

INFORMAL GROUP ON GASEOUS FUEL VEHICLES
Within the UN GRPE (WP29)
PROPOSED AMENDMENT GFV-04-09

Name of Organisation submitting Amendment/Work Item:

Polish delegation together with AEGPL

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Regulation name and reference number: Regulation 83

Name of Amendment/Work Item:

Document aiming at clarifying the interpretation of the existing specification on the composition of LPG reference fuel in R83.

Annex 10a:

1. SPECIFICATIONS OF GASEOUS REFERENCE FUELS

1.1. TECHNICAL DATA OF THE LPG REFERENCE FUELS

1.1.1. TECHNICAL DATA OF THE LPG REFERENCE FUELS USED FOR TESTING VEHICLES TO THE EMISSION LIMITS GIVEN IN ROW A OF THE TABLE IN PARAGRAPH 5.3.1.4. - TYPE I TEST

Parameter	Unit	Fuel A	Fuel B	Test method
<i>Composition:</i>				ISO 7941
C ₃ -content	per cent vol	30 ± 2	85 ± 2	
C ₄ -content	per cent vol	balance ¹	Balance ¹	
< C ₃ , >C ₄	per cent vol	max. 2	max. 2	
Olefins	per cent vol	max. 12	max. 15	
Evaporation residue	mg/kg	max. 50	max. 50	ISO 13757
Water at 0°C		free	free	visual inspection
Total sulphur content	mg/kg	max. 50	max. 50	EN 24260
Hydrogen sulphide		none	none	ISO 8819
Copper strip corrosion	rating	Class 1	class 1	ISO 6251 <u>1/</u>
Odour		characteristic	characteristic	
Motor octane number		min. 89	min. 89	EN 589 Annex B

1/ This method may not accurately determine the presence of corrosive materials if the sample contains corrosion inhibitors or other chemicals which diminish the corrosivity of the sample to the copper strip. Therefore, the addition of such compounds for the sole purpose of biasing the test method is prohibited

¹ Balance has to be read as follows: balance =100 - C₃ - <C₃ - >C₄

1.1.2. TECHNICAL DATA OF THE LPG REFERENCE FUELS USED FOR TESTING VEHICLES TO THE EMISSION LIMITS GIVEN IN ROW B OF THE TABLE IN PARAGRAPH 5.3.1.4. OF ANNEX I - TYPE I TEST

Parameter	Unit	Fuel A	Fuel B	Test method
Composition:				ISO 7941
C ₃ -content	per cent vol	30 ± 2	85 ± 2	
C ₄ -content	per cent vol	balance ¹	Balance ¹	
< C ₃ , >C ₄	per cent vol	max. 2	max. 2	
Olefins	per cent vol	max. 12	max. 15	
Evaporation residue	mg/kg	max. 50	max. 50	ISO 13757
Water at 0 °C		free	free	Visual inspection
Total sulphur content	mg/kg	max. 10	max. 10	EN 24260
Hydrogen sulphide		none	none	ISO 8819
Copper strip corrosion	Rating	class 1	class 1	ISO 6251 <u>1</u> /
Odour		characteristic	characteristic	
Motor octane number		min. 89	min. 89	EN 589 Annex B

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