

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

RAJYA SABHA
UNSTARRED QUESTION No. 538
TO BE ANSWERED ON 02.12.2021

Regulation of firecrackers

538 SHRI K. C. VENUGOPAL:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) the policy of Government in matters of control/regulation of production and burning of firecrackers in the country along with the basis for defining 'Green crackers';
- (b) whether burning of such Green Crackers do not affect the environment and if so, the details thereof; and
- (c) the steps taken to ban the import of Chinese firecrackers in the country?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI ASHWINI KUMAR CHOUBEY)

(a) and (b)

Hon'ble Supreme Court limited the manufacturing and sale of conventional firecrackers and allowed only the crackers with reduced emission (improved crackers) and green crackers. The manufacture, sale and use of joined firecrackers (series crackers or laris) is banned as the same cause huge air, noise and solid waste problems. Petroleum and Safety Organisation (PESO) has been directed to ensure fireworks with permitted chemicals only to be purchased/possessed/sold/used during Diwali and all other religious festivals, of any religion whatsoever, and other occasions like marriages, etc. PESO ensures that only those crackers whose decibel (sound) levels are within the limits are allowed in the market and take action by suspending the licenses of the manufacturers on such violations. Accordingly, new formulation fireworks and crackers as per the guidelines of the Supreme Court are manufactured and sold in the country.

Further, other steps taken to curb the use of firecrackers *inter alia* include advisories for noise monitoring on the occasion of Diwali, prohibition of the use of fireworks between 10.00 p.m. and 6.00 a.m., publicity regarding the ill effects of the firecrackers and awareness programme.

Green cracker has pyrotechnic compositions similar to conventional firecracker. However, it is different from conventional crackers by virtue of having additional component of proprietary additives with following functionalities which are presently not there in conventional crackers:

- (i) Unique property of releasing water and / or air as dust suppressant and diluent for gaseous emissions
- (ii) Overcomes issues of particulate and gaseous emissions

- (iii) Reduced gaseous emission (CO, CO₂, SO₂ and NO₂) due to effective absorbent materials
- (iv) Reduced uses of conventional chemicals Al, S, KNO₃, with respect to their counterpart conventional crackers available in market
- (v) Minimal usage of potassium nitrate and sulphur
- (vi) Matching performance in sound (100-120 BA) and same incidental visual effect as with conventional crackers
- (vii) Absorption potential of additives for metal and gases

Based on the above, Green crackers are 'environmentally benign' by virtue of reduced chemical and environmental footprint hence termed as 'Green cracker'.

Burning of green crackers is resulting into reduced emissions with reference to particulate matter (PM), SO₂ and NO₂ as follows:

- A minimum of PM reduction of 30%
- A minimum of PM reduction of 20% and rest 10% of gaseous emission (mass of gases emitted based on composition)

It is still technically unfeasible to eliminate all ingredients in fireworks causing Particulate pollution. Also, more cracking activities may add more pollution load. This process is dynamic and initial target set to eliminate 30% particulate emission load from fireworks.

(c)

The steps taken by Government to ban the import of Chinese firecrackers in the country, *inter alia* include the following:

- (i) Government of India vide notification No. 64(E) dated 27th January, 1992 has banned manufacture, possession, use, sale etc. of explosives containing sulphur or sulphurate in admixture with any chlorate in the country.
- (ii) Import of 'Fireworks' covered under Indian Trade (Harmonised System) classification [(ITC(HS)] code 36041000 is 'restricted' and no one can import fireworks without a licence / authorisation from the Directorate General of Foreign Trade (DGFT).
- (iii) Petroleum and Explosives Safety Organisation (PESO), Nagpur has come out with the chemical formulae for 4 types of commonly used sound producing crackers namely Atom bomb, Chinese crackers, maroons and Garland crackers specifying the proportion/composition as well as maximum permissible weight of every chemical used in the manufacture of said fire crackers. It has also directed that every manufacturer shall mention the details of chemical content on the box of each fire cracker vide its order dated 7th March, 2008.
- (iv) PESO is regularly drawing samples of fireworks from manufacturers and sellers end and get it tested for effective implementation of the said guidelines.

According to Central Pollution Control Board, Chinese firecrackers generally contain Sulphur, Sulphate and Chlorate in admixtures which are harmful to the environment and health.
