

## CO<sub>2</sub> specifications

Component	Mole Base
CO <sub>2</sub>	≥ 95%
H <sub>2</sub> O	≤ 70 ppm
Sum [H <sub>2</sub> +N <sub>2</sub> +Ar+CH <sub>4</sub> +CO+O <sub>2</sub> ]	≤ 4%
H <sub>2</sub>	≤ 0.75%
N <sub>2</sub>	≤ 2.4%
Ar	≤ 0.4%
CH <sub>4</sub>	≤ 1%
CO	≤ 750 ppm
O <sub>2</sub>	≤ 40 ppm
Total sulfur-contained compounds (COS, DMS, H <sub>2</sub> S, SO <sub>x</sub> , Mercaptan)	≤ 20 ppm Of which H <sub>2</sub> S ≤ 5 ppm
Total NO <sub>x</sub>	≤ 5 ppm
Total aliphatic hydrocarbons (C2 to C10) <sup>i</sup>	≤ 1200 ppm
Total aromatic hydrocarbons (C6 to C10, incl. BTEX) <sup>i</sup>	≤ 0.1 ppm
Total volatile organic compounds <sup>ii</sup> (excl. methane, total aliphatic HC (C2 to C10), methanol, ethanol, and aldehydes)	≤ 10 ppm
Total aldehyde compounds	≤ 10 ppm
Ethanol	≤ 20 ppm
Methanol	≤ 620 ppm
Hydrogen cyanide (HCN)	≤ 2 ppm
Total amine compounds	≤ 1 ppm
Total glycol compounds	Follow dew point specification
Ammonia (NH <sub>3</sub> )	≤ 3 ppm
Total carboxylic acid and amide compounds	≤ 1 ppm
Total phosphorus-contained compounds	≤ 1 ppm
Toxic compounds <sup>iii</sup>	
Dew point limit value measurement (for all liquids, i.e. for complete CO <sub>2</sub> composition)	< -10 °C (at 20 bara)

Note i: Specification values are molecular based  
 Note ii: VOC definition according to Dutch policy  
 Note iii: Toxic compounds: although CO<sub>2</sub> and other gases like i.e. H<sub>2</sub> and N<sub>2</sub> can form a risk of asphyxiation, Porthos would like to know other components within the stream which impose a risk on personal safety to be taken into account in Porthos HSE policy