

Supply of greases for high vacuum and cryogenic applications

1. Scope:

The tender is invited for the supply of greases for high vacuum and cryogenic applications

- Para 2 gives the technical requirements of greases
- Para 3 gives the deliverables
- Para 4 gives general instructions

2. Technical requirements:

The technical values mentioned below are the typical minimum requirement. Any product whose requirement is less the below mentioned table values will be technically rejected

Technical specification for Supply of High vacuum grease

Working temperature (°C)	10 to 30
Dropping point – ASTM D566 (°C)	42 to 52
Vapour pressure @ 20°C	7×10^{-11} Torr
Relative density @ 20°C	0.896
Outgassing characteristics as per ASTM E595	TML < 1% , CVCM < 0.1 %
Lubricity 4 Ball test as per ASTM D2596 Kg	150
Viscosity of molten grease cSt @ 50°C	766
Coefficient of expansion per °C	0.00076
Thermal conductivity @20°C W/m°C	0.194
Volume resistivity Ωcm	1.2×10^{16}
Permittivity	2.3
Loss tangent	< 0.0001
Surface break down strength at flash over KV	24
Electrical strength V/mil	730

Technical specification for Supply of cryogenic grade high vacuum grease

Working temperature (°C)	-269 to 30
Dropping point – ASTM D566 (°C)	42 to 52
Vapour pressure @ 20°C	6×10^{-10} Torr
Relative density @ 20°C	0.911
Outgassing characteristics as per ASTM E595	TML < 1% , CVCM < 0.1 %
Lubricity 4 Ball test as per ASTM D2596 Kg	150
Coefficient of expansion per °C	0.00072
Thermal conductivity @20°C W/m°C	0.194
Volume resistivity Ωcm	2.0×10^{16}
Permittivity	2.3

Loss tangent	< 0.0001
Surface break down strength at flash over KV	27
Electrical strength V/mil	820

3. Deliverables

Sr. No.	Description of items	Quantity
1.0	Supply of ultra-high vacuum grease (Tube of 25 gms) along with its compliance certificate	10 Nos
2.0	Supply of Cryogenic grade high vacuum grease (Tube of 25gms) along with its compliance certificate	20 Nos

4. General Instructions

4.1 Suppliers shall enclose the complete product sheet and user manuals along with offer. **Offers without the product number, technical specification details will be out rightly rejected.**

4.2 The supplier has to agree for supply of either type of vacuum grease.