



भारत सरकार

GOVERNMENT OF INDIA

पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन

Petroleum and Explosives Safety Organisation

(पूर्व नाम - विस्फोटक विभाग)

(Formerly- Department of Explosives)

“ए-ब्लॉक II, पाँचवा तल, केन्द्रीय कार्यालय परिसर”

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Seminary Hills, Nagpur- 440006

संख्या /No. D-18018/04/2013/PESO/SETT (TECH)

दिनांक /Nagpur, dated 28<sup>th</sup> August, 2018

**CIRCULAR**

To,

1. All High Explosives Manufacturers (*Except SME and ANFO Manufacturers*)
2. All LE-3 License holders (License issued by PESO under Explosives Rules, 2008)
3. All LE-3 and LE-4 (License issued by District Authority under Explosives Rules, 2008)

**Sub:** Implementation of “**System for Explosives Tracking and Tracing (SETT)**” – Pre- Launch Guidelines for Implementation of SETT - Reg.

It is known to all stakeholders that PESO is in the process of developing the “**System for Explosives Tracking and Tracing (SETT)**”. It is also intimated that the pasting/printing of 2D data matrix barcode on outer box of each type of explosives manufactured in the country is to be made mandatory after the launch of provisions of Phase-1 of SETT in **October, 2018**.

The objective of SETT is to develop system for effective tracking of every explosive right from the Manufacturer to the user end, throughout the supply chain and integrating SETT to the existing Explosives Returns System (ERS) and the Explosives Licensing Module of PESO. The project is proposed to be implemented in three phases as follows;

- a. **Phase-1: Level-1 barcode**-Printing or pasting of 2D (data matrix) barcodes along with alpha-numeric human readable characters (below 2D barcode) on the outer packages of all types of explosives.
- b. **Phase-2 : Level-2 barcode**-Printing of barcodes on intermediate (inner) packages, each bundle of cartridge of class-2 explosives (if applicable), each bundle of class-2 & class-3 cast booster (if applicable), each spool of detonating fuse and each bunch of detonators.
- c. **Phase-3: Level-3 barcode**- Printing of barcode on each individual unit left in phase-2

2.) In this regard, please refer to the meetings held in the O/o Chief Controller of Explosives, Nagpur on 28<sup>th</sup> September, 2016, 5<sup>th</sup> May, 2017 and 6<sup>th</sup> July, 2018 with all High Explosives Manufacturers, deliberating the Concept, Standardization Process, Implementation Methodology and Role of the Explosives Manufacturers, on implementation of SETT.

तार-ii “विस्फोटक”, नागपूर

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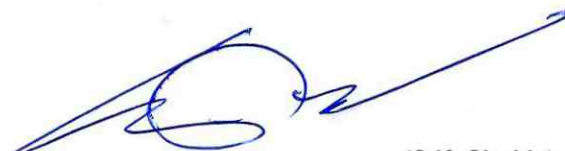
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कार्यालयीन उद्देश्य के सभी पत्रादि “मुख्य विस्फोटक नियंत्रक” के पदनाम से भेजे जाए उनके व्यक्तिगत नाम से नहीं.

All communications intended for this Office should be addressed to the ‘Chief Controller of Explosives’ and NOT to him by name.

- 3.) A Core Committee was constituted comprising the members from PESO, NIC and Explosives Industry to work on the process of standardisation of the data on each & every explosive manufactured in the country and SETT implementation methodology.
- 4.) The Core Committee had several meetings and finalized the design of 2-D data matrix barcode for all the explosives for identifying the Outer Level Package (**Level-1**), Intermediate Level Package (**Level-2**) and Unit Level (**Level-3**); with three levels of approach. The core committee had also developed the methodology for standardisation of data on Explosives, Factories, Buildings, etc and the data input Forms.
- 5.) Accordingly, the "Standardization Software Module" has been developed and all the High Explosives Manufacturers had submitted the requisite data online. The data was standardized and codified with respect to following:
- Standardization of all physical parameters pertaining to every authorized explosive.
  - Standardization of packing patterns of every explosive
  - Standardization of every factory location and every manufacturing building.
  - Allocating manufacture's code to every manufacture.
  - Allocating brand ID and size code to every authorized explosive.
- 6.) The aforesaid codified & allocated standardized data in respect of every Explosives Manufacturer has been shared with the explosives manufacturer, through their respective ERS login in the month of June 2018.
- 7.) As deliberated in the aforesaid meetings the implementation of Project SETT is planned in three phases. Under Phase-I, the implementation of SETT at the Box level for all the explosives products is scheduled at the end of **October, 2018**.
- 8.) A detailed guidelines with respect to the pre-requisites for the SETT implementation process, methodology, the format, size, data to be incorporated in the 2D- data matrix bar code, etc is appended herewith as **Annexure-I**.
- 9.) All the High Explosives Manufacturers are being requested to get themselves ready for the re-engineering of the manufacturing process as per the requirements of SETT and switching over to SETT from the present ERS. The licensees holding licenses in Form LE-3 and LE-4 of the Explosives Rules, 2008 are also requested to get themselves acquainted with the requirements and procedures to be adopted for data entry prior to migrating to SETT from the present ERS. A fortnightly report may also be forwarded by the High Explosives Manufacturers to PESO updating the progress made by them.
- 10.) For any further query / assistance related to the Project SETT may email at [support.ers@explosives.gov.in](mailto:support.ers@explosives.gov.in); [skdixit@explosives.gov.in](mailto:skdixit@explosives.gov.in) ; [ndgawade@explosives.gov.in](mailto:ndgawade@explosives.gov.in); .Technical person may also visit PESO office with prior appointment to clear the queries if any.

Yours faithfully



(S.K. Shukla)

Jt. Chief Controller of Explosives (H.O.D.)

**Copy to,**

1. Shri S.K. Jain- Development Officer, Department of Industrial Policy & Promotion, Ministry of Commerce and Industry, Udyog Bhavan, New Delhi: 110 011: *For Information only.*
2. Heads of All Circle, Sub-Circle offices of PESO and NAPES- DTS: *All Heads of Circle, Sub-Circle offices of PESO and NAPES- DTS are advised to give wide publicity to this circular among the High Explosives Manufacturers and Licensee holding licenses in Form LE-3 and Form LE-4 of the Explosives Rules, 2008 in their respective jurisdiction.*
3. The President- Explosives Manufacturers Welfare Association (EMWA): *EMWA is advised to extend necessary technical assistance to all the explosives manufacturers, so as to ensure that every manufacturer has initiated the re-engineering of the manufacturing process as per the requirements of SETT and shifting to SETT from the present ERS.*

Jt. Chief Controller of Explosives (H.O.D.)

**PRE-REQUISITE for All Explosives Manufacturers (other than SME & ANFO manufacturers) to ONBOARD into SETT (System for Explosives Tracking and Tracing (SETT)) system**

**1. About Bar Code 2D Data Matrix**



**2D Data Matrix Bar coding -Three Level approach for SETT**

Sr. No.	Level	Description	Bar Code Printing / Pasting (specification)
1.	Level- I bar code	27 digit 2D data matrix bar code on box (outer Package) of each type of explosive	2D Data Matrix (20mm x 20mm) + Human Readable format.
2.	Level- II bar code	20 digit 2D data matrix bar code on every intermediate (inner package) bundle/packet of each type of explosive	2D Data Matrix + Human Readable format.
3.	Level- III bar code	23 digit 2D data matrix bar code <b>on every unit</b> of each type of explosive	2D Data Matrix + Human Readable format.

**Level – I Bar Code**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
I	N	M	F	L	0	1	0	1	1	6	A/B/C	1	2	3	4	A	A	A	A	1	0	0	0	0	0	1
Country Code		Manufacturer's Code			Date		Month		Year		Shift Code	Brand ID already assigned by PESO			Size Code		Manufacturing Building Code		Batch No. (Box No)							
Alpha		Alpha			Numeric		Numeric		Numeric		Alphabet	Numeric			Alpha		Alpha Numeric		Numeric							
Assigned by EU		Assigned by PESO			System generated						Assigned by <u>Manuf</u>	Assigned by PESO			Assigned by PESO		Assigned by <u>Manuf</u> & Registered with PESO		System generated serial no. Reset as per manufacturer							
I	N	S	I	L	2	5	0	3	1	6	A	0	3	6	9	A	A	A	E	1	0	0	0	0	0	1

Note :

- (i) This barcode shall be pasted/printed on every box of explosives both in 2D and Human readable format.
- (ii) In 27 digit barcode Batch No [(Box No.) (digits 22 to 27)] shall be reset daily, weekly, fortnightly, monthly, bi-yearly, yearly basis by the manufacturer.
- (iii) The Batch No [(Box No.) (22 to 27)] is brand ID specific and shall be reset (will start from 1) with every change in the Brand Id.

## Level – II Bar Code

Proposed Barcode pattern for packet/bundle for all types of explosives → 20 Digits (Barcode & digits to be printed to be decided)																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
I	N	M	F	L	A	1	B	0	0	0	0	0	0	0	0	0	0	0	1
Country Code		Mfg Code			Manufacturing Building Code		Machine No	Running Serial Number											
Alpha		Alphabet			Alpha Numeric		Alpha (or) Numeric	Numeric											
Assigned by EU		Assigned by PESO			Assigned by Manuf & Registered with PESO			Running Serial Number will last forever											
I	N	S	I	L	E	1	A	0	0	0	0	0	0	0	0	0	0	0	1

Note :

- (i) This bar code shall be pasted/printed on every intermediate packing both in 2D and Human readable format.
- (ii) The Running Serial No. (9 to 20) will never be reset and continue indefinitely for a particular Manufacturing Building Code.
- (iii) The Running Serial No. (9 to 20) will start from 1, with every change in the Building Code.
- (iv) As per discussion in last Core Committee meeting, the machine Code in level-II bar code has been fixed as “X”.

## Level – III Bar Code

Proposed Barcode pattern for unit level for all types of explosives → 23 Digits (Bar code or digits to be printed to be decided)																						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
I	N	M	F	L	A	1	B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Country Code		Mfg Code			Manufacturing Building Code		Machine No	Running Serial Number														
Alpha		Alphabet			Alpha Numeric		Alpha (or) Numeric	Numeric														
Assigned by EU		Assigned by PESO			Assigned by Manufacturer & Registered with PESO			Running Serial Number will last forever														
I	N	S	I	L	E	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Note :

- (i) This bar code shall be printed on every unit level both in 2D and Human readable format (wherever possible).
- (ii) The Running Serial No. (9 to 23) will never be reset and continue indefinitely for a particular Manufacturing Building Code and Machine Code.
- (iii) The Running Serial No. (9 to 23) can be reset (will start from 1) with every change in the Building Code or Machine Code.

**2. Standardization process for implementation of “System for Explosives Tracking and Tracing (SETT)” through web module:**

PESO has completed the analysis, codification and standardisation of the data submitted by all Explosives Manufacturers in respect of the following:

- a) *Standardization of every explosives manufacture, factory location, every manufacturing building and machine.*
- b) *Standardization of all physical, characteristic and performance parameters of every authorized explosive.*
- c) *Standardization of packing patterns of every authorized explosive*

Every Explosives Manufacturer has been shared with their aforesaid codified and allocated standardized data through the Explosives Returns System (ERS) → <http://117.239.184.46/ERS> → **After Login** → **User Profile** → **SETT Standardization Details**, w.e.f. 22<sup>nd</sup> June 2018.

**3. Role of Manufacturers for Phase-I implementation of SETT:**

1. To develop IT system for generation of level-I, level-II and Level-III 2D data matrix bar codes.
2. To Incorporate Manufacture code, Building code, Brand ID and Size Code assigned by PESO for the box-level-I bar code in the IT system of the manufactures.
3. To generate box-level-I bar code and print stickers to be pasted on boxes as per above coding standards of SETT or the bar code may directly be printed on the box on two sides (length and width side of the box). In addition to that it is advisable to paste one more sticker inside the box preferably on the inner side of the flap.
4. To generate Level-II and Level-III bar codes for intermediate packets and unit level of explosives manufactured through the manufacturer's IT system (To be printed in Phase II and Phase III).
5. Print/Paste the Level-II and Level-III bar codes on the packet (intermediate) and unit level of explosives manufactured (in Phase-II).
6. To build relationship between Level-I, Level-II and Level-III bar codes through manufacturers IT system and upload the file containing details of Level-I, Level-II and Level-III bar codes to PESO's SETT system in desired format. The entries pertaining to RE-2 shall be as per RE-2 file format given in **Annexure-II** and entries pertaining to RE-12 shall be as per RE-12 format given in **Annexure-III**.
7. RE-2 file format will be “.csv” with maximum number of allowed unit level bar codes in one file is 2 Lakhs. The file will be Brand ID specific.
8. To get themselves equipped with required IT hardware and software including Printers, Scanners etc. to perform the above tasks.
9. To do the required re-engineering in the manufacturing processes, to carry out the above tasks.
10. To streamline their packing system to make it convenient for using Bar Code system and train manpower accordingly.
11. To follow the SETT ON-BOARDING process w.r.t. each Brand ID and Size code after completion of the above tasks and to intimate PESO.

Note :

1. In phase-I, ON BOARDING of Class-6-2 (DF, Shock Tube etc) and Class-6-3 (Detonators), where Level-II (L2 – Packet/Bundle/Spool/Coil etc) sale is allowed, needs to be on boarded with Level-I and Level-II bar codes printed/pasted on the respective box/packet.
2. If Level-II bar code (L2 – Packet/Bundle/Spool/Coil etc) is not printed/pasted, the SALE of Level-II (L2 – Packet/Bundle/Spool/Coil etc) will not be possible through Mobile App / File Upload option of SETT. However “Select Bar Code” option will be operational.
3. In RE-13 (Pass for Use) in SETT, Level-III (unit level) bar code will not be allowed to ISSUE/RETURN for use through Mobile App / File Upload option of SETT. However “Select Bar Code” option will be operational till level-III bar codes are printed/pasted on the unit.

**RE-2 Entries**  
**LEVEL-I, LEVEL-II, LEVEL-III (File format .csv)**

INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000001  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000002  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000003  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000004  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000005  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000006  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000007  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000008  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000009  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000010  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000011  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000012  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000013  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000014  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000015  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000016  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000017  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000018  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000019  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000020  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000021  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000022  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000023  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000024  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000025  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000026  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000027  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000028  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000029  
INSIC050718G0370CAAE7000001,INSICE7A0000000000001,INSICE7A000000000000030

**RE-12 Entries**

**LEVEL-I Sale (File format .csv)**

INSIC050718G0370CAAE7000001,,  
INSIC050718G0370CAAE7000002,,  
INSIC050718G0370CAAE7000003,,  
INSIC050718G0370CAAE7000004,,  
INSIC050718G0370CAAE7000005,,  
INSIC050718G0370CAAE7000006,,  
INSIC050718G0370CAAE7000007,,  
INSIC050718G0370CAAE7000008,,  
INSIC050718G0370CAAE7000009,,  
INSIC050718G0370CAAE7000010,,

**LEVEL-II Sale (File format .csv)**

INSIC050718G0370CAAE7000001,INSICE7A0000000000001,  
INSIC050718G0370CAAE7000002,INSICE7A0000000000002,  
INSIC050718G0370CAAE7000003,INSICE7A0000000000003,  
INSIC050718G0370CAAE7000004,INSICE7A0000000000004,  
INSIC050718G0370CAAE7000005,INSICE7A0000000000005,  
INSIC050718G0370CAAE7000006,INSICE7A0000000000006,  
INSIC050718G0370CAAE7000007,INSICE7A0000000000007,  
INSIC050718G0370CAAE7000008,INSICE7A0000000000008,  
INSIC050718G0370CAAE7000009,INSICE7A0000000000009,  
INSIC050718G0370CAAE7000010,INSICE7A0000000000010,