Annexure 1: Specification for Hydrocarbon Based Grease for Cryogenic Temperature Application

This grease will be used as thermal interface material (TIM) between two metallic components at Cryogenic temperatures inside Vacuum. Bidder shall also consider that, components joined using, this grease will be maintained at cryogenic temperature for long duration.

Detailed specification of grease is given below. Bidder has to explicitly provide response against each specification point given in the "Bidder response" column. In case response against any specification clause is not provided either in the form of compliance or non-compliance, offer submitted by the bidder will be summarily rejected.

Wherever bidder has been asked to submit documents in the "Bidder Response" column, Bidder shall submit the details as an attachment. In case Bidder has not submitted required documents as per specification clause, offer submitted by the bidder will be summarily rejected. If bidder wants to provide any other relevant information in addition to the asked details, a separate document may be enclosed along with the offer.

During technical evaluation of bids, if Purchaser ask for any clarification against submitted response of the bidder or for any of the specification clause of the enquiry, Bidder shall submit complete details against the clarification in single response within the prescribed time period, failing which, offer will not be considered for further evaluation and will be summarily rejected declaring the bid Technically Non-compliant.

Sl. No.	Technical Specification		Bidder Response (Compliance/ Non-Compliance)
1	Item Description	Hydrocarbon based grease for Cryogenic and Vacuum Environment	
2	Mass	200 gm	
3	Quantity	8 Nos. of tubes of 25 gm each for 200 gm	
4	Application	As a Thermal Interface Material (TIM) at interface of metallic components	
5	Operating Temperature Range	4.15 - 300 K	
6	Minimum Vacuum Pressure	1x 10^{-8} mbar	
7	Density	~ 900 kg/m^3	
8	Coefficient of Thermal expansion at 300 K	~ 7.2 x 10^{-4} K^{-1}	
9	Thermal Conductivity	• Greater than 0.15 W/m.K at 293 K • Greater than 0.075 W/m.K at 4.15 K	
10	Volume resistivity; Ω cm	~ 2 X 10^{16}	
11	Total Mass Loss (TML)	≤ 1%	
12	Collected Volatile Condensable Materials (CVCM)	≤ 0.1%	
Sl. No.	**General Terms and Conditions**		**Bidder Response (Compliance/ Non-Compliance)**
13	**Delivery Period:** Within 16 weeks from date of P.O.		
14	Bidder shall provide "Complete description of the offered grease along with its Data sheet" with quotation.		
15	Supplier shall provide "Safety Data Sheet" of the grease along with the Supply.		
16	**Packing:** Grease shall be supplied in suitable packing to avoid any damage during handling and transportation.		
17	**Material Receipt Inspection:** Material receipt inspection of grease will be carried out, for acceptance of items, after receipt at SAC; Ahmedabad.		