

# JUNAGADH AGRICULTURAL UNIVERSITY



## TENDER DOCUMENT FOR THE [TECHNICAL BID]

BY

Executive Engineer

Junagadh Agricultural University, Junagadh- 362 001

Telephone No. 0285 2670207,

E. Mail: exeengg@jau.in



જૂનાગઢ કૃષિ યુનિવર્સિટી, જૂનાગઢ

જાહેર નિવિદા નં. ૩ (૨૦૨૦-૨૧)

કાર્યપાલક ઇજનેરશ્રી, જૂનાગઢ કૃષિ યુનિવર્સિટી, જૂનાગઢ (ફોન નં. ૦૨૮૫-૨૬૭૦૨૦૭) ની કચેરીએથી સિવિલ કામ માટે અંદાજિત કિંમત રૂ. ૪.૭૧ લાખ ના કામ માટે વેબ મેઇલીંગ પદ્ધતિથી આઇટમ રેટ ટેન્ડર હાર્ડ કોપી મારફત મંગાવવામાં આવે છે. આ અંગેની જાહેરાત યુનિવર્સિટી વેબસાઇટ [www.jau.in](http://www.jau.in) ઉપર તા.૨૨.૦૬.૨૦૨૦ થી મુકવામાં આવશે. જે મુજબ ભાવો સીલ બંધ કવરમાં તા.૦૩.૦૭.૨૦૨૦ સુધીમાં (૧૮.૦૦) કલાક સુધીમાં કચેરીમાં મોકલવાના રહેશે. વધુ માહિતી કામકાજના દિવસો દરમિયાન ઉપરોક્ત કચેરીનો સંપર્ક સાંધવાથી મળી શકશે.

### Bid reference :

Period for downloading and submission of tender documents by R.P.A.D/Speed post	:	Dt.: 22-06-2020 to 03-07-2020 up to 18.00 hrs.
Physical submission of Tender Fee, EMD, other relevant documents as per check list of the tender as well as company printed literature other necessary documents by R.P.A.D./Speed Post	:	Up to 03-07-2020 18.00 hrs. to the office of the Executive Engineer, Junagadh Agril. University, "Mangal Nivas", Near Aksharvadi, B/h. Rajmoti Society, Vanthli Hiway Road, Junagadh-362 001
Probable date for opening of primary bid and verifying physically submitted documents and commercial bid	:	Dt. : 04-07-2020, 10.30 AM onward

**\*Tender fees of ₹ 900/- (Non Refundable)** through Demand Draft (DD) in favour of "J.A.U., Fund Account" SBI code: **60218** non refundable for entire tender

**\*EMD** for an amount of Rs.5,000/- (Rupees Five Thousands only) through Demand Draft / F.D.R. in favour of "J.A.U., Fund Account" SBI code: **60218** (Refundable)

**\*Note: The bidder will be entitled for immediate disqualification, if fails to submit the physical documents within time limit.**

**\*This tender consists of following Two parts**

[A] Envelop-1: Technical Bid

- Tender Fees, EMD, Tender Supporting Document as per checklist & terms conditions.

[B] Envelop-2: Price Bid

[C] Please Mention Name Of Work "Providing and Applying the Elastomeric Joint Sealant for Expansion Joint of Agriculture College Building at J.A.U., Porbandar" on both envelopes.

## TENDER SUPPORTING DOCUMENTS DETAIL

Sr. No.	Document / Certificate	Attached Yes /No	Yours Page No.
1.	Tender Fee: Demand draft of Rs. 900/- (Non-Refundable)		
2.	Earnest Money Deposit (EMD) of Rs. 5,000/- in the form of Fixed Deposit Receipt / Demand draft / FDR only (Refundable)		
3.	Vendors Profile, Company details		
4.	Partnership deed, Memorandum of article, Registration of firm etc.		
5.	G.S.T/VAT registration		
6.	Pan Card		
7.	Income Tax Return for last years (Assessment year 2017-18, 2018-19, 2019-20)		
8.	Affidavit of Non-black list (on Non-judicial stamp paper of Rs. 100) of any institute/ organization		
9.	Valid authorized dealer certificate for materials		
10.	An applicator shall be certificate by company, Only authorized certified applicator can quote the rate.		
11.	Guarantee/warranty obligation by tenderer / authorized applicator		

**Note:** 1) All photocopied documents must be attested with Seal and Signature.

2) All documents original shall be verified before works order.

### DECLARATION

It is verified that all the certificates/permissions/documents are currently valid as on date and have not been withdrawn/cancelled by the issuing authority. It is further verified that the certificates are as per the format and it is clearly and distinctly understood by us that the tender is liable to be rejected if on scrutiny any of these certificates is found not to be as per the prescribed format.

We further agree to produce on demand the original certificate/permission/ documents for verification at any stage during the processing of the tender.

We solemnly declare that we have attached all the documents mentioned herein above in the tender. We also understand that non-compliance of any documents will be treated as non-respective tender and we will lose our claim to participate in the Tender Enquiry automatically and our tender will be liable to be rejected

Name of the Firm:

Authorized Signature:

Name: Designation:

Seal of firm:

## **COMPANY DETAIL**

1. Name of firm :
2. Complete postal address :
3. Telephone Number :
4. FAX Number (if any) :
5. E-mail address (if any) :
6. GST No. :
7. Registration No. (if any) :
8. Any other details:

We agree to abide by the terms and conditions of supply mentioned in this tender document

Signature of Tenderer

(With Stamp, Name & Designation)

**1. Tender Fee Details: (Rs.900/-) DD in favour of “J.A.U., Fund Account”**

**a. Name and Address of Tenderer**

**2. Details of Demand Draft:**

Sr. No.	Particulars	Number	Date	Amount (Rs.)	Drawn on.... (Please mention <u>Name of Bank</u> )	Branch &Place
1	Demand Draft			900/-		

**3. Format for EMD to be filled in the letter pad by the tenderer:**

EMD in form of FDR / DD “J.A.U., Fund Account”

Serial No.	EMD Details
	F.D.R. / DD No. :  Rs. 5,000/-  Bank :

**4. Adhesive stamp: - as per state Government prevailing rules.**

## **Terms & Conditions**

1.	The tender should be accompanied by <b>Tender fees of ₹ 900/- (Non Refundable)</b> through Demand Draft (DD) in favour of <b>“J.A.U., Fund Account”</b> SBI code: <b>60218</b>
2.	<b>Earnest Money Deposit (EMD) of Rs. 5,000/- for in the form of FDR/DD (Refundable) only</b> in the name of <b>“J.A.U., Fund Account”</b> in the Envelope-1. Quotation without EMD will not be considered. The EMD of disqualified tenderers will be returned within three months.
3.	The Earnest Money Shall forfeited if any tenderer : <ul style="list-style-type: none"> <li>• Withdraws his offer after the opening of the tender,</li> <li>• Fails to execute the terms of supply order accordingly to his tender; and.</li> <li>• Fails to deposit the amount of security deposit.</li> </ul>
4.	Eligibility criteria of Technical qualification of Tender: <ul style="list-style-type: none"> <li>• Tenderer must have to physically submit the all documents as per check list and terms &amp; conditions of tender.</li> <li>• All tender documents must be duly sign and stamp by tenderer</li> <li>• The Tenderers are instructed to specify clearly in their tenders as to in which respect their quotations deviate from the tender enquiry. If deviations are not specified in detail, it will be presumed that the tendered offer is exactly to the specifications of the tender enquiry.</li> <li>• The firm should not be blacklisted from the Govt. Department in all over India.</li> </ul>
5.	The prices shall be inclusive of all freight, forwarding, transit insurance, installation charges, all applicable taxes <b>like GST &amp; other Tax etc.</b> and F.O.R. JAU.
6.	The contractor/agency shall have to stick to the <b>quality standards</b> works supplied or work done shall be rejected if found of inferior quality and must be replaced by quality goods in time at supplier's cost.
7.	On scrutiny of tender documents, any queries raised by the Executive Engineer have to be replied satisfactorily with all documentary proofs within 7 days.
8.	Vendor giving wrong information on specification will be <b>black listed for the period of 5 years.</b>
9.	The Conditional Rate will not be approved and Tenderer shall be disqualified.
10.	In case of <b>defective items, the same shall have to be replaced by the party concerned</b> at its own cost, and risk, and within stipulated time.
11.	<b>Successful Tenderer has to submit Security deposit sum of 10% of work order amount</b> in the form of FDR for 36 months + time limit of work.
12.	The security deposit shall be for fitted to Junagadh Agriculture University if the tenderer fails to execute the order for supply / work in accordance with the terms of tender and supply order.
13.	The security deposit shall be refunded on due performance & completion of the supply / work as per items and conditions of the tender after 36 months from completion date.
14.	The quantity mentioned in the tender is approximate. The Executive Engineer reserves the right to change the quantity of supply material.
15.	<b>TERMINATION OF CONTRACT</b> Tenderer fail to complete work or any part thereof within the contracted period OR incase work done are found not in accordance with prescribed specification and/or

	<p>approved sample, the Executive Engineer exercise to terminate contract :</p> <p>A) To cancel the contract:</p> <p>In the event of risk competition of work of similar description, the opinion the Executive Engineer shall be final, which was be exercised by him only, when materials / work done of exact specification are not readily procurable. In the event of action taken under cause above the tenderer shall be liable for any loss which the J.A.U. may sustain on that account but the tenderer should not be entitled to a saving on such purchase made against default. The decision of Executive Engineer shall be final as regards the acceptability of materials / work and the Executive Engineer shall not be required to give any reason in writing for rejection of materials / work.</p>
16.	<p><b>DELIVERY</b></p> <ul style="list-style-type: none"> <li>• All work done will have to be completed in good conditions and as per the specifications at the University office.</li> <li>• In case of delayed work done , the Executive Engineer reserve the right of either rejecting the consignment or for delay as may be deemed proper in the sale description.</li> <li>• In case of any dispute final decision of the Executive Engineer will be binding upon all.</li> </ul>
17.	<p><b>INSPECTION:</b></p> <p>Inspection will be done by the Executive Engineer office, J.A.U., Junagadh.</p>
18.	<p><b>EXECUTION OF AGREEMENT</b></p> <p>Tenderer will be required to enter into agreement/Appended herewith for the due performance of the contract.</p>
19.	<p><b>WARRANTY</b></p> <p>The work done to the university under this tender shall be the best quality shall be strictly in accordance with the specifications and particular contained/mentioned in the tender and the tenderer hereby guarantee / warrantee that the said work done would continue to confirm to the description and quality/afforded for period of 36 months from the date of work completion of the said work done the university and that notwithstanding the facts that the work done, office may have inspected and/or approved to said materials / work done if during the aforesaid period of 36 months the said materials / work done be discovered not to confirms to the description and quality forested or have deteriorated and the decision of the university in that benefit will be final and the university will be untitled to reject the said work done or such position were of as may be discovered not to confirm to the said description and quality. On such rejection work done will be the tenderer's risk and all provisions here in contained to rejection of work done etc. shall apply the tenderer shall if so sailed upon to do replace within period of one months of such further period, as may be extended from time to time by the university, on and application made therefore by the tenderer the rejected materials / work done such portion thereof, as is rejected by the university and in such as event the above mentioned warranty period shall apply to the materials / work done otherwise redone from the date of the breach of the condition herein contained. Nothing herein consistencies shall prejudice any other right of the university in this contract or otherwise.</p>
20.	<p><b>BREACH OF CONTRACT</b></p> <p>Should the tenderer fail to abide by any the terms and conditions of this tender, the failure on his part shall constitute a breach of the contract and action as deemed proper shall be taken against him under terms &amp; conditions of this tender.</p>

21.	<b>CERTIFICATES</b> On the completion of the delivery of materials / work done the tenderer shall be furnished with a certificates to that effect, but the delivery / work done shall not be considered to the completes until the tenderer shall have removed work done and shall have the work done in such position as may be directed to him.
22.	<b>SUBLETTING OF CONTRACT</b> This contract shall not be subject without the written permission of Executive Engineer in the event of the contractor subletting his contract without such permission, he shall be considered to have thereby committed a branch of the contract and shall forfeit his security deposit to the J.A.U. and shall have no claim for any compensation or any lose that may occur on account of the collection of the materials or engagement entered into.
23.	<b>TENDERER BOUND TO COMPLETE THE WORK AT THE RATES MENTIONED IN CONTRACT</b> No claim or claims made by the tenderer for increased rates on the grounds that the market of other rates included in the compact have been during the period of his contract will be recognized that as so to say the contractor is round to complete the work at the fixed rates mentioned the contractor.
24.	<b>Bid Validity Period:</b> 120 Days
25.	<b>Validity of Rate : up to One Year after order</b>
26.	For any dispute, decision of the Executive Engineer, J.A.U., Junagadh will be final and bound to supplier/s.
27.	All the rights are reserved with the University Authority to accept or reject any or all the tenders received without assigning any reasons thereof.
28.	For all legal purpose court jurisdiction will be Junagadh, Gujarat.

**We agree to abide by the terms and conditions of supply / work mentioned in this tender document**

Signature of Tenderer

(With Stamp, Name & Designation)

Authorized Signature:

Name: Designation: Seal of firm



**JUNAGADH AGRICULTURAL UNIVERSITY**  
**JUNAGADH**

**Office of the Executive Engineer**

'Mangal Nivas' Nr. Akshar Mandir, Timbavadi Road, Junagadh.

[www.jau.in](http://www.jau.in)

Ph: 0285-2670207

**[PRICE BID]**

**NAME OF WORK : PROVIDING AND APPLYING THE  
ELASTOMERIC JOINT SEALANT FOR  
EXPANSION JOINT OF AGRICULTURE  
COLLEGE BUILDING AT J.A.U. PORBANDAR**

TENDER ISSUED TO :-

M/s. / Shri \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# JUNAGADH AGRICULTURAL UNIVERSITY

## JUNAGADH

**NAME OF WORK :** PROVIDING AND APPLYING THE ELASTOMERIC JOINT SEALANT FOR EXPANSION JOINT OF AGRICULTURE COLLEGE BUILDING AT J.A.U. PORBANDAR

**Name of Agency :** M/S I Shri.

### **SCHEDULE - "B"**

No.	DESCRIPTION OF ITEM	Qty.	Rate	Per	Amount
1	Providing and applying the elastomeric joint sealant two component, high Performance polysulfide formulation conforming to BS:4254-1980/IS-12118 having weathering resistance to ultra-violetrays and shall exhibit shore A hardness of 25 and have movement accommodation factor 25% including using of compatible primer of approved standard etc. complete including making edges of expansion joint true line & level with C:M.1:1 and filling gaps with necessary thickness of thermocol sheet etc. complete as directed by E.I.C.-For 40 to 50 mm thick joint	312.00 Rmt.	-	Rmt.	-
Total Rs.					

**Executive Engineer  
J.A.U., JUNAGADH**

I/We am/are hereby agree to carryout and complete the work at the above mention rates.

Signature of Contractor (with Rubber Stamp & Date)

Date :

**Executive Engineer  
J.A.U., JUNAGADH**

# JUNAGADH AGRICULTURAL UNIVERSITY

## JUNAGADH

### REFERENCE SHEET

Sr. No.	Description of Item	Vol. No.	Page No.	Specificati on Item no.	Paragraph No.	Remark
1	Providing and applying the elastomeric joint sealant two component, high Performance polysulfide formulation conforming to BS:4254-1980/IS-12118 having weathering resistance	II		Attached		

Signature of Contractor (with Rubber Stamp & Date)

Date :

**Executive Engineer  
J.A.U., JUNAGADH**

## GENERAL SPECIFICATIONS

NOTE :- The various item of works shall be carried out in general as / per relevant I.S. Specifications and that of the latest edition of P.W.D. handbook Volume – I & II along with following specifications. Where there is construction between the following specification and P.W.D. handbook. The following specification shall govern in matters of inter predation etc. The decision of the Engineer / Architect shall be final and binding on the contractor.

### **PRELIMINARIES**

1. The contractor is not allowed for executing any work, which in the Engineer / Architect option, is likely to cause and annoyance to occupants in the vicinity, at such time the architect may direct.
2. Any treasure crove, coins or objects of antiquity, which any is found on the site, shall be handed over to the employer.
3. The contractor shall deliver daily to the Engineer-In-Charge of works report as the number of the operative employed in all trades and deliver notes for all materials delivered to the site.
4. The contractor is to provide, at all times during the progress of the works and the maintenance period proper means of access with ladders, gangways etc. The necessary attendance to move and adopt as direct for the inspection or measurement of the works by the Architect, consulting engineers structural engineers and employer of their authorized representatives.
5. The contractor is to allow for general attendance upon sub-contractors, including the free use of plant and scaffolding (and the provision of any special scaffolding required) and is to allow their operatives the use of latrines, water closets, mess rooms and sheds covered space for plant, storage of materials etc. and a lock up shop for each.
6. The contractor is to set out any level the works and will be responsible for the accuracy of the same. He is to provide all instruments and attendance required by the architects, consulting engineers, structural engineers and employer of their authorized representative for checking their work.
7. The contractor is to cover up end protect the works from the weather and is to suspend all "SET " operations during weather which in the Executive Engineer opinion will be detrimental to the work.
8. The contractor is allow for a general foreman to be constancy on the works through out the period of their execution and for supervision as required under the conditions of contract.
9. The contractor shall provide, erect and maintain proper sheds and temporary buildings for the storage and protection of materials etc. and for the execution of works, which may be fabricated or bought on the site.
10. The contractor shall provide, erect and maintain proper sheds, mess rooms for the operative with adequate lighting attendance etc.
11. The contractor shall provide and erect in approved positions all, necessary sanitary conveniences with the rules and regulations of the University and maintain in a clean and orderly conditions.
12. The contractor shall provide, erect and maintain on site office the general foreman, with desk drawers etc. and adequate lighting and attendance etc.
13. The contractor shall provide, erect and maintain for the engineer-in-charge with desk, drawers and office etc. and adequate lighting and attendance etc.

14. The contractor shall provide, erect and maintain on site office with desk, drawers etc. and adequate lighting and attendance for the Executive Engineer or his authorized agent.
15. The Contractor shall allow for paying all rates, taxes and other charges, which may be made, by local or other authorities in conditions with offices, sheds and other temporary building erected for the purpose of the contract.
16. BOARD :-  
A board of size approximately 8 ' x 6 ' per drawings shall be made and put up at approved place on the site. This board shall be painted in approved colours with the name of :-
  1. The proposed construction and the employer.
  2. The Architects.
  3. The building contractors.
  4. Any other specialist consultant and
  5. Consulting engineers, as directed by the architects.This shall be provided by the contractors at his own expenses.
17. Samples of each class of materials and workmanship shall be submitted by the contractor for the approval of the Engineer / Architect and after approval, these samples shall be deposited in the office of the engineer and the contractor will be required to perform all the works of his contract in accordance with these samples.
18. If the contractor wants to make any item of work at his workshop or at any other place and not on site written application for permission to do so shall have to be submitted to the engineer stating clearly the item of work. Place of its making etc. If the said applications are rejected by the engineer the same item of work shall have to be carried out on site at no extra cost.
19. On completion, all work must be cleaned down rubbish removed and the work and land cleared of rubbish, surplus materials, and other accumulations, and everything left in a clean and orderly condition. The contractor shall do this work at his own expenses as per the instructions of the Engineer-In-Charge.
20. The contractor shall prepare a sample of any work required by the Executive Engineers and get the Executive Engineer approval before proceeding with the quantity work. The contractor from site at his cost shall remove the rejected sample. The contractor shall not be eligible for any compensation for preparing or removing the sample.
21. No extra shall be paid and item on account of the floor lead except where specifically mentioned.
22. All quantities mentioned in the schedule of quantities are only approximate and the contractor shall not be eligible for any claim due to any variation in or commission of any item of works,

**Signature of Contractor**

**Executive Engineer  
J.A.U., Junagadh**

# **SPECIFICATION OF MATERIALS**

## **1. CEMENT**

Cement shall be ordinary Portland cement as per ISS269 1958. The contractor shall take every precaution to store cement properly so that the cement is not spoiled by dampness etc. It However, the cement is applied by dampness. The same shall be rejected and shall not be allowed for use and the amount for the same be burned by the contractor and such cement shall be destroyed in presence of the Engineer in charge or his authorized agent, by the contractor. The cement shall one bag cement shall contain 50 Kg of cement for calculation for the proportion of one cement bag shall be taken at 1.28 Cft i.e. 0.0343 Cumt and measuring box size 30cms x38 cms should be used.

## **2. FINE AGGEREGATE**

Fine aggregate shall be which clean, dry hard, strong & well graded be confirming to ISI 383-1962 as approved by the Engineer in charge his authorized agent. The sand shall be free from earth, dust & clay and organic imparities. The maximum size of sand shall be 3mm and it shall be graded properly. The sand shall be measured in volume by suitable steel boxes prepared as per instruction of the Engineer in charge of or his authorized agent

## **3. COARSE AGGEEGATE**

The metal to be used in various items of C.C. or R.C.C. shall be machine rushed of sized 12mm to 20mm of clean hard tough black trap of granite stone as approved by Architect/Engineer in charge or his authorized agent. The metal shall be free from all dust, loose place & other deleterious materials it shall confirm in general I.S.S. 383-1952 and relevant specification of P.D.W. hand book. All the Aggregate shall be stored properly so as prevent being mixed with dust and other impurities. The aggregate shall be measured by volume by uniform steel boxes as directed by the Architect/Engineer in charge or his authorized agent of approved quality and size from river bed will be permissible as coarse aggregate

## **4. LIME**

Lime shall be hydraulic lime as per I.S.S. 712-1956 and it shall have physical requirement as per table II of the I.S.S. 712-1956

## **5. WATER**

The water shall be sweet potable water free from salt other chemical impurities

## **6. LIME MORTAR**

Chani must be paved with brick edge paving. It shall be of the stone 18" wide. The side of which must be formed of bricks shall be 12" wide. The sides of which must be formed of bricks set in mortar. mortar shall have be ground in bullocks mill fitted with beales toll tail. All lime mortar shall be such trenches for 130 revolutions with sufficient quality of water which wetted sand shall be added evenly ground for another 180 revolutions. The mortar shall be churned continuously during the process particularly in the angles of the chain. The mortar shall be used on the day in which it is made but in no case mortar made about 36 hours. Iroviously shall be allowed to use. Such mortar shall have to be removed from site of the contractor at his own cost. The stacked mortar shall be kept damp and shall be under a shed and protected from the sun and rain by covering it with tarpaulin. Beside this the relevant specification No. 15 on page No 15 No 78 and of P.W.D. hand book Vol. I shall be strictly followed. Lime mortar shall be prepared is accordance with I.S.S. 1025-1962.

## **7. CEMENT MORTAR**

Cement mortar shall be in proportion of cement, sand and specified in the item. cement, sand and water to be used shall be as per general specification of materials and other specification if no special reference is made for the same. Cement and sand as above shall be mixed in prescribed proportion by volume taking volume of one cement bag as 1.20 cft i.e. 0.0343 cumt suitable boxes of size as directed shall be prepared for measuring sand cement and sand then shall be mixed dry to have uniform and homogeneous mix water as the gradually added and the mortar is prepared of uniform consistency gradually added and the mortar is prepared of uniform consistency to fill in joints incld. as required for the job. It shall be prepared in small quantities only which can be immediately used before the initial setting time of cement begins. The mortar shall be prepared on platform made of bricks, In no case mortar shall be prepared on ground

## **8. LIME NEERU**

Neeru shall be made from the best hydraulic lime checked with fresh water and sifted. The lime shall be ground to fine power by grinding in a mortar mill, only that much of quality that can be consumed in 16 days shall be prepared at time.

## **9. BRICKS**

### **1) First class bricks**

First class bricks, shall be of regular and uniform size shape and colour and well burnt. They shall be free from cracks of other flaws. They shall have frog of 10cm depth on one of their faces. They shall give a metallic ringing sound when struck they shall not break when thrown on the ground on their face face in a sturdied condition from height of 60cms. The absorption of water by weight shall not exceed 20% of the dry weight of the brick when tested according to ISS No 1077-1957. The load to crush the brick when dry shall not be less than 35kg/sq.cm. . All tests shall be done at the cost of contractor.

First class bricks shall be similar to 1<sup>st</sup> class bricks except the they may be slightly over burnt and may not have sharp edge. Absorption of water when immersed in water shall not exceed 22% than tests according to ISS No 1077-1957. Crushing strength may be 10% less than prescribed for first class bricks.

## **10. BRICK BATS**

All bricks bats shall be from well burnt bricks free from earth and powder shall be of size as mentioned in the item and specification & approved by the Architect / Engineer in charge or his authorized agent. The under burnt or over burnt bricks bats shall not be allowed. The rejected bricks bats shall be removed from site. The bricks bats shall be measured by volume by suitable boxes as directed by the Architect/Engineer in charge or his authorized agent.

## **11. TIMBER**

The timber to be shall be best balsa or pucca teak as approved by the Architect / Engineer in charge or his authorized agent. The wood shall conform as per specification No 1 of P.W.D. handbook. The works shall be carried out as general as per the specification in P.W.D. handbook. The timber shall generally uniform in substance, free from gaps, cluster or knots, shakes, splits, bends and such other defects

### **13. Plain cement Tiles**

The tiles shall be of plain cement mixed with zero No chips

### **14. MOSAIC CEMENT FLOORING TILES**

The tiles shall be chips size varying from smallest up to 12mm (1/2") of a directed by Architect /Engineer in charge or his authorized agent and tiles shall confirm the ISI requirement.

### **15. GLAZED TILES**

It shall be as per ISI 777-1951 & shall be best Indian make

### **16. GLAZING**

Unless other wise specification the glazing shall be patent flattened sheet glass ,Indian make of the best quality It shall not be from flows, spacks or bubbles. It shall weight 7.5 Kg/sqmt (about 23sft) upto 50 cm x60 cm panels large than 60 x60 cms upto 60cms the glass weighting not less than 8.75 kg/sqmt ( about 28.00 sqft) shall be used for higher panels upto 90cm x90cm weighting not less than 11.25 kg/smt ( about 36.00 sft) shall be used of approved quality by Engineer.

### **17. SANILITARY FITTILNGS**

All paint unless or otherwise specific shall be or be try mixed synthetic paints or best make. The various color architect/ engineer in charge or his authorized agent.

### **18. GLAZED TILES;**

ALL materials as above and other one not covered in above shall in general confirm to relevant specification of on P.W.D. hand book and ISS and as approved by the ARCHITECT/Engineer in charge or his authorized agent. Necessary tests as and when directed by Architect/ Engineer in charge. or his authorized agent shall be carried out as per ISS requirement for the satiability of the materials at the contractors cost in the Government Engineer college laboratory and the same will be binding to the contractor if the material are not found accordance from the site by the contractor at his architect/Engineer or his authorized agent regarding the quality of materials shall be final.

**Date :**

**Place :**

**Contractors Signature**

## SPECIFICATION OF WORK

### Item No. 1

**Providing and applying the elastomeric joint sealant two component, high Performance polysulfide formulation conforming to BS:4254-1980/IS-12118 having weathering resistance to ultra-violet rays and shall exhibit shore A hardness of 25 and have movement accommodation factor 25% including using of compatible primer of approved standard etc. complete including making edges of expansion joint true line & level with C:M.1:1 and filling gaps with necessary thickness of thermocol sheet etc. complete as directed by E.I.C.-For 40 to 50 mm thick joint**

The expansion joints shall be filled with pre-moulded joint fillers and sealed with mastic compound. For the purpose of measurement, the laps provided shall be neglected.

Expansion joints in foundations and all structures shall be formed in the positions and to the shapes shown in the relevant drawings. When joints are to be filled with joint filling materials as stipulated in the drawings the permanently exposed edges of joints shall be sealed with an approved sealing compound.

### 1.0 Materials:

1.1 POLYSULPHIDE SEALANT (BS-4254-1983/IS-12118 (part-1&2) -1987)

**1.1.1 It shall conform to relevant Indian Standards.**

1.1.2 Polysulphide Sealant shall be a one component, gun applied, synthetic rubber based sealant which cures by absorption of atmospheric moisture to form a permanently flexible seal. It shall be suitable for use on all joints where above average repeated movement is encountered over a wide temperature range. It shall provide outstanding resistance to weathering and chemical attack from solvent, alkalis, dilute acids, oils and grease. Polysulphide Sealant should be non-hazardous in normal use.

1.2 Cement mortar 1:1 (1-Cement: 1-Mortar) for making expansion joints edges in true line & level

1.3 filling gaps of expansion joints with necessary thickness of thermocol sheet

### 2.0 Workmanship:

2.1 The joint surfaces must be clean, dry and free from dirt, frost, grease, rust and protective lacquers and coatings. Remove dirt and loose material by rigorous wire brushing. Porous surfaces should be primed with Primer and allowed to dry before application of POLYSULPHIDE SEALANT (Masking tape may be used to keep the joint neat and clean prior to priming). Extrude the sealant firmly into the joint tooling may be carried out with a wetted pointing tool.

2.2 Joint size width should not exceed 40mm. To provide optimum joint dimensions a bond breaker or back-up foam should be inserted in the joint, this will also prevent the sealant adhering to the base of the joint. Tools may be cleaned before the sealant cures using white spirit.

### 2.3 Storage

Polysulphide Sealant should be stored in cool, dry conditions, away from frost or direct sunlight. This product should have a shelf life of 12 months when stored in these conditions in original unopened containers.

### 2.4 Handling

A proper precaution should be taken during handling such material as per note of materials Manufacture.



## 2.5 Technical Data

Appearance	Smooth viscous mastic
Tack Free Time (@ 20°C)	48 Hours
Full Cure (@ 20°C; 50%RH)	4 – 6 Weeks
Movement Accommodation Factor	20% total in butt joint
Shrinkage	Less than 2%
Staining	Non staining to concrete, masonry and stone
Life Expectancy	In excess of 20 years.
Application Temperature Service Temperature *	+5°C to +45°C -40°C to +80°C

**3.0** If defect found in 36 month after completion of works agency have to rectify/replace the works immediately

### **4.0 Mode of measurement and payment:**

4.1 Payment shall be made on Running meter basis.

4.2 The rate shall include the cost of preparing the surfaces, fixing and finishing with sealing compound, cleaning, costing materials and labours etc.

**EXECUTIVE ENGINEER  
J.A.U., JUNAGADH**