





**LIST OF PRODUCTS TO BE INDIGENISED**

S No.	Name of the Product	Photograph	Specifications	QPS	Qty procured during last three years	Quantity offered to Industry	Any other Relevant Detail
1	Incandescent Signalling LAMP		12V DC, 20 Watts Lumens required: 140 min. Operating temperature: -60°C to +85°C. Internal resistance without electrical load 05.to 1.0 Ohm Should withstand Mechanical & Environmental tersts.	QUANTITY PER SET: 01	7900 nos	2000 Nos after NC-NC Deevaluation	
2	OKFOL Explosive Composition	Used in Warhead for Missile	OKFOL 3.5 (HMX+WAX).Shelf life 20 years min. Acceptance : Chemical Analysis Safety certification Performance analysis by penetration test Vendors must have valid license for handling / manufacturing and supply of explosive compositions, warheads and igniters etc.	2.5 kg	10000 Kg	6000 kgs after NC-NC Deevaluation	Vendors must have valid license for handling / manufacturing supply explosive compositions, warheads and igniters etc.
3	Sustainer Charge		Double Base propellant. NCNG composition.Pressure $\leq 200\text{Kg}/\text{CM}^2$ . Total Impulse $\geq 230\text{Kg}.\text{Sec}$ Minimum burning time 4.3 seconds Operating temperature-50°C to +50°C	QPS: 01	Nil	2000 Nos after NC-NC Development	Vendors must have valid license for handling / manufacturing supply explosive compositions, warheads and igniters etc.




## LIST OF PRODUCTS TO BE INDIGENISED

S No.	Name of the Product	Photograph	Specifications	QPS	Qty procured during last three years	Quantity offered to Industry	Any other Relevant Detail
4	LED 3L107B & Photo diode		<u>LED:</u> Radiation power 9 mW min. Forward Voltage DC: 2V max. Radiation wave length: 940 - 965 nM Weight: 0.2 gm max <u>Photo Diode:</u> Dark Current: 0.1micro Amps max Operating voltage: 30V max Weight: 1 Gm max.	QPS: 02	6600 No's	5000 Sets after NC-NC Deevaluation	
5	OMA Explosive Composition	Used in Warhead for Missile	OMA is an HMX based high explosive powder. Shelf life 20 years min Remark - Each private [individual] batch of composition OMA that is included in the batch, should be manufactured from the acrylic emulsion of same batch. Acceptance : Chemical Analysis Safety certification Performance analysis by penetration test Vendors must have valid license for handling / manufacturing and supply of explosive compositions, warheads and igniters etc.	2.8 Kg	227780 kgs	6000 Kgs after NC-NC Deevaluation	Vendors must have valid license for handling / manufacturing supply explosive compositions, warheads and igniters etc.

## LIST OF PRODUCTS INDIGENISED (KEPT IN THE PORTAL FOR SECOND SOURCE DEVELOPMENT)

S No.	Name of the Product	Photograph	Specifications	QPS	Qty procured during last three years	Quantity offered to Industry	Any other Relevant Detail
1	Igniters-Four types		Electric igniters with (a)Instantaneous Thrust (b&c) chemical delay mechnism(d) delay & Pressure.NFC:50mA for 5 minutes.Pulse(a)0.3A. (b,c&d) 1A for 10mSec.	(a)Gyro Pusher Igniter: 02 (b)Inductor Bush Igniter: 01 (c)Sustainer Igniter: 01 (d)Control Section Igniter: 01	5000 sets	2000 Sets after NC-NC Deevaluation	Vendors must have valid license for handling / manufacturing supply explosive compositions, warheads and igniters etc.
2	Flat Flexi cables		Material: Conductors Pure soft annealed copper. Insulation: Film made of Polyimide resin duly bonded with fluoro plastic glue that should with stand at 400°Cfor 3 minutes Operating temperature ranges: A. -60°C to +125°C B. +400°C for a period of 3 minutes without repetitive usage. Operating electrical circuits: A. 10V AC, 8000Hz B. 100V AC, 3000Hz C. 150V DC	10x0.08 Variety: 1.26 meter Length. 4x0.08 Variety: 500 mm Length	a) 5129 mts b) 2504 mts	1000 Meters after NC-NC Deevaluation	
3	Warhead		1. Tandem Warhead with SAM . 2. High Explosive(HMX based) filled Hollow shaped Charge(Cone shaped). 3. Intended to defeat ERA and RHA 4. Specifications: a. Length – 251mm b. Diameter-122mm c. Weight 4.9Kg Vendors must have valid license for handling / manufacturing,staorage and supply of explosive compositions, warheads and igniters etc.	QPS: 01	8000 nos	2000 Nos after NC-NC Deevaluation	Vendors must have valid license for handling / manufacturing supply explosive compositions, warheads and igniters etc.

## LIST OF PRODUCTS INDIGENISED (KEPT IN THE PORTAL FOR SECOND SOURCE DEVELOPMENT)

S No.	Name of the Product	Photograph	Specifications	QPS	Qty procured during last three years	Quantity offered to Industry	Any other Relevant Detail
4	Thermal Battery		<p><b>TECHNICAL SPECIFICATIONS:</b></p> <p>Voltage on Load : 12 +3.5 / -1 Volts (11 to 15.5 Volts) for sec-I &amp; II, 24 +7.0 / -2 Volts (22 to 31 Volts) for sec-III</p> <p>Load : Sec.I – 9.1 <math>\Omega</math>, Sec.II - 9.1 <math>\Omega</math> and for Sec.III – 9.6 <math>\Omega</math></p> <p>No. of Sections : 03</p> <p>Mass : 125 gms. Maximum</p> <p>Insulation Resistance : not less than 40 M <math>\Omega</math> under normal climatic conditions</p> <p>Igniter Resistance : 2.5 to 3.5 <math>\Omega</math></p> <p>Firing Pulse for Igniter : 500 mA for 10 <math>\square</math> 2 mSec.</p> <p>Thermal Battery should withstand to 5500g</p>	QPS: 01	5000 No's	2000 Nos after NC-NC Deevlopment	
5	Knock-Out-Engine (Charge)		<p>Double Base propellant.</p> <p>NCNG composition.Pressure 470Kgf/cm<sup>2</sup>max.</p> <p>Instantaneous burning.Operation time:30mSecmax.</p> <p>Operating temperature-50°C to +50°C.</p>	780 Gms	12,000 kgs	100 Kgs after NC-NC Deevlopment	Vendors must have valid license for handling / manufacturing supply explosive compositions, warheads and igniters etc.
6	Warhead		<p>1. Tandem Warhead with SAM .</p> <p>2. High Explosive(HMX based) filled Hollow shaped Charge(Cone shaped)</p> <p>3. Intended to defeat ERA and RHA</p> <p>4. Specifications:</p> <p>a. Length – 213mm</p> <p>b. Diameter-125mm</p> <p>Vendors must have valid license for handling / manufacturing and supply of explosive compositions, warheads and igniters etc.</p>	QPS: 01	4000 No's	2000 Nos after NC-NC Deevlopment	Vendors must have valid license for handling / manufacturing supply explosive compositions, warheads and igniters etc.

### Contact Persons details:

1. Mr. CH. RAMESH BABU - GENERAL MANAGER - 09490129794
2. Mr. HARSHA VARDHAN RAO P - ADDL. GENERAL MANAGER - 08333036294