



POF 1262-A
(INDIGENOUS
SUPPLIES)

Government of Pakistan
PAKISTAN ORDNANCE FACTORIES
TENDER ENQUIRY

To M/s _____

Dear Sirs,

Reference : TENDER ENQUIRY NO. **0195/LP/FILL/54**

DATED **19-OCT-24**

You are requested to submit quotations for the item(s) noted in the Schedule to the Tender. Please note the following instructions for filling the tender:-

1. SUBMISSION OF TENDER

- 1.1 Tenders will be opened at **12:00 hours** on **14-DEC-24** at Bid Centre adjacent to Rabita Hall, POF Wah Cantt. Quotation must be submitted electronically on **www.ebidding.pof.gov.pk** as well as in hard form (duly sealed in envelope) before 30 minutes of opening time. The tender received late will not be entertained. You may witness the opening of the tender if you so desire. If a representative is deputed, he should bring a letter of authority from you.

Tender Enquiry No: **0195/LP/FILL/54**

Tender to be opened on: **14-DEC-24**

Address as follows:-

(www.ebidding.pof.gov.pk) BID CENTER

ADJACENT TO RABITA HALL

POFs, WAH CANTT.

2. GENERAL INSTRUCTIONS REGARDING PREPARATION OF QUOTATIONS

- 2.1 **For Materials**, the prices should be filled in column 5 and delivery date in column 7 of the schedule to this Tender Enquiry. As per **PPRA Rule 36(b)**, **Single Stage two envelope method** will be utilized for "Open competitive bidding." Moreover, technical & commercial evaluation of Bids will be carried out strictly as per PPRA rules and contract(s) will be awarded to the most advantageous bidder(s).
- 2.2 **For Plant and Machinery**, you are required to quote in two parts:-
Part I "Technical Offer": It should exclusively give technical details and literatures/brochures of the offered plant, machinery and equipment; validity date; delivery schedule; and signed undertaking given on the schedule to this Tender Enquiry. It must not indicate price, costs etc.

Cont....P-2

Part II "Commercial Offer": It should indicate the commercial terms e.g. price, terms of payment, mode of payment, mode of supply.

- 2.3 The quotation must remain valid for, at least 90 days from the date of opening of commercial tenders, extendable if so desired.
- 2.4 The quotation should hold good for any reduced or enhanced quantities without notice.
- 2.5 In the event of non-acceptance of offer, intimation may be given to the Tenderers on their request.
- 2.6 Conditional offers or alternative offers are likely to be ignored.
- 2.7 Quotations should be based on:-

F.O.R. station of dispatch basis, i.e. delivered free on rail, inclusive of packing and forwarding charges. The stores will be booked under Military Credit Note, to be provided by the purchaser.

and/or

Free delivery at POF's stores at **WAH CANTT**

In this case Octroi duty, will be payable by the supplier.

- 2.8 Taxes and Duties etc. where applicable, must be shown separately, quoting references to Registration No. in cases of Sales Tax and relevant authority in the case of others. Offers without these clarifications and inclusive of Taxes and Duties may be ignored.
- 2.9 Taxes and duties levied on or after Tender opening date or on or after the date offer was signed and dispatched will be allowed to include in the offered rates.
- 2.10 "Suppliers will furnish a certificate, issued by Excise & Taxation deptt., that he has cleared all Professional Tax payable by him" offers received without this certificate will be rejected.
- 2.11 Suppliers will render necessary information regarding hazardous effects on environment, of the material/products supplied by them, in their quotations and shipping/dispatch documents.
- 2.12 If the requisite information is not furnished on the T.E forms or offer received is not conformity with the requirement of the T.E such offer shall be ignored.

3. INSPECTION

- 3.1 Supplies shall be subject to the inspection and acceptance by the competent inspection authority nominated by the Purchaser, who will arrange it at his own cost. Inspection facilities such as tools, test equipment, instruments etc will, however, be provided by the Suppliers in accordance with the relevant specifications.
- 3.2 Where considered necessary by the Purchaser, stores may be obtained on Warranty/Guarantee subject to inspection on receipt. Rejected stores will be removed and replaced with the acceptable stores by the Supplier at his own expense, within a specified time.

4. TENDER FEE

The tender must be accompanied by a copy of non-refundable fee by means of a crossed postal order/pay order for Rs. 500/- in favour of: **Director-Admin-POFs, Wah Cantt.** The tender fee instrument in original must be provided on day/date of tender opening in the Bid Center.

4.1 TENDER SAMPLE

Where required, offer must accompany tender sample., strictly according to the description and specification given in Tender Enquiry. Offer not accompanied by tender sample will NOT be entertained excepting the established and reputable firms who have either previously satisfactorily supplied the same or similar stores or have submitted an acceptable sample thereof against previous T.E.

5. BID Security

5.1 A copy of Bid Security should accompany the tender in shape of deposit at call receipt/Pay Order/Banker Cheque from scheduled bank drawn in favour of :-

GM PP&C FILLING

5.2 Bid security instrument in original must be provided on the day/date of tender opening in the Bid Center as under:

- a. Registered/indexed firms including foreign firms - 2% of quoted value subject to the maximum ceiling of Rs. 0.5 Mn.
- b. Registered/un-indexed firms including foreign firms - 3% of quoted value subject to the maximum ceiling of Rs. 0.75 Mn.
- c. Unregistered Firms including foreign firms - 5% of quoted value subject to the maximum ceiling of Rs. 1.00 Mn.
- d. Govt organization/production units/state owned enterprises/welfare projects of Svcs HQ - Rs 0.50 M. can be waived off on request by DG(C)
- e. Bid money will be returned to unsuccessful (less first three lowest quotee firms) bidders on opening of commercial offers
- f. Bid money will be returned to successful bidders on submission of performance bond/unconditional B.G.
- g. Quotation accompanied with less bid money will be accepted on provisional basis for 10 x days after opening of bids. However the firms are bound to provide/furnish the balance bid money within 10 x days after opening of bid otherwise such quotations will be ignored or rejected
- h. Offers received without Bid Security will not be entertained.
- i. Bid money will be forfeited in case the quotation is withdrawn before the expiry of its validity date.

6. ACCEPTANCE OF OFFERS

6.1 POF may reject all bids or proposals at any time prior to the acceptance of bid(s) or proposal, but is not required to justify grounds for its rejection. POF shall incur no liability towards supplier or contractor who have submitted bids or proposals.

6.2 PERFORMANCE BOND

- (a) The successful bidders shall provide performance bond which shall not exceed 10% of contract value, in the form of Deposit At Call Receipt from a scheduled Bank; or, an un-conditional Bank Guarantee on a prescribed format. The performance Bond will be in favour of C.M.A.(POF) Wah Cantt. It will be returned on satisfactory completion of contract.
- (b) If the Supplier fails to furnish the Performance Bond within the specified time, such failure will constitute a breach of the contract and the Purchaser shall be entitled to make other arrangements for purchase of the stores at the risk and expense of the Supplier.

6.3 Performance Bond from State owned organizations may be waived off at the discretion of the Purchaser.

6.4 **FAILURE TO SUPPLY THE STORES**

All deliveries must be completed by the specified date. In case of failure to deliver the stores within the scheduled time should have arisen from "Force Majeure", which the purchaser may admit as reasonable ground for further time, he will allow such additional time as he may consider to have been required by the circumstances of the case. Otherwise, he will be entitled, at his discretion, to cancel the contract; and/or claim liquidated damages upto 2% but not less than 1% of the contract price of the items and their quantities for each and every month or part of a month, beyond the specified delivery date, during which these may not be delivered, subject to a maximum of 10% of the total contract value of the particular stores which remained unsupplied either in part or in full: or, to purchase from elsewhere, the unsupplied stores at the risk and cost of the supplier.

6.5 **PAYMENT**

Payment will be made by the CMA (POF) through crossed cheque on receipt/acceptance of stores on our prescribed bill form supported by receipt voucher on part/full supply basis.

(a) Payment of duties/Taxes including professional tax (where applicable) must be supported by proof of having paid these to concerned Govt. Taxation Deptt.

7. **SECURITY OF INFORMATION**

The tenderer and his employees must not communicate any information relating to the sale/purchase of stores under this enquiry to any person other than the manufacturer or to any press or agent not authorised in writing by POFs to receive it.

Please return the Schedule to the Tender duly signed by the specified date, along with the specifications, drawings etc. if any, enclosed herewith - even if you are unable to quote.

WARNING In case the firm abstain from making offers or fail to return/acknowledge the tender form by the specified date on three consecutive occasions, no further tender enquiry may be issued to them and their names would liable to removed from the approved list.

Yours faithfully

SUMAIRA YAMIN
MANAGER PURCHASE FILL

for PAKISTAN ORDNANCE FACTORIES

PAKISTAN ORDNANCE FACTORIES

SCHEDULE TO TENDER NO. 0195/LP/FILL/5419-OCT-24**(1) FOR MATERIALS**

(1)	(2)	(3)	(4)	(5)	(6)		(7)
Item No.	Description with Specs. etc.	Unit	Qty	Quoted Value	Price Per Unit FOR or free delivery		Delivery Date
					In Figures	In Words	

1	CHIPBOARD UNLINED FOR DISCS 635 X 760 X 3.17 MM THICK SPEC NO. DEF-STAN 81-40/ISSUE-3	SHEET	2260				02 MONTHS
---	---------------------------------------------------------------------------------------	-------	------	--	--	--	-----------

Total Rs =	
+ GST =	
Total value Rs =	

(2) For Plant & Machinery:
Specification:-

(3) Special Conditions

(1) Required Delivery period: 02 Months after placement of contract.

(2) Inspection of store will be carried out by Director Q.A POF Wah Cantt. 05% Super check by user section,

(3) Firms registered with Sales Tax and Income Departments who are on Active Taxpayers List (ATL) of FBR are eligible to participate in the bid. Documentary proof of the same must be attached with the bid.

(4) Participating firms must confirm T.E Spec Parameters. If the firm is participating 1st time in tender of requisite store, the sample of requisite store strictly as per required parameters have to be submitted alongwith technical quotation.

(5) The tender received without electronic means will not be entertained. You may witness the opening of tender if you so desire. If a representative is deputed, he should bring a letter of authority.

(6) Hard copy of both technical & financial quotation must also be reached to Bid Centre before tender opening. Photocopy of bid money hiding the amount must be accompanied with technical quotation.

(7) Quotation must remain valid for 90 days from date of commercial tender opening and should hold good for any reduced or enhanced quantity.

(8) Photocopy of NTN & PTC Certificate duly attested by Gazetted Class-I Officer must be attached with the bid.

(9) Participating firms should have not defaulted in any contract with POF or any other govt. organization.

(10) Bids will be opened as per PPRA Rule 36 (b) "Single Stage-Two Envelope Procedure" in which the bid shall comprise of two separate envelopes: Technical proposal and commercial proposal. Initially only Technical Offer will be opened.

(11) Price escalation clause is not allowed. No fax or e-mail offer will be accepted.

(12) Supplier must accept all the terms and conditions embodied in the form POF 1281 (General conditions of contract) and in T.E general instructions Performa form POF 1262 A (indigenous supplies).

(13) Rates and sales Tax must be shown separately otherwise rate will be considered inclusive of G.S.T.

(14) Please clearly confirm our specs / drawing. Conditional or alternative offers are likely to be ignored.

(15) The store must be protected adequately and appropriately against damages from environmental effects, water or other substances during journey/transportation to withstand the rough handling involved in the transit and provide preservation of store while held in the storage by the supplier.

(16) Any quantity of store, if found defective functionally will essentially be replaced by the supplier free of cost under his own arrangements.

(17) The firm will furnish warranty/ Guarantee for 01 year.

(18) The firm will be liable to deposit of stamp duty @ 0.25% of contract value to respective revenue office.

PAKISTAN ORDNANCE FACTORIES

SCHEDULE TO TENDER NO. 0195/LP/FILL/54

19-OCT-24

(1)	(2)	(3)	(4)	(5)	(6)		(7)
Item No.	Description with Specs. etc.	Unit	Qty	Quoted Value	Price Per Unit FOR or free delivery		Delivery Date
					In Figures	In Words	

Undertaking

Should our offer be accepted, we hereby undertake to supply the stores/render the services contracted on the basis of General Conditions of Contract embodied in Form POF 1281, and to deposit the performance bond within the prescribed time, failing which it will constitute a breach of contract, and POF will have the right to purchase the stores/services elsewhere at our risk and cost.

Place _____
 Date _____

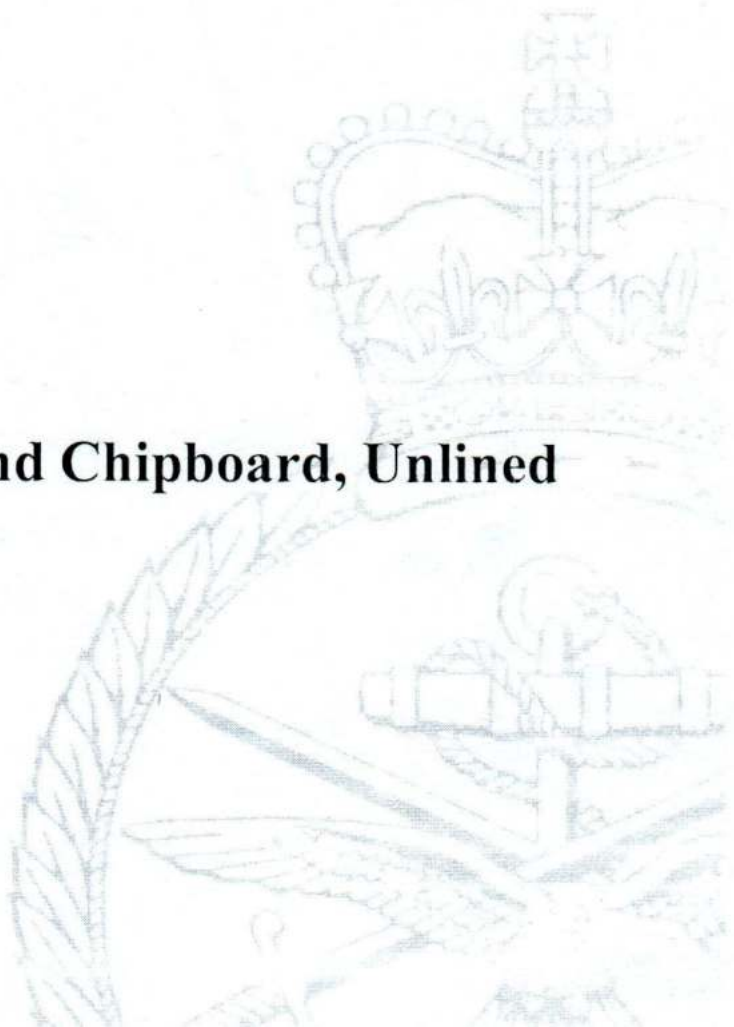
Signature of the Tenderer _____
 Name _____
 Position _____
 Address _____
 Income Tax G.I.R. No _____
 Official Stamp _____



Ministry of Defence
Defence Standard 81-40 / Issue 3

Issue 3 Publication Date 23 September 2005

Chipboard, Lined and Chipboard, Unlined



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Foreword

AMENDMENT RECORD

Amd No	Date	Text Affected	Signature and Date

REVISION NOTE

This standard is raised to Issue 3 to update its content.

HISTORICAL RECORD

This standard supersedes the following:

Def Stan 81-40 Issue 2 dated August 1997

Def Stan 81-40 Issue 1 dated November 1980

- a) This standard provides requirements for chipboard, lined and chipboard unlined.
- b) This standard has been produced on behalf of the Defence Material Standardization Committee (DMSC) by the Defence Logistics Organisation (DLO), Technical Enabling Services (TES), Defence Packaging Group (Def Pkg).
- c) This standard has been agreed by the authorities concerned with its use and is intended to be used whenever relevant in all future designs, contracts, orders etc. and whenever practicable by amendment to those already in existence. If any difficulty arises which prevents application of the Defence Standard, the Directorate of Standardization (DStan) shall be informed so that a remedy may be sought.
- d) Any enquiries regarding this standard in relation to an invitation to tender or a contract in which it is incorporated are to be addressed to the responsible technical or supervising authority named in the invitation to tender or contract.
- e) Compliance with this Defence Standard shall not in itself relieve any person from any legal obligations imposed upon them.
- f) This standard has been devised solely for the use of the Ministry of Defence (MOD) and its contractors in the execution of contracts for the MOD. To the extent permitted by law, the MOD hereby excludes all liability whatsoever and howsoever arising (including, but without limitation, liability resulting from negligence) for any loss or damage however caused when the standard is used for any other purpose.

Collation Page

Chipboard, Lined and Chipboard, Unlined

1 Scope

This Standard specifies requirements for lined and unlined chipboard suitable for use in ammunition components and packing.

2 Warning

The Ministry of Defence (MOD), like its contractors, is subject to both United Kingdom and European laws regarding Health and Safety at Work, without exemption. All Defence Standards either directly or indirectly invoke the use of processes and procedures that could be injurious to health if adequate precautions are not taken. Defence Standards or their use in no way absolves users from complying with statutory and legal requirements relating to Health and Safety at Work.

3 Normative References

3.1 The publications shown below are referred to in the text of this standard. Publications are grouped and listed in alpha-numeric order.

BS 506-1	Methanol for Industrial Use Specification for Methanol
BS 507	Specification for Ethanol for Industrial Use
BS 579	Specification for Diethyl Ether (Technical)
BS 2924	Aqueous Extracts of Paper, Board and Pulp Part 1: Method for Determination of pH Part 3: Titrimetric Method for the Determination of Water-soluble Sulfates Part 4: General Method for Determination of Water-soluble Chlorides
BS 3591	Specification for Industrial Methylated Spirits
BS EN 20187	Paper, Board and Pulps Standard Atmosphere for Conditioning and Testing and Procedure for Monitoring the Atmosphere and Conditioning of Samples
BS EN 20287	Paper and Board Determination of Moisture Content Oven-drying Method
BS EN 21974	Paper Determination of Tearing Resistance (Elmendorf Method)

BS EN ISO 534	Paper and Board Determination of Thickness, Density and Specific Volume
BS EN ISO 186	Paper and Board Sampling to Determine Average Quality
BS EN ISO 1924-2	Paper and Board Determination of Tensile Properties Constant Rate of Elongation Method
BS EN ISO 3696	Water for Analytical Laboratory Use Specification and Test Methods
BS ISO 2144	Paper, Boards and Pulps Determination of Residue (Ash) on Ignition at 900 °C
BS ISO 9197	Paper, Board and Pulps Determination of Water-soluble Chlorides
BS ISO 9198	Paper, Board and Pulps Determination of Water-soluble Sulfates

3.2 Reference in this Standard to any normative references means in any Invitation to Tender or contract the edition and all amendments current at the date of such tender or contract unless a specific edition is indicated.

3.3 In consideration of clause **3.2** above, users shall be fully aware of the issue and amendment status of all normative references, particularly when forming part of an Invitation to Tender or contract. Responsibility for the correct application of standards rests with users.

3.4 DStan can advise regarding where normative references documents are obtained from. Requests for such information can be made to the DStan Helpdesk. How to contact the helpdesk is shown on the outside rear cover of Def Stans.

4 Materials and Manufacture

The material shall be made from recycled cellulose fibre.

5 Information to be Supplied by the Purchaser

The purchaser shall state clearly in the contract or order the thickness and size of the sheets, and whether lined or unlined board is required.

6 Test Requirements

6.1 Where conditioning is specified in the appropriate method, this shall be in accordance with BS EN 20187 using the conditioning atmosphere of 23 °C ± 1 °C and relative humidity 50 % ± 2 %.

6.2 The material shall be sampled in accordance with BS EN ISO 186 and when tested by the method specified, shall comply with the requirements listed in **Table 1** and **Table 2**.

Table 1 —Board Requirements

Test	Property	Units	Limits	Method
1	pH of water extract (hot extract)		5,0 min 8,0 max	BS 2924 Part 1
2	Chloride content, calculated as NaCl	% m/m	0,05 max	BS ISO 9197 * BS 2924 Part 4
3	Sulfate content, calculated as Na ₂ SO ₄	% m/m	0,25 max	BS ISO 9198 * BS 2924 Part 3
4	Fatty acids, calculated as oleic acid (C ₁₇ H ₃₃ COOH)	% m/m	0,25 max	Annex A
5	Matter soluble in ether	% m/m	2,5 max	Annex B
6	Moisture	% m/m	11,5 max	BS EN 20287
7	Ash	% m/m	11,0 max	BS ISO 2144
8	Thickness	mm	see Table 2	BS EN ISO 534
9	Tensile strength	kN/m	see Table 2	BS EN ISO 1924-2
10	Tearing strength	mN	see Table 2	BS EN 21974
* This standard has been withdrawn but test results to this standard will be accepted.				

Table 2 — Thickness Schedule

Minimum thickness, mm	Minimum tensile strength, kN/m		Minimum tear strength, mN	
	Machine direction	Cross direction	Machine direction	Cross direction
	0,35	6,0	2,3	550
0,40	7,0	2,7	650	1100
0,50	8,7	3,3	900	1350
0,65	11,0	4,3	1850	2800
0,75	13,0	5,0	2200	3100
1,00	17,3	7,0	2650	3550
1,25	21,7	8,7	3500	4450
1,80	30,7	12,3	4550	5500
2,30	39,7	16,0	-	-
2,55	43,7	17,7	-	-
3,20	55,0	22,0	-	-

NOTE Intermediate thicknesses of board may be requested, in which case the tensile strength and tear resistance shall be proportional to the figures given in the above Schedule.

7 Packaging

7.1 Unless the form of packaging is specified in the contract or order, the chipboard lined, and chipboard, unlined shall be packed in material suitable for the product. The use of dirty or contaminated packaging shall render the whole consignment liable to rejection.

7.2 Each package shall be legibly and durably marked according to statutory requirements and with at least the following detail;

Designation viz: CHIPBOARD, LINED AND CHIPBOARD, UNLINED as appropriate

Defence Standard viz: DEF STAN 81-40/3

Contract or order number:

Size of board (length and width):

Thickness of board:

Distinctive lot and/or batch number:

Quantity of contents:

Date of manufacture:

Manufacturer's initials or recognised Trade Mark:

and any other markings called for in the contract or order.

Annex A

Method of Test for the Determination of Fatty Acids

A.1 Apparatus

Standard laboratory glassware - Grade A.

Soxhlet apparatus of capacity approximately 200 ml.

Balance accurate to two decimal places.

A.2 Reagents

Chemicals of analytical reagent quality.

Water complying with BS EN ISO 3696 grade 3

Diethyl ether complying with BS 579

Methanol complying with BS 506

Ethanol 90 % v/v complying with BS 507

Sodium hydroxide, c NaOH = 0,1 mol/l

Sulphuric acid ($d = 1,84$ g/ml)

Petroleum spirit (40 °C to 60 °C)

Methylated spirit 99 % v/v complying with BS 3591, previously brought to a faint pink colouration by the addition of phenolphthalein and 0,1 mol/l sodium hydroxide solution.

Phenolphthalein indicator solution. Dissolve 0,5 g of phenolphthalein in 50 ml of ethanol and add 50 ml of water with constant stirring.

Sodium chloride solution 5 g/100 ml water

A.3 Procedure

A.3.1 Preparation of extract

Cut a sample of the chipboard into pieces approximately 10 mm square. Weigh, to the nearest 0,01 g, approximately 30 g of this prepared sample and place directly into a Soxhlet apparatus of 200 ml capacity, without thimble. Extract the sample with diethyl ether for 16 hours on a water bath. The diethyl ether shall syphon from the Soxhlet apparatus approximately 9 times per hour. Filter the extract through a No 1 Whatman filter-paper, make up to 150 ml with diethyl ether in a measuring cylinder, mix and divide into 2 portions in separate flasks, one of 50 ml (portion A) and one of 100 ml (portion B).

A.3.2 Total acidity (portion A)

Evaporate the diethyl ether from the extract until the volume is reduced to approximately 10 ml then add 20 ml of the methylated spirit. Boil the mixture under a reflux condenser for 10 minutes \pm 1 minute, cool to room temperature, add a few drops of phenolphthalein indicator solution, and titrate with 0,1 mol/l sodium hydroxide solution and record the volume (V_1) ml.

Carry out a blank titration on the reagents and record the volume (V_2) ml.

A.3.3 Calculation

$$\text{Total acidity as oleic acid (C}_{17}\text{H}_{33}\text{COOH), \% m/m} = \frac{(V_1 - V_2)}{m_1} \times 2.823$$

where m_1 = mass of sample in volume of extract taken, i.e. approximately 10 g

A.3.4 Resin acidity (portion B)

Evaporate the diethyl ether from the extract and then add 30 ml of petroleum spirit to the residue. Boil the mixture under a reflux condenser for 30 minutes. After cooling, filter the extract into a separating funnel through a No 41 Whatman filter-paper. Wash the flask and filter-paper with petroleum spirit then add the washings to the separating funnel. Wash the petroleum spirit in the separating funnel with three successive quantities of 20 ml of water, then run off the petroleum spirit into a flask. Evaporate the petroleum spirit from the flask, dry the residue for 30 minutes at 95 °C to 100 °C then add 30 ml of methanol to which has previously been added 2 ml of sulfuric acid.

Boil the mixture under a reflux condenser for exactly 180 seconds \pm 10 seconds and immediately add 50 ml of the sodium chloride solution. Cool the flask and transfer the contents to a separating funnel. Wash the flask 3 times with 20 ml portions of diethyl ether, adding the washings to the separating funnel. Shake the funnel vigorously and, after allowing the layers to separate, run off the aqueous layer into a second separating funnel. Extract the aqueous layer with two further separate 20 ml portions of ether, combining the ether extracts in the original separating funnel.

Wash the combined extract with successive 20 ml portions of sodium chloride solution and continue washing until one portion, to which has been added a few drops of phenolphthalein indicator and one drop of 0.1 mol/l sodium hydroxide solution remains pink.

Transfer the washed diethyl ether extract to a flask and evaporate off the diethyl ether until about 10 ml remain. Add 20 ml of the methylated spirit and boil the mixture under a reflux condenser for 10 minutes. Cool the flask, add a few drops of phenolphthalein indicator solution and titrate the contents with 0.1 mol/l sodium hydroxide solution (V_3) ml.

Carry out a blank determination similarly on the reagents (V_4) ml.

A.3.5 Calculation

$$\text{Resin acidity as oleic acid (C}_{17}\text{H}_{33}\text{COOH), \% m/m} = \frac{(V_3 - V_4)}{m_2} \times 2.823$$

where m_2 = mass of sample in volume of extract taken, i.e. approximately 20 g

A.4 Calculation

Fatty acids per cent = the difference between the per cent contents of total acidity (A.3.3) and per cent resin acidity (A.3.5).

Annex B

Method of Test for the Determination of Matter Soluble in Ether

B.1 Apparatus

Soxhlet apparatus of capacity approximately 75 ml

Balance accurate to two decimal places.

B.2 Reagent

Chemical of analytical reagent quality.

Diethyl ether complying with BS 579

B.3 Procedure

Cut a sample of the chipboard into pieces approximately 10 mm square. Accurately weigh approximately 5g of this prepared sample and record the mass (m_3). Place directly into a Soxhlet apparatus of 75 ml capacity, without thimble. Extract the sample with diethyl ether for 4 hours on a water bath. The diethyl ether shall syphon from the Soxhlet apparatus approximately 9 times per hour. Filter the extract through a No 1 Whatman filter paper into a weighed flask (m_4) and distil off the diethyl ether. Dry the flask in an oven at 95 °C to 100 °C for two hours. Allow to cool in a desiccator containing freshly activated silica gel and weigh. Repeat the drying for subsequent periods of 30 minutes until the difference in successive weighings does not exceed 2mg. Record the final mass (m_5).

B.4 Calculation

$$\text{Matter soluble in ether, \%} = \frac{m_5 - m_4}{m_3} \times 100$$

Where m_3 = mass of sample taken

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UK Defence Standardization

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File Reference

The DStan file reference relating to work on this standard is D/DSTAN/81/40/3.

Contract Requirements

When Defence Standards are incorporated into contracts users are responsible for their correct application and for complying with contractual and statutory requirements. Compliance with a Defence Standard does not in itself confer immunity from legal obligations.

Revision of Defence Standards

Defence Standards are revised as necessary by an up issue or amendment. It is important that users of Defence Standards should ascertain that they are in possession of the latest issue or amendment. Information on all Defence Standards is contained in Def Stan 00-00 Standards for Defence Part 3 Index of Standards for Defence Procurement Section 4 'Index of Defence Standards and Defence Specifications' published annually and supplemented regularly by Standards in Defence News (SID News). Any person who, when making use of a Defence Standard encounters an inaccuracy or ambiguity is requested to notify UK Defence Standardization (DStan) without delay on order that the matter may be investigated and appropriate action taken.