



**CHARACTERISTICS OF PROPANE AND BUTANE (In common commercial form)**

DESIGNATION		PROPANE	BUTANE
Gross calorific Value G.C.V.	{ per Nm <sup>3</sup> per kg	98 MJ to 130 MJ 50 MJ to 52 MJ	105 MJ to 130 MJ 47 MJ to 50 MJ
Nett calorific Value N.C.V.	{ per Nm <sup>3</sup> per kg	90 MJ to 93 MJ 46 MJ to 47 MJ	117 MJ to 121 MJ 45 MJ to 46 MJ
Specific weight	{ per Nm <sup>3</sup> per litre of liquid	1.965 kg 0.509 kg	2.637 kg 0.576 kg
Density (relative)	{ of gas of liquid	1.52 0.509	2.04 0.576
STOICHIOMETRIC VOLUME OF AIR	{ per Nm <sup>3</sup> of gas per kg gas	23.9 Nm <sup>3</sup> 12.2 Nm <sup>3</sup>	31.1 Nm <sup>3</sup> 11.8 Nm <sup>3</sup>



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<b>Products of combustion per Nm<sup>3</sup> of gas</b>		
- Carbon dioxide : CO <sub>2</sub>	2.97 Nm <sup>3</sup>	4.03 Nm <sup>3</sup>
- Water vapour : H <sub>2</sub> O	4.01 Nm <sup>3</sup>	5.12 Nm <sup>3</sup>
- Nitrogen : N <sub>2</sub>	18.64 Nm <sup>3</sup>	24.26 Nm <sup>3</sup>
- Total volume	25.62 Nm <sup>3</sup>	33.41 Nm <sup>3</sup>
- Weight of water	3.21 kg	4.01 kg
<b>Products of combustion per kg of gas</b>		
- Carbon dioxide : CO <sub>2</sub>	1.51 Nm <sup>3</sup>	1.53 Nm <sup>3</sup>
- Water vapour : H <sub>2</sub> O	2.04 Nm <sup>3</sup>	1.94 Nm <sup>3</sup>
- Nitrogen : N <sub>2</sub>	9.52 Nm <sup>3</sup>	9.26 Nm <sup>3</sup>
- Total volume	13.07 Nm <sup>3</sup>	12.67 Nm <sup>3</sup>
- Weight of water	1.63 kg	1.55 kg
Boiling point at atmospheric pressure.	- 42 °C	- 0.5 °C
LATENT HEAT OF VAPORISATION per kg.	448 kJ	402 kJ