

तार "विस्फोटक", ागपूर
Telegram: 'EXPLOSIVES', Nagpur
Website : <http://peso.nic.in>
Email: explosives@explosives.gov.in
दूरभाष/ Telephone : 0712-2510248
फैक्स/ FAX : 2510577

कार्यालयी उद्देश्य के सभी पत्रादि "मुख्य विस्फोटक यंत्रक" के पदाम से भेजे जाएं, उनके व्यक्तिगत ाम से ही ।

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



भारत सरकार

GOVERNMENT OF INDIA

पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन

Petroleum and Explosives Safety Organisation

(पूर्व ाम- विस्फोटक विभाग)

(Formerly- Department of Explosives)

"ए" ब्लॉक, पाँचवा तल, केन्द्रीय कार्यालय परिसर,

"A" Block, 5th Floor, CGO Complex,

सेमीरी हिल्स, ागपुर-440 006 (महा.)

Seminary Hills, Nagpur- 440006

संख्या/No. D-18018/05/2007-08/Plan/SVK/PESO

ागपुर, दिाक/Nagpur, dated 7th March, 2008

To,

All Fireworks Manufactures in India.

Sub: Compliance of Hon'ble Supreme Court's Directives with respect to fireworks manufactured by you.

Dear Sirs,

Whereas, manufacture, possession, sale, transport etc., of the fireworks are regulated under Explosives Rules, 1983 framed under Explosives Act, 1884 and

whereas, Govt. of India, Ministry of Environment & Forests vide their Notification No. GSR 682(E) dated 05/10/1999 issued under Environment (Protection) Act, 1986 specified noise level of fire crackers as under :

- (i) The manufacture, sale or use of firecrackers generating noise level exceeding 125 dB(AI) or 145 dB (C) pk at 4 meters distance from the point of bursting shall be prohibited.
- (ii) For individual fire-cracker constituting the series (joined fire-crackers), the above mentioned limit be reduced by 5 log 10(N) dB, where N = number of crackers joined together and

whereas, Hon'ble Supreme Court in its verdict dated 18/07/2005 in the case of Writ Petition (Civil No. 72 of 1998) read with Civil appeal No. 3735 of 2005 arising out of SLP (C) No. 2185/2003 has directed that **PESO** (formerly Department of Explosives) **shall undertake necessary research activities & come out with the chemical formulae for each type or category or class of fire cracker** specifying the proportion/composition as well as maximum permissible weight of every chemical used in the manufacture of fire crackers, and

whereas, **in compliance to the above directives I(2) of the verdict**, PESO has come out with the chemical formulae for 4 types of commonly used sound producing fire crackers namely (a) Atom Bomb, (b) Chinese Crackers, (c) Maroons & (d) Garland crackers specifying the proportion/composition as well as maximum permissible weight of every chemical used in the manufacture of said fire crackers as given in the **Annexure -1** and

Contd....2/-

whereas, vide said verdict, the Hon'ble Court has further directed that "Every manufacturer shall on the box of each firecracker mention details of its chemical contents and that it satisfies the requirement as laid down by PESO (formerly DOE). In case of a failure on the part of the manufacturer to mention the details or in cases where the contents of the box do not match the chemical formulae as stated on the box, the manufacturer may be held liable.

Therefore, in view of the above, **you are advised to ensure** that the said fire crackers manufactured by you are within the limits prescribed in Annexure 1 above with respect to the chemical formulae specifying proportion/ composition as well as the maximum permissible weight of every chemical used and other parameters, so as to satisfy the requirement of Notification No. GSR 682(E) dated 05/10/1999 issued by Ministry of Environment & Forests under Environment (Protection) Act, 1986 and also comply the directives I(5) & I(6) of the Hon'ble Court's directives. The chemical formulae along with other parameters as given in the Annexure 1 in respect of the above mentioned fire crackers is also hosted in PESO's Website "<http://peso.gov.in>" for information of all concerned.

Please acknowledge the receipt.

Yours faithfully,

Encl : As above.

Sd/-

(**AJAI NIGAM**)

Chief Controller of Explosives

Copy forwarded for information to :

- 1) Shri S.K.Thade, Director, Department of Indl. Policy and Promotion, Ministry of Commerce and Industry, Udyog Bhavan, New Delhi.
- 2) Shri J.N.Jindal, Addl.Director, Ministry of Environment & Forests, CP Division, New Delhi.
- 3) Circle, Sub-Circle and Factory Attached Offices of the Organisation.
- 4) Departmental Testing Station, Gondkhairy, Nagpur.

Chief Controller of Explosives

Annexure-1

A gist of recommendations and chemical formulae
for 4 commonly used Sound Producing Fireworks Items viz.,
(a) Atom Bomb, (b) Chinese Crackers, (c) Maroons & (d) Garland Crackers.

A. Atom Bomb

Physical Measurements	Chemical Composition	Weight	Packing bulk density
Maximum 25g in weight, 40mm in length, 20mm in dia or diagonal. Inner shell volume not exceeding 4.3cm ³ with shell made of paper of max. 240 Gsm, max. winding 5 Nos. and fitted with fuse of 6 to 9 sec delay.	Aluminium powder (999 / 666) : 0.46g (23 %) Sulphur : 0.40g (20 %) KNO ₃ : 0.94g (47 %) BaNO ₃ : 0.20g (10 %) If BaNO ₃ is not in the composition, KNO ₃ will be 1.14g (57%).	Weight of Chemical not exceeding 2.0g per Atom Bomb.	Packing Bulk density not exceeding 0.6 g/cc per Atom Bomb

B. Chinese Cracker

Physical Measurements	Chemical Composition	Weight	Packing bulk density
Overall size not exceeding 75mm in length and 15mm in dia. Inner shell max.length 57.5mm, dia max.8mm and thickness 0.5mm having max. 4 Nos. of papers wrapping in the form outer shell and fitted with fuse of 6-9 sec delay.	Aluminium powder (999) : 0.138g (23 %) Sulphur : 0.120g (20 %) KNO ₃ : 0.342g (57 %)	Weight of Chemical not exceeding 0.6g per cracker.	Packing Bulk density not exceeding 0.6 g/cc per cracker.

C. Maroons

Physical Measurements	Chemical Composition	Weight	Packing bulk density
Overall size not exceeding 100mm in length and 25mm in dia. Inner shell not exceeding 89.0mm in length, 6.0 in dia and thickness not exceeding 1.0mm. Outer shell with max.8 Nos. of paper wrapping and fitted with fuse of 6-9 sec delay.	Aluminium powder (999) : 0.23g (23 %) Sulphur : 0.20g (20 %) KNO ₃ : 0.57g (57 %)	Weight of Chemical not exceeding 1.0g per Maroon	Packing Bulk density not exceeding 0.6 g/cc per Maroon

D. Garland Crackers

Number of Crackers in a garland	Inner shell specification in mm (max.)			Maximum Chemical Quantity (in gms)	Maximum packing bulk density not exceeding (in gms)
	Length	Inner Dia	Thickness (in mm)		
28	45.84	6	0.58	0.3	0.6
56	36.5	6	0.5	0.3	0.6
100	36.5	6	0.5	0.3	0.6
200	36.5	6	0.5	0.3	0.6
500	36.5	6	0.5	0.2	0.6

Chemical Composition	When using composition 0.3g per cracker	When using composition 0.2g per cracker
Aluminium powder (999)	0.069g (23%)	0.046g (23%)
Sulphur	0.060g (20%)	0.040g (20%)
KNO ₃	0.171g (57%)	0.114g (57%)

Delay of Fuse 6 to 9 seconds.
