AMMONIA NH_3

Ammonia is a colorless, pungent, flammable gas at atmospheric pressure and temperature. It is irritating to the mucous membranes and toxic in high concentrations. Ammonia is shipped as a liquefied gas under its own vapor pressure.

Container Information

CYLINDER SIZE	CONTENTS LB	CONTENTS KG
044	50	22.7
016	15	6.8
008	9	4.1

Pressure@21.1˚C	114 psig
Valve Outlet	std: CGA-660 opt: DISS-720
DOT Shipping Description:	Ammonia, anhydrous, liquefied 2.2, UN 1005, Inhalation Hazard
DOT Shipping Labels	Nonflammable Gas
DOT Guide No.	15
CAS Registry No.	7664-41-7

Specifications

COMPONENT AMMONIA	ULSI 99.9997%min	VLSI 99.9995%min	ELECTRONIC 99.999%min
Carbon Dioxide	< 250 ppb		
Carbon Monoxide	ND < 100 ppb	< 1 ppm	< 1 ppm
Nitrongen	<1000 ppb	< 1 ppm	< 2 ppm
Oxygen	< 500 ppb	< 1 ppm	< 1 ppm
THC (as Methane)	ND < 100 ppb	< 1 ppm	< 1 ppm
Water	<2000 ppb	< 3 ppm	< 5 ppm

SHELF LIFE: 2 years

Physical Properties

Molecular Weight	17.030
Flammability Limits in air	15 - 28%
Specific Gravity, Gas @ 70˚F(21.1˚C), 1 atm(Air=1)	0.594
Density, Gas @ 70˚F(21.1˚C), 1 atm	0.04lbs/ft³ (0.71ml/g)
Specific Volume, Gas @ 70˚F(21.1˚C), 1 atm	22.6ft³/lb (1.411ml/g)
Boiling Point @ 1 atm	-28˚F (-33.4˚C)
Melting Point @ 1 atm	-107.9˚F (-77.8˚C)
Critical Temperature	270.4˚F (132.4˚C)
Toxicity	
PEL	50 ppm
TLV-TWA	25 ppm
STEL	35 ppm
LC_{50}RAT	7338 ppm
IDLH	500 ppm

ULSI Metals Specifications

ELEMENT	SYMBOL	GAS PHASE	LIQUID PHASE
Antimony	Sb	< 10	< 10
Cadmium	Cd	< 10	< 10
Calcium	Ca	< 10	< 50
Chromium	Cr	< 10	< 50
Cobalt	Co	< 10	< 10
Copper	Cu	< 10	< 50
Gallium	Ga	< 1	< 10
Germanium	Ge	< 10	< 10
Iron	Fe	< 50	< 500
Lead	Pb	< 10	< 10
Lithium	Li	< 1	< 1
Magnesium	Mg	< 10	< 50
Manganese	Mn	< 10	< 50
Molybdenum	Mo	< 10	< 10
Nickel	Ni	< 10	< 100
Potassium	K	< 1	< 1
Silicon	Si	< 10	< 500
Sodium	Na	< 10	< 10
Tin	Sn	< 10	< 300
Zinc	Zn	< 10	< 100

*all values in ppb, lot analysis only