OXYGEN O_2

Oxygen is a colorless, odorless, highly oxidizing gas that sustains life and vigorously supports combustion. Oxygen should not be permitted to contact oil, grease or other combustible materials. As such, all equipment used with Oxygen must be specially cleaned. It is used to oxidize certain materials, such as Si to SiO_2, or ashing of photoresists and to achieve chemical vapor deposition of oxides. It is also used to make ozone for oxidation or cleaning. It is shipped in steel cylinders under high pressure.

Container Information

CYLINDER SIZE	CONTENTS	
	Ft^3	M^3
049	251	7.1
044	226	6.4
016	81	2.3

Pressure @ 21.1˚C	2000 psig
Valve Outlet	CGA-540 / DISS-714
DOT Shipping Description:	Oxygen, compressed 2.2, UN 1072
DOT Shipping Labels	Non-flammable Gas Oxidizer
DOT Guide No.	14
CAS Registry No.	7782-44-7

Specifications

COMPONENT OXYGEN	ULSI 99.9999% min	VLSI 99.999% min
Argon	< 200 ppb	< 2 ppm
Carbon Dioxide	< 50 ppb	< 0.1 ppm
Carbon Monoxide	< 50 ppb	< 0.1 ppm
Krypton	< 100 ppb	< 1 ppm
Nitrous Oxide	< 200 ppb	< 2 ppm
THC (as Methane)	< 50 ppb	< 0.1 ppm
Water	< 100 ppb	< 1 ppm
Xenon	< 100 ppb	< 1 ppm

SHELF LIFE: 2 years

Physical Properties

Molecular Weight	32.00
Flammability Limits in air	Non-flammable
Specific Gravity, Gas @ 70˚F(21.1˚C), 1 atm(Air=1)	1.11
Density, Gas @ 70˚F(21.1˚C), 1 atm	0.0826lbs/ft^3 (1.325g/l)
Specific Volume, Gas @ 70˚F(21.1˚C), 1 atm	12.1ft^3/lb (0.755l/g)
Boiling Point @ 1 atm	-297.4˚F (-183˚C)
Critical Temperature	-181.4˚F (-118.6˚C)
Critical Pressure	731.4 psia (50.4 bar)
Toxicity	>75% causes hyperoxia