

Oxygen & Argon Works Ltd.	Spec.No.G-08.008	
Product Sales Control	Issue: A	Date:5.06.2013
GAS SPECIFICATION	Sheet 1 of 1	

CARBON DIOXIDE – 99.9% Beverage grade

Typical purity/Impurity Limits:


Component	Specification	Component	Specification
Carbon dioxide- CO2	≥ 99.9% (v/v)	Oxygen-O2	≤ 30 ppm(v/v)
Acetaldehyde-CH3CHO	≤ 0.2 ppm(v/v)	Phosphine-PH3 (See note 3)	≤ 0.3 ppm(v/v)
Ammonia-NH3	≤ 2.5 ppm(v/v)	Sulfur Dioxide-SO2 (See note 2)	≤ 1 ppm(v/v)
Acidity (1)	to pass JECFA test	Total Sulfur Excluding SO2 (See note 2)	≤ 0.1 ppm(v/v)
Aromatic Hydrocarbon as Benzene	≤ 20 ppb(v/v)	THC as Methane (See note 4)	≤ 50 ppm(v/v)
Carbon Mono Oxide-CO	≤ 10 ppm(v/v)	Hydrogen Sulfide-H2S (See note 2)	≤ 0.1 ppm(v/v)
Carbonyl Sulfide-COS (See note 2)	≤ 0.1 ppm (v/v)	NVR- Non Volatile Residue	≤ 10 ppm(w/w)
Hydrogen Cyanide- HCN (See note 5)	Non detected	NVOR- Non Volatile Organic Residue-Oil/grease	≤ 5 ppm(w/w)
Methanol- CH4OH	≤ 10 ppm (v/v)	H2O	≤ 20 ppm(v/v) (DP ≤ Minus 55.6° C)
Nitrogen Mono Oxide-NO	≤ 2.5 ppm(v/v)	Odor of solid CO2	No foreign odor
Nitrogen Dioxide-NO2	≤ 2.5 ppm(v/v)	Odor & taste in water	No foreign odor or taste
		Appearance In water	No color or turbidity

Notes:

- (1) Due to lack of sensitivity, this test is not required if the assay results are acceptable.
- (2) If total sulfur exceeds 0.1 ppm, hydrogen sulfide and carbonyl sulfide shall not exceed a value of 0.1 ppm each. a sulfur dioxide test should be performed and the sulfur dioxide result shall be subtracted from the total sulfur value. A separate 1.0 ppm(v/v) limit applies to sulfur dioxide only.
- (3) Apply only to CO2 from phosphate rock sources.
- (4) Including 20 ppm max. of non methane hydrocarbons.
- (5) Apply only to CO2 from coal gasification and combustion source. Current detection level is 0.5 ppm.

- Above specification applies to Carbon Dioxide compressed gas and refrigerated liquid for Beverages applications, per the requirements of the following standards: Israeli standard SII 388, CGA G6.2 and ISBT.
- Quality Assurance – According to company QC procedures.
- Manufacture - fermentation process, burning of a fuel, neutralization of hydrochloric acid by calcium carbonate or as by product of producing fertilizers as Mono Potassium Phosphate.
- Packing & Distribution – As, liquid In high pressure gas cylinders, refrigerated liquid in liquid cylinders and refrigerated liquid in tanks and road tankers, according to customers requirements.
- Valve Outlet Thread - According to IS 637 part 3. [21.7mm Whitworth, 14 teeth/", Male, Cylindrical, right hand, with rupture disk]

Hazardous Materials Codes			
	U.N. No.	Emergency Actions	Hazard Class
Compressed gas	1013	2T	2.2
Refrigerated liquid	2187	2T	2.2

Originator : Meir Ben Ishay	Date: 5.06.2013	Signature: 
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