

### Anti-riot Gloves with Fire Resistance

In riot conditions, law enforcement and security personnel face significant challenges related to hand protection. The challenges include injuries from thrown objects, blunt force trauma, and needle punctures. This necessitates use of specialized gloves viz anti-riot gloves. Anti-riot gloves are designed to balance protection with dexterity, allowing personnel to maintain a firm grip and perform task effectively.

Typically, gloves made from high-performance fibers like ultrahigh molecular weight polyethylene or nylon offer excellent protection against cuts and punctures. However, they may not guarantee fire retardance. In the context, the present technology uses core spun yarn improving fire resistance along with cut resistance. This gives the gloves advantage of utility in multiple scenarios over and above law enforcement, giving protection to personnel in situations with mechanical, thermal and chemicals hazards.

CFEES developed anti-riot gloves have been prepared using core spun yarn- core of stainless steel fiber, which is wrapped or twisted with a sheath of a fire retardant fiber. As expected, the yarn has the strength and durability of the core fiber, and benefits from the fire retardancy and abrasion resistance of the sheath fiber. The gloves offer excellent cut protection for environments where high temperatures and sharp objects, like glass, are both present. The seamless glove liner greatly reduces perspiration and limits skin irritation caused by contact with glove material such as latex, PVC and also other chemical handling gloves. The weight of the pair of gloves is 55g. The thickness is 2mm  $\pm$ 10%.



**Figure:** CFEES developed gloves

The gloves meet the requirements of BS 7971-6:2003 (Protective clothing and equipment for use in violent situations and in training- Part 6: Gloves for protection against mechanical, thermal and chemical hazards- Requirements and test methods).

1. **Industries are requested to submit their expression of Interest for ToT within 21 days of publishing of technology on DRDO web-page.** Interested companies/industries are forward the sealed bids against this EoI **(two separate sealed envelopes in one sealed cover (i) Technical Offer:** Application cum Industry Form as per Annexure –II of Appendix 'D' to with all supporting documents to Lab/Estt. **(ii) Commercial Offer:** In a separate sealed enveloped specifying the ToT fee offered by industry) to following address:-

**To,**

**The Director**

**Centre for Fire, Explosive and Environment Safety (CFEES)**

**Brig. S.K. Mujumdar Marg, Timarpur-Delhi-110054**

**E-mail: director.cfees@gov.in**

**Fax No: 011-23819547**

2. A copy of interest may be sent to the following address without any attachment:-

**To,**

**The Director,**

**Directorate of Industry Interface & Technology Management (DIITM),**

**Room No. 447, DRDO Bhawan, Rajaji Marg, New Delhi-110 011**

**E-mail: diitm.hqr@gov.in**

**Phone No. 011-23007446**

**Fax-011-23793008**

All industries interested in seeking ToT are requested to apply in the format given below. Kindly fill in the fields. The list of documents to be attached is provided in Annexure – I. Kindly provide the reference of page no. of supporting document in the relevant field of form.

**PART-1**

**General Information**

(Please enclose documents in support of information provided)

1.	<b>Name of the Technology requested for Technology Transfer (Technology name and concerned Lab, Category)</b>	
2.	<b>Name of the industry/ organization</b>	
3.	<b>Complete Address and other details</b>  <b>Registered Office</b> State Phone No Fax Email Website	
	<b>Factory</b> State Phone No Fax Email Website	
4.	<b>Point of Contact</b> Name Designation Address Mobile No Ph No Email ID	
5.	<b>NAME OF CMD/ MD /PARTNERS/ PROPRIETOR/ etc</b> Name Designation Address Mobile No Ph No Email ID	
6.	<b>Date of Incorporation of company</b>	
7.	<b>Foreign Direct Investment in company (if any in %)</b>	
8.	<b>Shareholding pattern</b>	
9.	<b>Turn over as per Audited Balance Sheet for the preceding three years.</b> Year _____ Year _____ Year _____	
10.	<b>Annual budget for R&amp;D during last three years (if any)</b> Year _____ Year _____ Year _____	
11.	<b>Income Tax returns for the preceding three</b>	

	<b>years period</b> Year _____ Year _____ Year _____	
12.	<b>Nature of company</b> DPSU, Private Limited, Public Limited, Partnership, Proprietary, Ex- Serviceman Unit	
13.	<b>Category of industry</b> Large Scale, Medium Scale, Small Scale, Micro, Startup	
14.	<b>MSME Registration No</b>	
15.	<b>Certificates of registration as a manufacturing unit, if any.</b>	
16.	<b>If Startup, DPIIT Registration No</b>	
17.	<b>UDYOG AADHAR No</b>	
18.	<b>PAN Number</b>	
19.	<b>Details of Industrial license for defence manufacturing issued by DPIIT (if any)</b>	
20.	<b>Details of PESO license (if any)</b>	
21.	<b>GST Number</b>	
22.	<b>Nature of business</b> Manufacturing/ Sole Selling or Authorized Agent/ Assembler/ Traders/ Dealer/ Processor/ Repacker/ Others	
23.	<b>Details of current products and services</b> Products and services Supplied (please specify Govt/ Domestic market/ Export)	
24.	<b>Record of past performance</b> (e.g., Supply orders executed against of Ministry of Defence orders, Public Sectors and Par-military Forces, if any).	
25.	<b>Details of registration</b> with NSIC / SSI, DGS&D, other Defence Department, other Govt. Dept, membership of FICCI/ASSOCHAM/CII or other Industrial Association <b>(Attach relevant copies of registration letters)</b>	
26.	<b>Have you already taken any technology from DRDO</b> (If yes, give details attaching separate sheet)  Name of the Technology, Lab, Year, License number & Status	
27.	<b>ISO/ ISI certification or any other certification</b> (If yes, give details)	
28.	<b>Relevant clearances form the authorities/ ministries</b> (if any)	
29.	<b>Capacity and capability to undertake developmental work and to accept attendant financial and commercial risks.</b>	
30.	<b>Capacity/capability to market the product through the marketing network, sales and service network, reliability to maintain confidentiality.</b>	

## PART-2

### Infrastructure and other Information

1.	<b>Total area of factory</b> Covered (m <sup>2</sup> ), Uncovered (m <sup>2</sup> ), Bonded space available (m <sup>2</sup> )	
2.	<b>Ownership of factory</b> Self-owned, partnership, rental	
3.	<b>Electric power</b> Sanctioned Installed Standby (if any)	
4.	<b>Availability of adequate infrastructure</b> (List of machines and their production capacities) and technical expertise	
5.	<b>Name of bank &amp; A/c No</b> Name of bank A/c type A/c no Address of the bank Phone: Email:	

### 6. Details of current products:

S.No	Type	Description	Licensed/installed capacity	Annual production for preceding 3 years

### 7. Details of foreign collaboration, if any

S.No	Product	Name and address of collaborator	Year	Remarks

### 8. Details of products developed for services

S.No	Nomenclature of stores	Order No. and date	Remarks

### 9. Please give details of important facilities & infrastructure as per following format for:

- (a) Production
- (b) Unconventional, special m/c
- (c) Testing & quality control facilities

S.No	Description of m/c	Make & model	Qty	Date of purchase	Remarks

### 10. Furnish the following details with relevant certificates and documents

- (a) R&D facilities available :

- (b) Inspection quality control of raw material components :
- (c) Assistance from central agency for testing / calibration etc. :
- (d) laboratory and drawing office facility :

**11. Principal customers:**

S. No	Name & address	S.O No and date	Date of last supply	Products supplied	Value

**12. Future plans (if any) in respect of expansion programme/ installation of additional machines/ test facilities etc.**

**13. Name of the technology requested for transfer**

(give self-assessment of your capability to absorb the technology)

**14. Details of employee as on date on firm's pay roll**

<b>PERMANENT</b>				
Category	Post Held	Number	Qualification	Total Service
Technical	Prod. Manager Q.C. Manager Supervisor Testing Staff (QC) Skilled workers Unskilled workers, etc			
Administrative	Purchase Manager Accounts Officer Office Superintendent Clerical Others, etc			

<b>TEMPORARY</b>				
Category	Post Held	Number	Qualification	Total Service
Technical	Prod. Manager Q.C. Manager Supervisor Testing Staff (QC) Skilled workers Unskilled workers, etc			
Administrative	Purchase Manager Accounts Officer Office Superintendent Clerical Others, etc			

**DECLARATION:**

I / we confirm that the information furnished in Part 1 & 2 above is correct. In the event of any information given by me / us is found incorrect / false at any time, I / we understand our EoI for ToT will be cancelled/ rejected without notice, beside any other appropriate action against me / us.

Industry seal

Authorized signatory

Name(s) in capital

Designation and seal of authorized signatory

Date:

Place:

**List of Support documents to be attached with EoI**

- (a) Memorandum and Articles of Association (Should be incorporated as per Indian Companies Act, as amended time to time)
- (b) Certificates of registration as a manufacturing unit, if any.
- (c) Audited Balance Sheet for the preceding three years.
- (d) Income Tax returns for the preceding three year period
- (e) Details of shareholding/ownership pattern especially foreign partners/ shareholders, foreign employees, directors, etc. The company must adhere to the prevailing Govt of India policies and regulations on Foreign Direct Investment (FDI)/DIPP norms as applicable.
- (f) Annual budget for R&D during last three years.
- (g) Numbers and details of IPR or patents, etc., held by the company.
- (h) Number of technically or professionally qualified personnel.
- (i) Record of past performance (e.g., Supply orders executed against of Ministry of Defence orders, Public Sectors and Paramilitary Forces, if any).
- (j) Availability of adequate infrastructure (List of machines and their production capacities) and technical expertise.
- (k) List of Testing and Support equipment's
- (l) ISO/ ISI certification or any other certification
- (m) Relevant clearances from the authorities/ ministries (if any)
- (n) Capacity and capability to undertake developmental work and to accept attendant financial and commercial risks.
- (o) Capacity/capability to market the product through the marketing network, sales and service network, reliability to maintain confidentiality.
- (p) PESO and DPIIT license for explosive handling if ToT is for high energy Material, explosives, propellants, and component/ system dealing with it etc.
- (q) Under taking from company seeking ToT that none of its Directors, Independent Directors, non-executive Directors, Key management personnel are involved in any corrupt practices, unfair means and illegal activities.
- (r) Details of the industrial license for defence manufacturing be provided by the industry seeking ToTs.
- (s) Application cum Industry Assessment Form