

Oxygen & Argon Works Ltd.	Spec.No. G-00.001	
Product Manufacturing Control	Issue: J	Date: 14.02.2008
GAS SPECIFICATION	Sheet 1 of 2	

GENERAL GAS SPECIFICATION SHEET

OXYGEN	Typical Analysis					
	Name	Grade	Ar + Inerts	H ₂ O	THC	CO ₂
Industrial (Uncertified)	98%	As per SI 496 for Technical Oxygen				
Commercial (Dry)	99.5%	≤ 0.5%	≤ 10 ppm	Not defined	Not defined	Not defined
Medical Grade breathing- EP (MOH licence)	99.5%	Not defined	≤ 67 ppm	Not defined	≤ 300 ppm	≤ 5 ppm
Food Grade- EP	99.5%	Not defined	≤ 67 ppm	Not defined	≤ 300 ppm	≤ 5 ppm
Aviation breathing- Liquid	99.5%	Not defined	≤ 5 ppm	≤ 25 ppm	≤ 5 ppm	Not defined
Aviation breathing -gaseous	99.5%	Not defined	≤ 5 ppm	≤ 50 ppm	≤ 10 ppm	Not defined
High purities	99.7%	≤ 0.3%	≤ 2 ppm	≤ 15 ppm	Not defined	Not defined
	99.8%	≤ 0.2%	≤ 2 ppm	≤ 15 ppm	Not defined	Not defined
Ultra high purities	99.998%	Available on special order				
	99.999%	Available on special order				

NITROGEN	Typical Analysis					
	Name	Grade	O ₂	H ₂ O	THC	CO ₂
Industrial (Uncertified)	99.5%	≤ 0.5%	Not defined	Not defined	Not defined	Not defined
Dry	99.99%	≤ 50 ppm	≤ 10 ppm	≤ 7 ppm	≤ 3 ppm	Not defined
Inert grades	99.995%	≤ 20 ppm	≤ 10 ppm	≤ 5 ppm	≤ 2 ppm	Not defined
	99.998%	≤ 5 ppm	≤ 3 ppm	≤ 3 ppm	≤ 1 ppm	Not defined
Electronic/optic	99.999%	≤ 2 ppm	≤ 2 ppm	≤ 1ppm	≤ 1ppm	Not defined
Ultra high purities	99.9995%	≤ 1 ppm	≤ 1.5 ppm	≤ 0.5 ppm	≤ 0.5 ppm	Not defined
	99.9999%	Available on special order				
Cryogenic cooling fluid	98.7%	≤ 1.3 %	≤ 10 ppm	≤ 10 ppm	≤ 10 ppm	≤ 10 ppm
Food Grade- EP	99.5%	≤ 50 ppm	≤ 67 ppm	Not defined	≤ 300 ppm	≤ 5 ppm
Pharmaceutical Grade- EP	99.5%	≤ 50 ppm	≤ 67 ppm	Not defined	≤ 300 ppm	≤ 5 ppm
Pharmaceutical Grade- USP	99.0%	≤ 1.0 %	Not defined	Not defined	Not defined	≤ 10 ppm

ARGON	Typical Analysis					
	Name	Grade	O ₂	N ₂	H ₂	H ₂ O
Industrial (Uncertified)	99.985%	Minimum Product Purity 99.985%				
Commercial (Dry)	99.996%	≤ 10 ppm	≤ 20 ppm	Not defined	≤ 10 ppm	Not defined
High purity	99.998%	≤ 5 ppm	≤ 10 ppm	≤ 1ppm	≤ 5 ppm	≤ 3ppm
Special purpose	99.999%	≤ 2 ppm	≤ 5 ppm	≤ 1ppm	≤ 2 ppm	≤ 1ppm
Ultra high purities	99.9995%	≤ 1ppm	≤ 2.5 ppm	≤ 0.2 ppm	≤ 1.5 ppm	≤ 0.5 ppm
	99.9999%	Available on special order				

HELIUM	Typical Analysis					
	Name	Grade	O ₂	N ₂	H ₂	H ₂ O
Helium for balloons Uncertified	≥ 95%	≤ 1.0%	Not defined	Not defined	≤ 100 ppm	Not defined
High purity I	99.995%	≤ 5 ppm	≤ 20 ppm	≤ 2 ppm	≤ 10 ppm	≤ 2 ppm
High purity II	99.996%	≤ 4 ppm	≤ 17 ppm	≤ 1.5ppm	≤ 6 ppm	≤ 1.5ppm
Special purpose	99.999%	≤ 2 ppm	≤ 5 ppm	≤ 0.5ppm	≤ 2 ppm	≤ 1ppm
Ultra high purities	99.9995%	≤ 1ppm	≤ 2 ppm	≤ 0.5 ppm	≤ 1.5 ppm	≤ 0.5 ppm
	99.9999%	Available on special order				

COMPRESSED AIR	Typical Analysis						
	Name	O ₂	CO ₂	CO	Oil	H ₂ O	SO ₂
Industrial (Uncertified)	Minimum Product Purity 20% O ₂						Not defined
Dry	20 to 22%	Not defined	Not defined	Not defined	≤ 10 ppm	Not defined	
Pharmaceutical - EP	20.4 - 21.4%	≤ 500 ppm	≤ 5 ppm	≤ 0.1 mg/m ³	≤ 67 ppm	≤ 1 ppm	≤ 2 ppm
Breathing Air (not Medical)	20.4 - 21.4%	≤ 500 ppm	≤ 10 ppm	≤ 0.001 g/m ³	≤ 10 ppm	Not defined	
Synthetic air	Available on special order						

HYDROGEN	Typical Analysis						
	Name	Grade	O ₂	N ₂	H ₂ O	THC	CO,CO ₂
High purity I	99.99%	≤ 10 ppm	≤ 50 ppm	≤ 20 ppm	≤ 10 ppm	≤ 10 ppm	≤ 5 ppm
High purity II	99.99%	≤ 1 ppm	≤ 5 ppm	≤ 4 ppm	≤ 0.5 ppm	≤ 0.5 ppm	≤ 1 ppm



Originator : Meir Ben Ishay	Date: 14.02.2008	Signature:
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CARBON DIOXIDE	Typical Analysis									
	Name	Grade	CO	Oil	H ₂ O	NO	NO ₂	NH ₃	H ₂ S	SO ₂
Technical	99.5%	≤ 10 ppm	≤ 20 mg/m ³	≤ 250 ppm	Not defined	Not defined	Not defined	Not defined	Not defined	Not defined
Technical (Dry)	99.5%	≤ 10 ppm	≤ 5 mg/m ³	≤ 10 ppm	≤ 2.5 ppm	≤ 2.5 ppm	≤ 2.5 ppm	≤ 1 ppm	≤ 5 ppm	≤ 5 ppm
Medical Grade-EP	99.5%	≤ 5 ppm	Not defined	≤ 67 ppm	≤ 1 ppm	≤ 1 ppm	Not defined	≤ 1 ppm	≤ 2 ppm	≤ 2 ppm
Food Grade per Israeli Standard 388	99.5%	≤ 10 ppm	≤ 5 mg/m ³	≤ 10 ppm	≤ 2.5 ppm	≤ 2.5 ppm	≤ 2.5 ppm	≤ 1 ppm	≤ 5 ppm	≤ 5 ppm

ACETYLENE	Typical Analysis		
	Name	Grade	H ₂ S
Technical grade per Israeli standard 477	technical	≤ 500 ppm	≤ 500 ppm



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