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भारतीय मानक प्रारूप

सड़क वाहन - संपी इत प्राकृतिक गैस (सीएनजी) / जैव-संपी इत प्राकृतिक गैस (बायो-सीएनजी) / तरल पेट्रो लयम गैस (एलपीजी) ईंधन प्रणाली के घटक - सीट, असबाब, छत और साइड लाइनिंग के लए अग्निरोधी सामग्री के लए अग्निरोधी सामग्री
(आई एस 15721: 2006 का संशोधन)

Draft Indian Standard

**ROAD VEHICLES — COMPRESSED NATURAL GAS (CNG) / BIO-COMPRESSED NATURAL GAS (BIO- CNG) / LIQUEFIED PETROLEUM GAS (LPG) FUEL SYSTEM COMPONENTS — FIRE RETARDANT MATERIAL FOR SEAT, UPHOLSTERY, ROOF AND SIDELINING
(REVISION OF IS 15721: 2006)**

ICS: 43.060.40

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Automotive Vehicles Running on Non-Conventional Energy Sources Sectional Committee,
TED 26

FOREWORD

(Formal Clause to be added later)

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Automotive Vehicles Running on Non-conventional Energy Sources Sectional Committee had been approved by the Transport Engineering Division Council.

In the formulation of this standard considerable assistance has been derived from the following AIS Standards issued by the Automotive Research Association of India:

AIS 024(Rev.1) (Part A):- Safety and Procedural Requirements for Type Approval of Gaseous Fuelled Vehicles - Part A (Automotive Application).

AIS 024(Rev.1) (Part B):- Safety and Procedural Requirements for Type Approval of Gaseous Fuel Agricultural Tractors - Part B (Agricultural Tractors Application).

AIS 024(Rev.1) (Part C):- Safety and Procedural Requirements for Type Approval of Gaseous Fuel Vehicles - Part C (CEV's Application).

AIS 028(Rev.1) (Part A):-Code of Practice for Use of Gaseous Fuels in Internal Combustion Engine Vehicles - Part A (Automotive Application)

AIS 028(Rev.1) (Part B):-Code of Practice for Use of Gaseous Fuels in Internal Combustion Engine Agricultural Tractors - Part B (Agricultural Tractors Application)

AIS 028(Rev.1) (Part C):-Code of Practice for Use of Gaseous Fuels in Internal Combustion Engine Construction Equipment Vehicles (CEV's) - Part C (CEV's Application).

AIS-025 (Version 3): Safety and Procedural requirements for Type Approval of LPG Operated Vehicles

AIS 026 (Version 3): Code of Practice for use of LPG Fuel in Internal Combustion Engine to Power 4 Wheeled Vehicles

AIS 027 (Version 3): Code of Practice for use of LPG Fuel in Internal Combustion Engine to Power 2 & 3 Wheeled Vehicles.

This standard is one of the series of Indian Standards published on CNG/Bio-CNG/LPG onboard fuel system components. Other standards in the series are:

<i>IS No.</i>	<i>Title</i>
15710: XXXX	Road vehicles - Compressed natural gas (CNG) /Bio-Compressed natural gas (Bio-CNG) fuel system components – General requirements & definition.

- 15711: **XXXX** Road vehicles - Compressed natural gas (CNG) /Bio-Compressed natural gas (Bio-CNG) fuel system components – Performance and general test methods
- 15712: **XXXX** Road vehicles - Compressed natural gas (CNG) /Bio-Compressed natural gas (Bio-CNG) fuel system components – Automatic valve
- 15713: **XXXX** Road vehicles - Compressed natural gas (CNG) /Bio-Compressed natural gas (Bio-CNG) fuel system components – Pressure regulator
- 15714: **XXXX** Road vehicles - Compressed natural gas (CNG) /Bio-Compressed natural gas (Bio-CNG) fuel system components – Gas Air mixer
- 15715: **XXXX** Road vehicles - Compressed natural gas (CNG) /Bio-Compressed natural gas (Bio-CNG) / Liquefied Petroleum Gas (LPG) Fuel system components – CNG/Bio-CNG/LPG Conduit (Ventilation Hose/Pipe)
- 15716: **XXXX** Road vehicles - Compressed natural gas (CNG) /Bio-Compressed natural gas (Bio-CNG) fuel system components – CNG / Bio-CNG high pressure fuel line (rigid) with end connections (having pressure exceeding 2.15 MPa)
- 15717: **XXXX** Road vehicles - Compressed natural gas (CNG) /Bio-Compressed natural gas (Bio-CNG) / Liquefied Petroleum Gas (LPG) Fuel system components – Petrol valve (Automatic/Manual)
- 15718: **XXXX** Road vehicles - Compressed natural gas (CNG) /Bio-Compressed natural gas (Bio-CNG) fuel system components – CNG/Bio-CNG high Pressure fuel line (flexible hose) with end connections (having pressure exceeding 2.15 MPa)
- 15719: **XXXX** Road vehicles - Compressed natural gas (CNG) /Bio-Compressed natural gas (Bio-CNG)/ Liquefied Petroleum Gas (LPG) fuel system components – Electrical Wiring kit
- 15720: **XXXX** Road vehicles - Compressed natural gas (CNG) /Bio-Compressed natural gas (Bio-CNG) /Liquefied Petroleum Gas (LPG) fuel system component – Compartments sub- Compartments
- 15722: **XXXX** Road vehicles - Compressed natural gas (CNG) / Bio-Compressed natural gas (Bio-CNG) fuel system components - CNG /Bio-CNG flexible fuel line with or without end connections (having pressure not exceeding 2.15 MPa)
- 15723: **XXXX** Road vehicles - Compressed natural gas (CNG) /Bio-Compressed natural gas (Bio-CNG) /Liquefied Petroleum Gas (LPG) fuel system components – Current Limiting devices

The composition of the Committee responsible for the formulation of this standard is given at Annex A (Will be added later).

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (revised)' . The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Draft Indian Standard

ROAD VEHICLES — COMPRESSED NATURAL GAS (CNG) / BIO-COMPRESSED NATURAL GAS (BIO-CNG) / LIQUEFIED PETROLEUM GAS (LPG) FUEL SYSTEM COMPONENTS — FIRE RETARDANT MATERIAL FOR SEAT, UPHOLSTERY, ROOF AND SIDELINING

1 SCOPE

1.1 This **draft** standard specifies definitions, test methods and requirements of fire retardant material for seat, upholstery, roof and side lining of CNG / Bio-CNG / LPG onboard fuel system components, intended for use on motor vehicles defined in IS 14272.

1.1.1 This **draft** standard is applicable to CNG / Bio-CNG/LPG fuel system components intended to be used on vehicles using compressed natural gas / Bio-compressed natural gas / Liquefied petroleum gas in accordance with IS 15320 Part 1 (mono-fuel or bi-fuel applications or dual fuel applications).

1.1.2 This **draft** standard is not applicable to the following:

- a) Liquefied natural gas (LNG) fuel system components located upstream of, and including, the vaporizer;
- b) Fuel containers;
- c) Stationary gas engines; and
- d) CNG / Bio-CNG/LPG fuel systems components for the propulsion of marine craft.
- e) Hydrogen Natural Gas Blend (HCNG) Fuel system components

2 REFERENCES

The following standards contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
IS 14272:2011	Automotive Vehicles — Types — Terminology
15061:2002	Automotive Vehicles – Flammability requirements
IS 15710:XXXX	Road Vehicles — Compressed Natural Gas (CNG) / Bio-Compressed Natural Gas (Bio-CNG) Fuel System Components — General Requirements And Definitions

3 DEFINITIONS

For the purpose of this standard definitions given in IS 15710 shall apply.

4 TYPE TESTS (TYPE APPROVAL)

Seat, upholstery, roof and side lining shall be made up of fire retardant material conforming to 3.2 and 4.1 of IS 15061.

5 MARKING

5.1 The fire retardant material for seat, upholstery, roof and side lining shall be permanently marked with:

- a) Manufacturers name, trade-mark or symbol; and
- b) Part No. or unique identification mark.

5.2 BIS Certification Marking

The material may also be marked with the Standard Mark.

5.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

6 TECHNICAL INFORMATION TO BE SUBMITTED BY THE COMPONENT MANUFACTURER

Technical information to be submitted by the component manufacturer for component type approval/type test shall contain at least following technical information:

- a) Name of the manufacturer,
- b) Manufacturing plant address,
- c) Vehicle manufacturers Part No. for which the material is intended for use,
- d) Make and model of the vehicle for which the material is intended for use,
- e) Manufacturing date and batch number,
- f) Type and grade, and
- g) Identification code number (if any allotted by the supplier/trader).

7 CHANGES IN TECHNICAL SPECIFICATIONS OF A TYPE APPROVED COMPONENT AND EXTENSION OF APPROVAL

Any modification in technical specification of already type approved component shall require re-type test / extension of approval at the discretion of test agency, based on the justification provided by the component manufacturer and reviewed by the test agency, which has granted type approval.

8 NUMBER OF SAMPLES FOR TESTING

Minimum 5 Numbers of cut pieces of the test material of size 356 mm (L) x 100 mm (W) x thickness not more than 13mm. Also specify original thickness from which the sample is cut.