

**GOVERNMENT OF INDIA  
ROAD TRANSPORT AND HIGHWAYS  
LOK SABHA**

STARRED QUESTION NO:257

ANSWERED ON:06.08.2015

Green Bitumen for Road Construction

Patil Shri Shivaji Adhalrao;Shrirang Shri Chandu Barne

**Will the Minister of ROAD TRANSPORT AND HIGHWAYS be pleased to state:**

- (a) whether bitumen and asphalt used in the construction of roads emit toxic gases;
- (b) if so, the details thereof along with measures taken by the Government to address the issue;
- (c) whether the Government proposes to replace aforesaid material by green bitumen;
- (d) if so, the cost difference between the normal bitumen and green bitumen; and
- (e) the time by which the green bitumen is likely to be used for construction of roads?

**Answer**

THE MINISTER OF STATE IN THE  
MINISTRY OF ROAD TRANSPORT AND HIGHWAYS  
(SHRI PON. RADHAKRISHNAN)

(a) to (e) A Statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PART (a) TO (e) OF THE LOK SABHA STARRED QUESTION NO 257 ASKED BY SHRIADHALRAO PATIL SHIVAJIRAO AND SHRI SHRIRANG APPA BARNE ANSWERED ON 06.08.2015 REGARDING 'GREEN BITUMEN FOR ROAD CONSTRUCTION'

(a) & (b) Yes Madam. This Ministry is primarily responsible for the construction and maintenance of National Highways. As per the studies conducted by the research institutes, it has been observed that at ambient temperatures, bitumen does not present any environmental hazards. However, as bitumen is handled at elevated temperatures, in a molten state, this results in hydrocarbon emissions. The Ministry had issued policy guidelines that the feasibility studies/detailed project reports for development of National Highways shall, invariably, consider (i) the construction materials/technologies with reference to their environment friendliness, (ii) use of recyclable materials/waste materials from other industries, (iii) use of efficient and environment friendly construction equipment and plants and (iv) designs using alternative materials/technologies so as to enable the implementing agencies to select the most economical design which would result in substantially reduced Greenhouse Gas (GHG) emissions.

(c) No Madam. The Indian Roads Congress (IRC) has formulated specifications in IRC:SP:98 for the usage of waste plastic in road construction. However, the efficacy of use of waste plastic in construction of roads has to be tested and proved by field trials. Considering the issues related to environment, longer service life, fuel consumption, resistance to extreme weather conditions, saving of natural resources and lower maintenance cost etc., the Ministry has decided that cement concrete pavement could be the default mode of construction on National Highways as against bitumen, which is currently used in construction of National Highways.

(d) & (e) Do not arise.

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