



Ref: FCS/SDQ/TE/027/26

Dated: 24.06.2026

The Deputy Director (Monitoring & Implementation)
Public Procurement Regulatory Authority,
Cabinet Secretariat, Cabinet Division, Government of Pakistan,
Federal Bank for Cooperative Building, Sector G-5/2,
ISLAMABAD.
Fax No. (051) 99224823

INVITATION TO BID
HEAT SHRINK SLEEVE
TENDER ENQUIRY NO. FCS/SDQ/TE/027/26

Dear Sir,

1. Sui Northern Gas Pipelines Limited, a Gas Transmission & Distribution Company, invites sealed bids from the original manufacturers / authorized distributors/dealers / authorized stockiest Suppliers and stockiest along with authority letter may participate in this tender & registered with Income Tax and Sales Tax Departments possess valid Professional Tax Clearance Certificate (2025-26) and are on Active Taxpayers list of the Federal Board of Revenue, for supply of "**HEAT SHRINK SLEEVE**"
2. Bidding documents, containing detailed terms and conditions, etc. are available on PPRA web site (EPAD). Bidders are required to submit Bid bond of quoted material in sealed envelope in shape of Bank Draft / Pay Order or a bond (Bid Bond) issued by a scheduled Bank of Pakistan on a non-judicial stamp paper in favor of SNGPL and sent to Procurement Department, SNGPL Project South Spread KLP Road Near Jamal Din Wali Bypass, Sadiqabad on or before opening of tender on 13.07.2026.
3. Bid's /Quotations received without Bid Bond of Quoted material will not be read/ announced at the time of tender opening and will not be considered for further evaluation. Bid's /Quotations received without Tender download may not be considered for further evaluation.
4. The bids, prepared in accordance with the instructions in the bidding documents, must reach at Procurement Department, on or before 13.07.2026 at 1500 Hours Procurement Department, SNGPL Project South Spread KLP Road Near Jamal Din Wali Bypass, Sadiqabad. Closing time). Bids will be publicly opened on the same day at 1530 Hours on EPAD. This advertisement is available on PPRA website at www.ppra.gov.pk , agency's website at www.sngpl.com.pk.

Yours faithfully
Sui Northern Gas Pipelines Limited

(M. ZIA UR RAHMAN)
Dy. Chief Officer Procurement
Project South Spread

Tender Enquiry

Tender Enquiry No. FCS/SDQ/TE/027/26

Dated: 24.06.2026

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INVITATION TO BID
OUR TENDER ENQUIRY NO.FCS/SDQ/TE/027/26
HEAT SHRINK SLEEVE
CLOSING/OPENING DATE: 13.07.2026
TENDER CLOSING TIME 15:00 HOURS & OPENING TIME 15:30 HOURS

Dear Sir

1. Please submit your lowest and firm quotation with best delivery for the item given on attached sheet/sheets and return one copy of the sheet/sheets duly completed & signed by you latest by **15:00 Hours** positively on **13.07.2026**
2. Please include:-
 - (a) Our items No (b) discount, if any (c) full detail of any deviation from our specification (d) Lump sum price in addition to unit price, carriage paid to our address as mention on attached sheet / sheets.
3. The envelope containing your quotation should be sealed and addressed to the **Deputy Chief Officer (Procurement), SNGPL Project KLP Road Near Jamal Din Wali Bypass, Sadqabad Camp.**
4. The envelope should be headed "**Confidential**" and marked.

Tender Enquiry No. FCS/SDQ/TE/027/26

Closing Date: **13.07.2026**

In addition your complete tender must be uploaded on E-pads as well.

A bid will be considered non-responsive if it is submitted only in one form, either physically or electronically (on E-PADS), and not in both required formats. This means that a bidder must ensure their bid is submitted both on the e-procurement system (EPADS) and also physically at the designated location as mentioned above.

5. Your quotation should remain open for at least a period of 60 days from the date of closing of this tender enquiry.
6. All tender enquiries shall be publically opened at **15:30 Hours** on the same day in our office at above mentioned address. Only one representative of each bidder possessing "Letter of Authority" to do so may attend the bid opening, if desired.
7. In case purchase order placed on you, you will be required to execute strictly in accordance with the terms and conditions of purchase order. In case terms and conditions violated we will have the right to cancel the purchase order or part as thereof, necessary.

SUI NORTHERN GAS PIPELINES LIMITED

SNGPL project KLP Road Near Jamal Din Wali Bypass, Sadiqabad Camp.

8. In case purchase order on you and subject to (7) above, if the purchase order on you or part thereof is cancelled, we will have the right to make purchases from other sources at your risk and cost, and difference will be recovered from you.
9. We reserve the right to increase / decrease the tender quantities or cancel this enquiry in whole or in part before tender opening should our requirement. In change in the meantime. After tender opening, the quantities may be increased / decreased by 15% of the tender quantities. However, decrease beyond 15% shall be subject to concurrence by the successful bidder.
10. Relevant, leaflets/brochures should accompany your quotation.
11. Instead of writing the word "Imported" please give exact brand/make / Country of origin of each items quoted by you.
12. Your firm and irrevocable offer in Pak Rupees (inclusive of all Taxes, duties, levies including Sales Tax) must be based on delivery mentioned in Appendix-'B'. You are required to clearly mention, in your bid if any item(s) of your bid is/are exempted from sales Tax. You are also required to indicate the rate of GST on each item quoted in your offer, if such rate is different from generally applicable rate i.e. 18%. In the absence of such details in your bid, SNGPL will consider all items as inclusive of generally applicable GST. No subsequent clarification will be accepted after bid opening in this regard.

BID SECURING DECLARATION:-

Every bidder shall furnish as part of its bid, **Bid Securing Declaration**, (as per Appendix-I). This will serve as a guarantee of acceptance of purchase order in case his bid turns out to be the lowest evaluated bid.

Any Bid; which is not accompanied by the requisite **Bid Securing Declaration** (in original), will not be read out at the time of tender opening and will be considered as non responsive.

This **Bid Securing Declaration** will serve as guarantee in case bidder subsequently either withdraw, or unilaterally modify, vary or alter his bid after opening of the bids and before expiry of bid validity period, or fail to accept our purchase order, placed on them within the validity of their bid or its extended validity in case his bid turns out to be the most advantageous bid.

LATE DELIVERY CHARGES:

1. Time shall be essence of the contract/purchase order and it will include a clause on Late Delivery charges. This interalia will state that if the materials, as given in the order have not been dispatched/delivered on time and as per stipulations in the contract except on account of Force Majeure, within the delivery period given in the contract, Sui Northern Gas Pipelines Limited (SNGPL) shall be entitled to recover 1% (One Percent) of the total value (excluding Sales Tax) of the delayed part of material for each week of delay, by way of Late Delivery Charges and not by way of penalty subject to a maximum of 10% of the total value (excluding sales tax) of the delayed part of the material.

SUI NORTHERN GAS PIPELINES LIMITED

SNGPL project KLP Road Near Jamal Din Wali Bypass, Sadiqabad Camp.

2. The payment of such Late Delivery Charges shall not relieve the supplier from performing and fulfilling its obligations under the contract nor will the corresponding rights and entitlements of Sui Northern be affected or reduced in any manner.
3. Whenever Late Delivery Charges become payable, SNGPL, in its sole discretion shall quantify the same and recover Late Delivery Charges through deduction from outstanding bills of suppliers directly by Accounts Department while making payment to supplier

GENERAL CONDITIONS

1. All deliveries are to be consigned carriage paid to the address given on attached sheet / sheets.
2. Delivery challan (in triplicate) for each consignment should accompany the material.
3. In case purchase order is placed on you on the basis of this tender enquiry, payment shall be made within 30 days from receipt of goods except when stores are received "Subject to Approval". In such cases 30 days limit will commence from date of "Approval".
4. Blacklisting and Debarment of bidders and suppliers shall be as per PPRA Rule No. 19 (Appendix-II).

Yours faithfully,
SUI NORTHERN GAS PIPELINES LIMITED

(M. ZIA UR REHMAN)
Dy. Chief Officer (Procurement)
For **MANAGING DIRECTOR**

www.sngpl.com.pk



OHSA5 18001 ISO 14001

BID SECURING DECLARATION
TENDER ENQUIRY # FCS/SDQ/TE/027/2026

M/s. Sui Northern Gas Pipelines Limited,

Dear Sirs,

We, M/s _____, hereby confirm that our bid against subject tender enquiry is firm & irrevocable.

We, M/s _____, also confirm & undertake that our said Bid Securing Declaration shall serve as guarantee that we shall not either withdraw, unilaterally modify, vary or alter our Bid after opening of the tenders and before expiry of bid validity period or extended bid validity period, and we shall accept purchase order placed on us within validity period of bid in case our bid turns out to be the most advantageous bid as per terms of the tender enquiry.

Authorized Signatories of the Bidder

Name: _____

Date: _____

E-mail address:- _____

Company Seal: _____

Place: _____

SUI NORTHERN GAS PIPELINES LIMITED
SNGPL project KLP Road Near Jamal Din Wali Bypass, Sadiqabad Camp.

Appendix-B

SCHEDULE OF REQUIREMENT AND DELIVERY
OUR TENDER ENQUIRY NO. FCS/SDQ/TE/027/2026

Item No.	Description	Unit	Qty	GST Amount	Delivery Location
1	HTPL-80 Heat Shrink Sleeve Roll, 17" wide x 100 Ft Long Part No. HTLP 80-HP-17 x 100/C-RL	Roll	6		Within 15 Days At Our SNGPL Sadiq Abad Camp Store, KLP Road, Near Jamal din Wali Bypass, Sadiq Abad

Note: Please arrange to submit one original quotation along with tender fee & Bid bond in shape of CDR favoring SNGPL through DAK/Courier along with submission on EPADS, failing which your quotation may not be considered for evaluation.

Note:

1. We require the delivery within 15 days at our SNGPL project KLP Road Near Jamal Din Wali Bypass, Sadiqabad Camp. however, you may quote your best delivery period.
2. Your offer should be inclusive of all Government Taxes & Duties including General Sales Tax and transportation charges for delivery at our required site/store.
3. We reserve the right to increase / decrease the tender quantities or cancel this enquiry in whole or in part before tender opening should our requirement change in the meantime. After tender opening, the quantities may be increased / decreased by 15% of the tender quantities. However, decrease beyond 15% shall be subject to concurrence by the successful bidder.
4. We reserve the right to extend the opening date of the tender enquiry without assigning any reason.
5. Please indicate separately the amount of Sales Tax included in your quoted price and note that we as per Sales Tax special Procedure Rules 2007, shall deduct an amount equal to 1/5 of the total value of Sales Tax shown in the Sales Tax invoice issued by the supplier and make payment of the balance amount.
6. No bid will be accepted for a quantity lesser than that specified above. Any bid received for partial quantity will be rejected and not considered for evaluation.
7. Bidder must in their quotation write the prices quoted by them in figures as well as in words.
8. You are required to mention clearly the country of origin/make/brand of the equipment / material offered by you.
9. Any discount or alternate prices not read out at bid opening will not be considered during bid evaluation.
10. Your offer should be accompanied by a copy of valid Sales Tax Registration Certificate in your name, failing which the offer will not be considered for evaluation.
11. Please also provide break down of your quoted price indicating detail of taxes duties etc., separately included therein.
12. Please indicate clearly your reservations, if any, to the terms and conditions of the tender enquiry, on the quotation.
13. The contractors, suppliers and services rendering persons/firms are required to provide valid Professional Tax Certificate for the current financial year.
14. Please mention your National Tax Number on the invoices to be submitted for payment.
15. No bidder will be permitted to alter his bid after bids have been opened, but clarifications not altering the substance of the bid may be solicited and/or accepted. No bidder will be asked or required to alter the substance of his bid.
16. The successful suppliers/manufacturers on whom the purchase order(s)/contracts(s) will be placed shall be bound to supply the material strictly in accordance with the specifications/ terms and conditions of the purchase order. In case of failure/deviation of any of the terms and conditions and specifications of the purchase order/tender enquiry the company reserve the right to stop future business dealing with you and de-list the company names from the list of Company's suppliers.
17. It is contractor's responsibility to take measures as per General Procedure of HSE in view of the environmental health, safety law and regulations, which is available at www.sngpl.com.pk
18. Conditional Offers/quotation will not be acceptable.
19. Offer for partial quantity will not be acceptable.
20. Only brand new equipment/material will be accepted.
21. Unit price will be prevailed in case of any discrepancy found in quoted price.
22. Black listed firms are not allowed to participate in this tender enquiry.
23. Please enclose all relevant leaflet/brochure along with your quotation.
24. Every bidder is required to submit only One proposal / option against purchase of One Tender Documents set. Alternate /second option/ proposal can be submitted by set by submitting procuring new tender documents set. Submission of more proposals against purchase of one tender set will lead to disqualification / rejection of the whole bid. No further chance / clarification to withdraw additional offer / option will be provided
25. The successful suppliers / printers on whom the purchase order(s)/contract(s) will be placed, shall provide certificate as under:-
"No extra payment in the form of commission, over and above the contracted value has neither been paid nor will be paid to any official of SNGPL/any authority in Pakistan".

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OHSAS 18001 ISO 14001


SUI NORTHERN GAS PIPELINES LIMITED

SNGPL project KLP Road Near Jamal Din Wali Bypass, Sadiqabad Camp.

As a result of evaluation / scrutiny of bid, if any clarification is sought by SNGPL, bidders are required to adhere to the timeline specified by the SNGPL. In case of non-compliance to the timeline, SNGPL reserve the right to proceed further without any re-course.

27.

Bids will be evaluated on Item-wise basis, unless and until mentioned otherwise. However in case after evaluation, the tendered quantities are splitted between two or more bidders and chunk of any supplier(s) is too small to cover administrative cost on further processing of the purchase order, pre-shipment inspection costs etc as determined by the procuring agency, order of such items will be placed on next lowest available responsive bid winning / securing orderable quantities.

	Doc No.	SNP-SPC-ISS-1
	Rev #	06
TECHNICAL SPECIFICATIONS FOR HEAT SHRINKABLE WRAPAROUND SLEEVES WITH PRIMER FOR CORROSION PROTECTION OF FIELD WELD JOINTS, ON 3-LAYER P.E. COATED PIPELINES OPERATING AT MAXIMUM 80°C TEMPERATURE	Date	26-FEB-2026
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1. Scope & Purpose

- 1.1 These specifications cover the heat shrinkable wraparound sleeves with primer and define the material characteristics and functional properties, qualification tests and quality control program for these sleeves, to be achieved by the manufacturer of product.
- 1.2 The sleeves shall be applied for corrosion protection on field weld joints of pre-coated pipes (3-Layer Polyethylene/Fusion Bonded Epoxy Coating, comprising of first layer of epoxy primer, second layer of copolymer adhesive and an outer layer of extruded radiation cross-linked heat shrinkable polyethylene for operating temperatures not exceeding 80°C in wet conditions (as verified by hot water immersion testing). The specifications are applicable to sleeves for line pipe of nominal diameter 6" - 56". The maximum steel pre-heat temperature for sleeve installation shall not exceed 110 °C to avoid damage to the 3LPE mainline coating.
- 1.3 The type and grade of heat shrinkable sleeves and epoxy shall be fully compatible with the factory applied pipeline coatings of 3-Layer Polyethylene/Fusion Bonded Coating. The sleeve shall be suitable for pipes which shall be subjected to Black Bulb temperatures up to 80 °C.

2. Materials Requirements

All materials supplied shall be strictly in accordance with this specification. The heavy-duty high-performance shrinkable sleeves shall be manufactured from the cross-linked high-density polyolefin sheet coated from the inside with a formulated adhesive and bonding primer or other ingredients compatible with the 3-Layer Polyethylene or Fusion Bonded Epoxy Coating System. It shall meet the requirements detailed in Table 1.

Bidder shall submit independent Lab Test Reports of all the parameters in Table-1 from reputable Laboratories certifying the test carried out confirming compliance to ISO 21809-3 and UV resistance according to EN12068 Annex F and ASTM/DIN standards, along with their bid proposal. Test reports shall be from one of the following Independent Test Laboratories, which shall have valid ISO/IEC 17025 (General requirements for the competence of testing and calibration laboratories) certification. These tests shall be a requirement for consideration of the bids for evaluation purposes.


- a. DVGW, Germany
- b. Element, North America, Europe, UAE
- c. TGM, Austria
- d. TUV Nord, Europe
- e. DNV, Europe
- f. iCoatek, China
- g. Acuren, USA


Testing of all parameters of the ISO 21809-3 (Table 17 Type 14B-2 for $T_{max} = 80 \text{ }^{\circ}\text{C}$) standard shall be done simultaneously on the same batch of materials at the same time. The annual inspection reports of selected surveillance test results (Peel strength to pipe surface at 23°C, Indentation resistance at 80°C Impact resistance at 23°C) shall be conducted by same test lab and shall not be older than two years from the bid submission date. Tests from in house laboratory shall not be considered.

The required Independent Test Lab Reports (of all the parameters ISO21809-3) should correspond to the backing and adhesive thicknesses of the offered sleeve.

3. Quality System

The MANUFACTURER, which definition shall include Manufacturer's, Sub Manufacturers, and suppliers, shall have in effect at all times a QA/QC program certified according to the latest issue of ISO 9001. A


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copy of the valid ISO certificate verifying conformance to the ISO standards shall be submitted by MANUFACTURER with his offer. Persons performing quality functions shall have sufficient and well-defined authority to enforce quality requirements that initiate, identify, recommend, and provide solutions to quality problems and verify the effectiveness of the corrective action.

The MANUFACTURER shall identify in purchase documents to its SUB-MANUFACTURERS all applicable QA/QC requirements imposed by the MANUFACTURER, and shall ensure compliance thereto. On request, MANUFACTURER shall provide objective evidence of its QA/QC surveillance of its SUB-MANUFACTURER's activities.

The MANUFACTURER shall submit certified reports of production tests with the materials delivered.

The PURCHASER reserves the right to inspect materials and workmanship at all stages of manufacture and to witness any or all tests. The MANUFACTURER shall provide the PURCHASER on demand with a copy of its Manufacturing and Inspection Plan for review and inclusion of any mandatory PURCHASER witness points 15 days after award but prior to the pre-inspection meeting.

4. Shrink Sleeve Thickness and Width:

The heat shrink sleeve shall provide mechanical protection to the epoxy layer and shall seal onto the epoxy layer and the adjacent line coating. It shall have the following minimum thickness and shall meet the requirements of ISO 21809-3 (Table 17 Type 14B-2) and UV resistance requirement of EN12068.

Backing Thickness:	0.75 – 1.00 mm (as supplied)
Adhesive Thickness:	1.00 – 1.5 mm (as-supplied)
Coating Thickness (Backing + Adhesive):	1.75 – 2.5 mm (as supplied)
Pipeline Operating Temp. Range:	80°C Max.
Suitable for cut-back lengths:	150 mm

The sleeves on the weld joint shall be wide enough so as to overlap onto the mainline coating by a minimum of 50mm on each side once installed.

5. Corrosion Coating Properties


5.1. Epoxy and Sleeve Properties

The joint anti-corrosion coating shall be suitable for an operating temperature not exceeding 80°C in wet conditions.

5.2 Epoxy Primer:

The heat shrinkable sleeve coating system shall incorporate application of epoxy primer to bond steel surface and the adhesive sealant. The first layer of the joint coating system preferably be 100% solids isocyanate-free and shall be two component epoxy of a minimum dry-film thickness of 200 microns (app. 8 mils) when applied on the steel surface. The epoxy layer shall be the primary anti-corrosion barrier and shall be capable of corrosion protecting the steel surface on a stand-alone basis. The epoxy primer shall be compatible with the 3-Layer Fusion Bonded Epoxy Polyethylene (High Density) Coating System and Heat Shrink Sleeves. Epoxy Primers Type 'A' & 'B' (Base & Cure) must be from the fresh stock, providing 2 years clean Shelf-Life at point in time of shipment. The Epoxy Primer B (Cure) should be packed in a packing of one liter (net volume). The Epoxy Primer A (Base) should be packed in exactly same volume, which is recommended as mixing ratio. If, for example, recommended mixing ratio is 5:1 (Base : Cure) on volume : volume basis, the Epoxy base should be supplied in 5 (five) liters packing and Epoxy Cure should be packed in 1 (One) liter packing. Rugged metal container of Epoxy Base and Cure should be packed in one carton, which would be considered as package in correct ratio, whereas in the bid, the manufacturer shall specify

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diameter wise usage/consumption of the epoxies for joint coating of 6" – 56" diameter pipelines along with percentage of wastage of primer.

Alternately, the bidders may quote and provide standard packing for epoxies along with smaller empty containers at no additional cost, according to offered ratios, for repacking at Company's Stores.

5.3 Adhesion Sealant:


The inner surface of the polyolefin sleeve shall be coated with the controlled/specified thickness of the adhesive sealant and shall meet the requirements of Table-1. The adhesive layer shall be free of inclusions, holes, bare patches, gouges or other defects which could adversely affect the performance of the system. The adhesive of the heat shrinkable sleeve coating system should be sufficient to fill the step-down on either side of weld bead and at the coating chamfer edge without requiring any additional adhesive or sealant.


5.4 Polyolefin Backing:

The sleeve backing shall be fabricated from a thermally stabilized, ultraviolet resistant, high density polyethylene (HDPE) and shall be radiation cross linked. The backing of the sleeve shall be homogeneous and free from flaws, defects, pinholes, bubbles, cracks and inclusions. It shall meet the requirements of Table-I. Unless otherwise mentioned, the color shall be Black.

6. Performance Requirements

- 6.1.1 The epoxy and sleeves shall, as a minimum, meet the requirements of Table 1. Bidder shall submit with their bid, detailed characteristics of the Heat Shrink sleeves and epoxy to be supplied.
- 6.1.2 Manufacturer shall ensure that all material proposed for field joint coating have been tested and have met the requirements as agreed with PURCHASER for physical, chemical and electrical properties.
- 6.1.3 Manufacturer shall ensure that test certificates are provided for all accepted materials, detailing the information as required in this Specification.
- 6.1.4 The self-adhesive layer of the coating adopted shall be homogeneous, free from flaws, defects, pinholes, bubbles, cracks and inclusions.
- 6.1.5 The corrosion coat shall be resistant to bacterial attack and shall not deteriorate during the design life of the pipeline.
- 6.1.6 The sleeve shall be resistant to high Ultraviolet light of the Pakistani summer without requiring any sort of painting or covering. To confirm suitability, the sleeve shall be tested for UV resistance as per EN12068 standard and shall meet the requirements of table 1.
- 6.1.7 To ensure that the sleeve is applicable in the high ambient temperature and Black Body temperatures of Pakistan in the summer, the backing and adhesive shall be of a high enough temperature rating such that it shall be fully installable without damage. It shall not be necessary, nor will it be allowed, to paint or cover the installed shrink sleeve with any protective cover during the peak of the summer. At this time, under the direct sun in the summer and without any protective coating, the sleeve and adhesive shall not become soft and the adhesive shall not flow. Any sleeve which exhibits such softness or flow of adhesive when directly exposed to the sun shall be considered unsuitable and rejected.


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6.2 Materials Supply

The coating materials shall be handled and stored in accordance with Manufacturer's instructions or as directed by an authorized representative of the coating Manufacturer

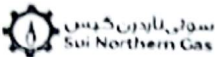
TABLE - 1

Performance requirements of Heat Shrink Sleeve System for maximum continuous pipe operating temperature up-to 80 °C

HEAT SHRINKABLE WRAPAROUND SLEEVES

Item #	Performance Parameters	Test Methods	Specification Value
1	Full compliance with ISO 21809-3 Type 14B-2 at 80°C and UV resistance according to EN12068 Ann. F	ISO 21809-3 EN12068 Ann. F	Results of all parameters shall meet requirement of standard.
2	Adhesion of cured epoxy to bare steel	ASTM D-4541	≥ 2000 psi
3	Tensile strength of backing @ 23°C	ASTM D-638	≥ 2200 psi
4	Elongation to break of backing @230C	ASTM D-638	≥ 400 %
5	Density of backing	ASTM D792	> 0.95 gm/cc
6	Hardness	ASTM D-2240	≥ 55 Shore D
7	Volume Resistivity @ 23°C	ASTM D-257	≥ 1 x 10 ¹⁵ Ohm-cm
8	Ring and Ball Softening Point of adhesive	ASTM E-28	115°C, -10°C + 25°C
	Holiday Detection	ISO 21809-3	5kV/mm + 5kV (max 25kV)
9	Impact Resistance at 23°C Holiday detection at 5 KV/mm + 5KV (max 25kV)	ISO 21809-3	≥ 7 J/mm (min. 15J)
10	Indentation Resistance @ 80°C - 10 N/mm ² - residual thickness	ISO 21809-3	≥ 0.6 mm
11	Cathodic disbondment resistance	ISO 21809-3	
	- @ 23°C		≤ 5 mm
	- @ 80°C		≤ 10 mm
12	Peel strength after 100 day hot water immersion at 80°C - to pipe surface	ISO 21809-3	P100/P0 ≥ 0.75
	- to PE plant coating		P100/P0 ≥ 0.75
13	Peel strength to pipe surface	ISO 21809-3	
	- @ 23°C		≥ 5.0 N/mm
	- @ 80°C		≥ 0.3 N/mm
	Peel strength to PE plant coating		
	- @ 23°C		≥ 5.0 N/mm
	- @ 80°C		≥ 0.3 N/mm
14	Lap Shear Strength	ISO 21809-3	
	- @ 23°C		≥ 3.0 N/mm ²
	- @ 80°C		≥ 0.2 N/mm ²

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 TECHNICAL SPECIFICATIONS FOR HEAT SHRINKABLE WRAPAROUND SLEEVES WITH PRIMER FOR CORROSION PROTECTION OF FIELD WELD JOINTS, ON 3-LAYER P.E. COATED PIPELINES OPERATING AT MAXIMUM 80°C TEMPERATURE	Doc No.	SNP-SPC-HSS-1
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15	Ultraviolet irradiation resistance ratio of	EN12068 Annex F	
	- elongation at break		$1.25 \geq Ex/E0 \geq 0.75$
	- tape strength		$1.25 \geq Sx/S0 \geq 0.75$
16	Resistance to Thermal Ageing (100d/100°C) ratio of	ISO 21809-3	
	- elongation at break		$E100/E70 \geq 0.75$
	- Peel strength to pipe surface		$P100/P70 \geq 0.75$
17	Dielectric Breakdown at 23°C	ASTM D-149	≥ 17 kV
18	Moisture Vapor Transmission of sleeve at 38°C, 90% RH	ASTM E-398	≤ 0.08 gm/24hr/100 sq.in
19	Holiday detection	ISO 21809-3	pass at 20kV

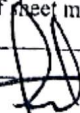
NOTE: The bidders, quoting the sleeving material of brands and manufacturers other than that already in use of the company, shall provide the results of offered products against specific values as required in Table 1 from an independent laboratory.

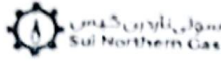
7. Test Methods

7.1 Applicable Standards:

The following standards as applicable form part of the specification.

Sr. No.	Standards	Specifications
1.	ASTM-D 149	Standard Test Method for dielectric breakdown voltage and dielectric strength of solid electric insulating materials at commercial power frequencies.
2.	ASTM-D 257	Standard Test Methods for D-C resistance or conductance.
3.	ASTM-D 543	Resistance of plastics to chemical reagents.
4.	ASTM-D 570	Test for water absorption of plastics.
5.	ASTM-D 638	Standard Test Method for tensile properties of plastics.
6.	ASTM-D 746	Test for brittleness temperature of plastics and elastomer by impact.
7.	ASTM-D 792	Standard Method of Test for specific gravity and density of plastics by displacement.
8.	ASTM D870	Test Method for Hot Water Immersion.
9.	ASTM-D 1000	Standard Methods of testing pressure-sensitive adhesive coated tapes used for electrical insulation.
10.	ASTM-D 1002	Standard Test Method for strength properties of adhesives in shear by tension loading (Metal-to-Metal).
11.	ASTM-D 1044	Test for resistance of transparent plastics to Abrasion (Modified).
12.	ASTM-D 1693	Environmental stress cracking of ethylene plastics.
13.	ASTM-D 2240	Indentation hardness of rubber and plastics by means of a durometer.
14.	ASTM D2249	Test Method for Rubber Property (Durometer-hardness)
15.	ASTM-D 2671	Standards methods of testing heat-shrinkable tubing for electrical use.
16.	ASTM-D 28	Standard Test Method for softening point by Ring and ball apparatus.
17.	ASTM-E 96	Test for water vapor transmission of materials in sheet form.
18.	ASTM-E 398	Standard Test Method for water vapor transmission rate of sheet materials using a rapid technique for dynamic measurement.
19.	ASTM-G 6	Abrasion resistance of pipeline coatings.


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 Specification Committee



TECHNICAL SPECIFICATIONS FOR HEAT SHRINKABLE WRAPAROUND SLEEVES WITH PRIMER FOR CORROSION PROTECTION OF FIELD WELD JOINTS, ON 3-LAYER P.E. COATED PIPELINES OPERATING AT MAXIMUM 80°C TEMPERATURE	Doc No.	SNP-SPC-1155-1
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20.	ASTM-G-10	Standard Test Method for Bend ability of Pipeline Coatings.
21.	ASTM-G 14	Standard Test Method for impact resistance of pipeline coatings (Falling Weight Test).
22.	ASTM-G 17	Standard Test Method for penetration resistance of pipeline coatings (Blunt Rod).
23.	ASTM-G 21	Determining resistance of synthetic polymeric materials to fungi.
24.	ASTM-G 22	Determining resistance of plastics to bacteria.
25.	ASTM-G 42	Standard Test Methods for cathodic disbonding of pipeline coatings subjected to elevated or cyclic temperatures.
26.	DIN - 30672	Polyethylene sheathing of steel tubes and steel shapes and fittings.
27.	EN12068	External organic coatings for the corrosion protection of buried or immersed steel pipelines used in conjunction with Cathodic protection - Tapes and shrinkable materials
28.	ISO 9000/9001/9002	Quality Systems.
29.	ISO 21809-3:2016	External coatings for buried or submerged pipelines used in pipeline transportation systems -- Part 3: Field joint coatings
30.	ASTM D - 6677	Standard Test Method for Evaluating Adhesion by Knife
31.	ISO 2409	Paints and varnishes -- Cross-cut test

8. Qualification Tests:

8.1 Qualification Inspection:

The wraparound shrinkable sleeves furnished to this specification shall have been tested and met the requirements of Tables 1. The supplier is responsible for the performance of all inspection tests specified herein and may use his own or any other lab facility and services acceptable to the BUYER. The inspection/test record shall be kept complete and made available to the BUYER.


8.3 Acceptance Inspection:

The test reports for each batch of production shall be made available with each shipment. The following tests shall be carried out on each batch of the sleeves or upon the sleeve component, where applicable:

- a. Visual inspection for defects.
- b. Measurement of dimensions.
- c. Tensile strength (backing only).
- d. Elongation at break
- e. Adhesive softening point (ASTM E-28)
- f. Physical Shrinkage Test
- g. Peel adhesion at 23 Deg C and 80 Deg C to steel
- h. Lap shear at 23 Deg C and 80 Deg C
- i. Cross Cut - As per ASTM D - 6677
- j. Cross Hatch - As per ISO 2409

Any condemned material not conforming to this Specification shall be replaced by the Manufacturer at no expense to the PURCHASER.


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8.3 Rejection/Retesting:

Failure to any of the applicable requirements of the specification shall be cause for rejection of the lot represented. Material rejected shall have to be replaced at the Supplier's/Manufacturer's cost

9. Marking/Traceability:

Manufacturer shall ensure that all materials are supplied in sealed, damage-free, clearly marked containers or pallets and each heat shrink and epoxy box/packing containers shall be clearly marked, for traceability with following information/Data:

- Purchase Order No.
- Manufacturer's name.
- Grade/type of products contained.
- Batch number of the products.
- Shelf Life/Expiry dates where applicable.
- Safety instructions


In addition to the above each sleeve shall be marked as follows:

- Product Identification No.
- Date of manufacture/production
- Purchase Order No.

10. Requirement of Samples:

Bidders, introducing a field joint coating system from a manufacturer that has never been used in SNGPL in the past, shall submit a sizeable sample of their coating system for field performance testing. The sample size should be sufficient for coating minimum 5 joints of 16" Dia and should include HS Sleeves, Closure Patches, Primers and any other component required to satisfactorily install the field joint coating system.

Prepared by:

			
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