

Sc C/ Deputy Director
PCD, BIS

Kind Attn.: Mr. Hari Mohan Meena

Dear Sir,

Good Day

This refers to our discussions had with you regarding need for modifications of IS 17586 2021 [E12 / E15] specification. As you are aware that Industry is moving higher percent of ethanol blending gradually as per Govt. initiatives but we are facing various challenges on Industry basis while meeting the Specification. The concerns are given below:

A. Limit for Ethanol content:

As per the standard range of ethanol blending is 11.5 to 12 percent for E 12 fuel and 14 to 15 percent for E15 fuel. Please note exactly meeting E12 i.e. 12 % [max] and that for 15 % [max] for E15% is difficult to achieve always while maintain higher limit. We request to change the specification of Ethanol content as follows in line with the AMENDMENT NO. 4 March 2022 in IS 2796 : 2017.

Hence we are recommending following:

E12 Gasoline : **Ethanol Content - 11 to 13 volume percent.**
E15 Gasoline : **Ethanol Content - 14 to 16 volume percent.**

Key Remarks: There are few limitations for determination of Ethanol in gasoline.

1. Water Extraction test method: This is a prominent test method across the industry. As per the test method reporting is to be done at every 0.5 percent having poor repeatability of 1.0 percent.
2. While implementing E10 industry has already faced difficulty in maintain precise blending of ethanol within 0.50 vol % Limit.
3. For E12 and E15 it is extremely difficult to maintain ethanol dosing 12 % and 15 % always which is the highest limit



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B. Amendment of VLI E70 E100 and oxygen content under (IS 17586:2021) for E12/ E15

▪ **To be Revised Proposed Limit:**

Parameter	Months	E 12 Specification (IS 17586 :2021)	E 15 Specification (IS 17586 :2021)
VLI	April –July	1080	1080
	Other	1100	1100
E70	April – July :	10 – 57	10 – 59
	Other :	10-60	10-62
E100		40-72	40-75
Oxygen Content		5.0*	6.2*

▪ **Key Remarks:**

1. Ethanol is lighter component with respect to gasoline, hence blended with Gasoline Distillation properties (E70, E100 & VLI) are impacted. It was recommended to revise E70, E100 and VLI specification accordingly to consider impact of additional ethanol blending.
2. In view of proposed revision of Ethanol % limit as mentioned above. There will be subsequent need of revise Oxygen (*) content, Following is calculation for E12 & E15 EBMG.

Material	Density	Vol%	wt%	Oxygen Content
Ethanol	789	13%	102.57	35
Ethanol Free gasoline	710	87%	617.7	0
EBMS Quantity			720.27	4.98

Material	Density	Vol%	wt%	Oxygen Content
Ethanol	789	16%	126.24	35
Ethanol Free gasoline	707	84%	593.88	0
EBMS Quantity			720.12	6.14

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C. Other Points:

1. If EBMG with 12% and 15% ethanol blended gasoline are meeting IS 17586:2021, then requirement of 88 percent volume of ethanol free gasoline in E12 and 85 percent volume of ethanol free gasoline in E15 is not mandatory to meet specification of IS 2796. The same philosophy was followed in E10 Specification.
2. Test method mentioned in the foot note 7 for ethanol content testing D 5845 is for measurement up- to 10 percent of Ethanol which is not suitable for E12 & E15 EBMS hence need to be removed.
3. Referee method for ethanol content to be changed to D 4815 (GC) in line with IS 2796.

As discussed it is extremely difficult to maintain existing parameters always E12 / E15 and we should not operate with borderline Specifications. Views above requesting for Industry meeting at the earliest for collective views and necessary amendment accordingly please.

Thanking You & Warm Regards



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