
2 to 1	Very bad colour change	L — Loss of colour
0	Complete colour change	

C-3.2.3 Freedom from Checking

Freedom from checking shall be rated as 10 for no checking and 0 for most severe and complete checking. Intermediate ratings of 8, 6, 4 and 2 shall be done by matching with standard photographs.

C-3.2.4 Freedom from Cracking

Freedom from cracking shall be rated as 10 for no cracking and 0 for most severe and complete cracking. Intermediate ratings of 8, 6, 4 and 2 shall be done by matching with standard photographs.

C-3.2.5 Freedom from Flaking

Freedom from flaking shall be rated as 10 for no flaking and 0 for most severe and complete flaking. Intermediate ratings of 8, 6, 4 and 2 shall be done by matching with standard photographs.

C-3.2.6 Freedom from Chalking

Freedom from chalking shall be rated as 10 for no chalking and 0 for most severe and complete chalking. Intermediate ratings of 8, 6, 4 and 2 shall be done by matching with standard photographs.

C-3.2.7 Freedom from Spotting

Freedom from spotting shall be rated as follows:

<i>Numerical Value</i>	<i>Rating</i>
10	No spotting
9	Satisfactory
8-7	Slight spotting
6-5	Definite spotting
4-3	Bad spotting
2-1	Very bad spotting
0	Complete spotting

C-3.2.8 Freedom from Blistering and Corrosion

Freedom from blistering shall be rated as 10 for no blistering and 0 for complete failure in respect of blistering. Intermediate ratings for blister density F, M, MD and D (few medium, medium-dense and dense) and blister sizes 8, 6, 4 and 2 shall be done by matching with standard photographs.

C-3.3 Evaluation of Exposed Films

C-3.3.1 The requirements of this test shall be taken to have been satisfied if performance in respect of the characteristics as noted in **C-3.2** is within the limits specified below:

<i>Sl No.</i>	<i>Characteristic</i>	<i>Exposure</i>	<i>Requirement</i>
i)	Colour	After 3 months	The film shall have a minimum rating of 7 (except for colour categories No. 12, 13, 14, 16, 22, 26 and 27 where the minimum rating shall be 4)
		After 6 months	The film shall have a minimum rating of 5 (except for colour categories No. 12, 13, 14, 16, 22, 26 and 27 where the minimum rating shall be 3)
		After 12 months	The film shall have a minimum rating of 4 (except for colour categories No. 12, 13, 14, 16, 22, 26 and 27 where the minimum rating shall be 2)
ii)	Freedom from checking	After 12 months	Minimum rating of 6
iii)	Freedom from cracking	After 12 months	Minimum rating of 8
iv)	Freedom from flaking	After 12 months	Minimum rating of 9
v)	Freedom from chalking	After 12 months	Minimum rating of 6
vi)	Freedom from spotting	After 12 months	Minimum rating of 5

C-3.3.2 Freedom from Blisters and Corrosion

The film shall remain generally free from blisters and the metal underneath shall show no signs of corrosion on exposure for 12 months. A few isolated blisters without any signs of corrosion underneath as well as one or two localized corrosion and/or rust spots shall not constitute a cause of failure.

C-3.4 Protection Against Corrosion

After exposure of the film is discontinued, examine for corrosion of the metal surface of the panel underneath by removing film at 5 different places, one in the centre and one each at 4 different places near the 4 corners about 50 mm away from the edges. The paint film shall be removed by solvent type paint remover. When the film is softened by the paint remover it shall be removed by gently rubbing with cotton swab or waste jute taking care to remove adhering film of primer and/or undercoating. After removal of the film, the exposed metal shall be covered by thick mineral oil or petroleum jelly. Localized corrosion and/or one or two rust spots shall not constitute a cause of failure. To satisfy the requirements of this standard, the metal surface shall be otherwise free from corrosion.

C-4 ACCELERATED WEATHERING TEST

C-4.1 Accelerated Weathering Apparatus

An artificial weathering apparatus of the xenon/carbon arc type for uniform and controlled exposure to the effects of heat, light and water.

C-4.2 Procedure

C-4.2.1 The panel for this test shall be prepared as described under C-2.2. Samples for registration shall be tested in duplicate in a suitable accelerated weathering apparatus (*see* C-4.1) and samples drawn from the bulk supply shall be tested in a similar manner.

C-4.2.2 Commonly used cycles and test conditions are given in Table 3. However, any other cycle may be

used if mutually agreed upon between the purchaser and the supplier. The temperature of water for specimen spray shall be $16 \pm 5^\circ\text{C}$. The term cycle is the set of exposure conditions (light, light plus water spray, dark periods) that are repeated.

C-4.2.3 The exposed film shall be evaluated for gloss and various film properties as prescribed under C-3.2.

C-4.2.4 The requirement of this test on a sample from bulk supply shall be taken to have been satisfied if the gloss retention shall be minimum 40 percent of the original and the performance in respect of the other film characteristics is generally similar to that obtained with the registered sample.

Table 3 Test Cycles Commonly Used for Carbon-Arc Exposure Testing of Paints
(Clause C-4.2.2)

Cycle Description	Black Panel Temp. °C	Typical Uses
(1)	(2)	(3)
102 min light 18 min light and water spray 18 h using;	63 ± 2.5	General coatings General coatings
102 min light 18 min light and water spray 6 h at 95 + 4 percent relative humidity with no spray	63 ± 2.5 75 ± 3	
48 min light 12 min light and water spray 4 h light 4 h water spray 12 h light	63 ± 2.5 63 ± 2.5	Original equipment Manufactured coating Exterior pigmented Paints
12 h water spray 8 h light 10 h light and water spray 6 h water spray	63 ± 2.5	Exterior wood stains and clears Marine enamels

ANNEX D*(Clause 6.8)***TEST FOR RESISTANCE TO ACID****D-0 GENERAL****D-0.1 Outline of the Method**

A test panel coated with the enamel, after specified drying period, is immersed in a definite concentration of sulphuric acid for 24 h after which it is washed, dried and compared in performance with a panel prepared with the registered sample data.

D-1 PROCEDURE

D-1.1 Apply a coat of the finishing enamel, as specified in 2.2 of IS 101 (Part 6/Sec 1) on a 150 mm × 100 mm clean glass panel to give a dry film mass commensurate

with the mass in kg/10 litres of the material. Protect the edges of the panel by applying a coat of wax. Allow the panel to air-dry in a horizontal position for 48 h under specified laboratory drying conditions [see IS 101 (Part 1/ Sec 3)]. Immerse the panel in a 2 percent (*m/v*) solution of concentrated sulphuric acid (relative density 1.84) (see IS 266) for 24 h at room temperature. Remove the panels, wash in running fresh water and allow to dry for 1 h.

D-1.2 The tested portion shall not show signs of disintegration. The colour shall not vary more than slightly from that of untested portion of the test panel.

ANNEX E*(Clause 6.9)***TEST FOR RESISTANCE TO ALKALI****E-0 GENERAL****E-0.1 Outline of the Method**

The film of the material is tested with a solution of laundry soap followed by a solution of sodium carbonate, washed dried and compared in performance with a panel prepared with the registered sample.

E-1 PROCEDURE

E-1.1 Immerse a panel prepared as prescribed in **D-1.1** in a 1 percent (*m/v*) solution of laundry soap (see Type 1 of IS 285) for half an hour at temperature

of $27 \pm 2^\circ\text{C}$. Remove, wash in running water, dry for an hour and examine the film and then subject it to test as prescribed under **E-1.2**.

E-1.2 Immerse the panel in a 2 percent (*m/v*) solution of sodium carbonate of analytical reagent grade (see IS 296) for half an hour at a temperature of $27 \pm 2^\circ\text{C}$. Remove the panel, wash in running water, dry for an hour and examine the film.

E-1.3 The tested portion shall not show signs of disintegration. The colour shall not vary more than slightly from that of the untested portion of the test panel.

ANNEX F

[Table 2, Sl No. (xi)]

ACCELERATED STORAGE STABILITY TEST**F-1 PROCEDURE**

F-1.1 Store the paint sample in a closed 500-ml container and keep at 60°C for 96 h.

F-1.2 After the test, paint shall not gel, liver, curdle or increase in viscosity by more than 20 percent of the

original value and there shall be no evidence of seeding. The paint shall meet the drying requirements and produce a film free from streaking, mottling and seeding. Further, for finishing paint, change in gloss value shall not be more than 5 units from that of original value.

ANNEX G

(Clause 10.3.2)

TESTING PROGRAMME

G-1 When a purchaser orders for supply of paint (conforming to this standard) in lots to be delivered, over a period of time, it is assumed that not all of the tests specified shall be carried out on samples representing of each lot or consignment. The extent and frequency of the tests may vary depending on many factors and on choice of purchaser. The following programme of tests is, however, may be useful for the guidance of purchasers, particularly in relation to vendor's certification. It may also provide a useful tool to establish a testing programme when an inspecting agency acting on behalf of a purchaser, is required to examine lots of products for compliance to this standard.

G-1.1 Programme 1

Following tests to be made on first lot and on every subsequent lot:

- a) Non-volatile content,
- b) Mass per 10 litre,
- c) Condition in container,
- d) Fineness of grind,
- e) Thinning properties,

- f) Drying time,
- g) Colour,
- h) Gloss,
- j) Finish, and
- k) Viscosity.

G-1.2 Programme 2

Following tests to be made on first lot and subsequently as and when agreed upon:

- a) Flexibility and adhesion,
- b) Scratch resistance, and
- c) Acid resistance and alkali resistance.

G-1.3 Programme 3

Following tests to be made on first lot alone:

- a) Durability,
- b) Keeping qualities,
- c) Volume solids percent,
- d) Phthallic anhydride content of non-volatile vehicle, percent by mass, and
- e) Flash point.

ANNEX H

(Foreword)

COMMITTEE COMPOSITION

Paints, Varnishes and Related Products Sectional Committee, CHD 20

<i>Organization</i>	<i>Representative (s)</i>
In personal capacity (14, Orion, Oomer Park, Bhulabhai Desai Road, Mumbai 400026)	SHRI RAVI MARPHATIA (<i>Chairman</i>)
Addisons Paint & Chemicals Ltd, Chennai	SHRI R. SRINIVASAN
Asian Paints (India) Ltd, Mumbai	SHRI A. B. MENON DR B. P. MALIK (<i>Alternate</i>)
Bajaj Auto Limited, Pune	REPRESENTATIVE
Berger Paints India Ltd, Howrah	SHRI K. NIRMAL KUMAR SHRI N. K. RAY (<i>Alternate</i>)
Bharat Heavy Electricals Ltd, Tiruchirapalli	SHRI M. SOMU
Central Building Research Institute, Roorkee	DR L. K. AGARWAL DR K. K. ASTHANA (<i>Alternate</i>)
Central Public Works Department, New Delhi	REPRESENTATIVE
Colour-Chem Limited, Thane	SHRI R. R. VAIDYA
Consumer Unity & Turst Society (CUTS), Jaipur	SHRI SANDEEP SINGH
Continental Coatings Pvt Ltd, Chennai	SHRI M. B. SATYANARAYANA
Directorate General of Supplies & Disposals, New Delhi	REPRESENTATIVE
Export Inspection Council of India, New Delhi	REPRESENTATIVE
Goodlass Nerolac Paints Ltd, Mumbai	SHRI S. V. PORWAL
Hindustan Shipyard Ltd, Visakhapatnam	SHRI P. V. RAMANA MURTHY SHRI A. P. CH. N. PRASAD (<i>Alternate</i>)
ICI (India) Ltd, Kolkata	REPRESENTATIVE
Indian Institute of Chem Technology, Hyderabad	DR K. V. S. N. RAJU
Indian Paints Association, Kolkata	DR M. B. GUHA SHRI V. M. NATU (<i>Alternate</i>)
Indian Petrochemicals Corp Ltd, Vadodra	REPRESENTATIVE
Indian Small Scale Paint Association, Mumbai	REPRESENTATIVE
Jenson & Nicholson (India) Ltd, Gorifa, 24 Parganas (N), West Bengal	REPRESENTATIVE
Maruti Udyog Ltd, Gurgaon	SHRI T. K. BANERJEE
Ministry of Defence (DGQA), Kanpur	SHRI M. S. SULTANIA SHRI L. S. MISHRA (<i>Alternate</i>)
Ministry of Environment & Forest, New Delhi	REPRESENTATIVE
Ministry of Industry, New Delhi	SHRI P. K. JAIN SHRI N. C. TIWARI (<i>Alternate</i>)
Mumbai Paints Limited, Mumbai	REPRESENTATIVE
National Organic Chemical Industries Ltd, Mumbai	DR B. V. BAPAT
National Test House (ER), Kolkata	DR B. B. PAL DR SUNIL KUMAR SAHA (<i>Alternate</i>)
Office of the Development Comissioner (SSI), New Delhi	SHRI Y. S. BHATNAGAR SHRI A. K. JAIN (<i>Alternate</i>)
Office of the Scientific Adviser to Chief Naval Staff, New Delhi	SHRI R. K. SEHGAL
Oil and Natural Gas Corporation Ltd, New Delhi	REPRESENTATIVE
Oil Technologists Association of India, Kanpur	REPRESENTATIVE

(Continued on page 16)

(Continued from page 15)

<i>Organization</i>	<i>Representative(s)</i>
Punjab Paint Colour and Varnish Works, Kanpur	SHRI G. N. TIWARI
Research Designs & Standards Organization, Lucknow	REPRESENTATIVE
Resins & Plastics Limited, Mumbai	SHRI M. C. CHOKSI
Shriram Institute for Industrial Research, Delhi	REPRESENTATIVE
Sudarshan Chemicals Industries Ltd, Pune	SHRI SUDHIR H. HARSULE SHRI MAHESH D. METTELLOO (<i>Alternate</i>)
Tata Engineering & Locomotive Co Ltd, Jamshedpur	REPRESENTATIVE
The Indian Turpentine & Rosin Co Ltd, Bariely	SHRI R. C. BASSI
Travancore Titanium Products Ltd, Triruvananthapuram	SHRI V. S. BASHIR DR K. GOPINATHAN NAIR (<i>Alternate</i>)
U. K. Paints Industries, New Delhi	SHRI V. K. NAYYAR
BIS Directorate General	SHRI S. K. CHAUDHURI, Director & Head (CHD) [Representing Director General (<i>Ex-officio</i>)]
<i>Member Secretary</i>	
SHRI N. K. BANSAL Joint Director (CHD), BIS	

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 1986* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Director (Publications), BIS.

Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards: Monthly Additions'.

This Indian Standard has been developed from Doc : No. CHD 20 (946).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

BUREAU OF INDIAN STANDARDS

Headquarters :

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110 002
Telephones : 2323 0131, 2323 33 75, 2323 9402

Telegrams : Manaksanstha
(Common to all offices)

Regional Offices :

	Telephone
Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg NEW DELHI 110 002	{ 2323 7617 2323 3841
Eastern : 1/14 C.I.T. Scheme VII M, V. I. P. Road, Kankurgachi KOLKATA 700 054	{ 2337 8499, 2337 8561 2337 8626, 2337 9120
Northern : SCO 335-336, Sector 34-A, CHANDIGARH 160 022	{ 60 3843 60 9285
Southern : C.I.T. Campus, IV Cross Road, CHENNAI 600 113	{ 2254 1216, 2254 1442 2254 2519, 2254 2315
Western : Manakalaya, E9 MIDC, Marol, Andheri (East) MUMBAI 400 093	{ 2832 9295, 2832 7858 2832 7891, 2832 7892
Branches : AHMEDABAD. BANGALORE. BHOPAL. BHUBANESHWAR. COIMBATORE. FARIDABAD. GHAZIABAD. GUWAHATI. HYDERABAD. JAIPUR. KANPUR. LUCKNOW. NAGPUR. NALAGARH. PATNA. PUNE. RAJKOT. THIRUVANANTHAPURAM. VISAKHAPATNAM.	

Tender Check List

Tender Enquiry No- 2200024 dt 28/05/2022

Annexure-IV

Technical and Other Requirements			Suppliers Remarks
SI No	Description	BHEL Requirement	
1	The bidders should have supplied Paint and Primer during last 03 (three) years (from the last day of the previous month of tender submission). Copies of purchase order/ delivery challan is required to be submitted as a documentary proof.	purchase order/ delivery challan copy/ies	
2	The supplier should have to submit audited Balance Sheets and Profit Loss statements of last three years (FY18-19, FY19-20 and FY20-21). Average annual financial turnover during the last 03 years, ending March 2021 should be at least Rs 0.69 Lakhs.	Audited Balance sheet and Profit Loss statement of FY 18-19, 19-20, 20-21	
3	For Manufacturers: Certification/ declaration of being manufacturer along with valid ISO 9001 certificate along with manufacturing process chart.	A. Supplier's confirmation for Manufacturer , ISO 9001 Certificate & manufacturing process Chart	
	For Trader/ Dealer/ Distributor/ Agent etc: Authorization letter from their OEM/ Principal/ manufacturer is to be submitted.	Authorization letter from their OEM/ Principal/ manufacturer is to be submitted.	
4	Declaration by vendor for Sister Concern (Format in GTC of Tender)	Seal and signed	
5	Self-Declaration on Class I/Class II/Non Local under Make in India (Format in GTC of Tender)	Seal and signed	
6	No Deviation Certificate	Yes/No	
7	Registraion Certificate under MSME Act if applicable	To be submitted	
8	Udhyan Certificate if applicable	To be submitted	
9	MSE owned by SC/ST declaration if applicable	Yes/No, If Yes, Provide supporting document	
10	MSE owned by Women declaration if applicable	Yes/No, If Yes, Provide supporting document	
11	Acceptance of NIT, Technical Specification and General terms and conditions	Yes/No	
	Remarks if any		

Seal and Signed by Bidder