

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.

This enquiry is a two part tender. First is Technical bid and the other is price bid. Bidder shall enclose required documents in technical bid and price bid as asked hereafter. Bidder shall ensure that no mention of quoted price is available in the Technical part of the bid. In case any mention of quoted price is available in any form in the technical bid, 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	150 gm	
3	Quantity	6 Nos. of tubes of 25 gm each for 150 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	1×10^{-8} mbar	
7	Density	$\sim 900 \text{ kg/m}^3$	
8	Coefficient of Thermal expansion at 300 K	$\sim 7.2 \times 10^{-4} \text{ K}^{-1}$	
9	Thermal Conductivity	<ul style="list-style-type: none"> • Greater than 0.15 W/m.K at 293 K • Greater than 0.075 W/m.K at 4.15 K 	
10	Volume resistivity; $\Omega \text{ cm}$	$\sim 2 \times 10^{16}$	
11	Total Mass Loss (TML)	$\leq 1\%$	
12	Collected Volatile Condensable Materials (CVCM)	$\leq 0.1\%$	
13	Guarantee/Warranty: Grease shall be guaranteed/warranted against any manufacturing defects for a period of 12 months from the date of acceptance of items at SAC, Ahmedabad.		
14	Delivery Period: Within 8 weeks from date of P.O.		

Sl. No.	Pre-Qualification Criteria	Bidder Response (Compliance/ Non-Compliance)
15	Bidder shall either be a manufacturer of grease or an authorized representative/distributor of the grease manufacturer.	
16	If bidder is a manufacturer, bidder shall submit a self-declaration stating that they are manufacturer of grease along with their company profile.	Bidder shall enclose Self Declaration along with company profile in the technical bid.
17	If bidder is an authorized representative/distributor of the manufacturer, bidder shall submit an authorization letter from the manufacturer of grease.	Bidder shall enclose Authorization Letter from Manufacturer in the technical bid.
18	If bidder has not submitted self-declaration or authorization letter along with the offer, submitted offer will be summarily rejected.	
Sl. No.	Bid Documentation	Bidder Response (Compliance/ Non-Compliance)
The following documents (in English) shall be provided by the vendor along with the quotation for offered products		
19	Data sheet of the offered product	Bidder shall enclose details of the offered products in the technical bid
20	Storage Environment/Condition for the product	
21	Shelf life of the offered product	
22	Test Certificates/Certificate of Conformity for tested values of grease properties	
The following documents (in English) shall be provided by the vendor along with the consignment at the time of Delivery:		
23	Guarantee/Warranty certificate	
24	Instruction manual for usage and storage	
Packing		
25	Grease shall be supplied in suitable packing to avoid any damage during handling and transportation.	
Material Receipt Inspection		
26	Material receipt inspection of grease will be carried out, for acceptance of items, after receipt at SAC; Ahmedabad.	