

**ABNT (Associação Brasileira de Normas Técnicas)**

Connector type	Connector description	Generic gas property	Example gases or mixtures components
ABNT 172-1	3/8" -18 NGT INT	Toxic	Ammonia
ABNT 218-1	W 21.8 x 1/14" INT	Oxidiser	Air, Oxygen, Oxygen Mix >20%
ABNT 218-2	W 21.8 x 1/14" LH INT	Flammable	Hydrogen, Methane
ABNT 225-2	0.885" - 14 NGO LH	Flammable	Acetylene, Butane
ABNT 245-1	0.960" - 14 NGO	Inert	Argon, Helium, Nitrogen
ABNT 245-1	0.960" - 14 NGO	Inert	Inert gases + Oxygen Mix <20%
ABNT 245-2	0.960" - 14 NGO LH	Non Flammable	Sulphur Hexafluoride
ABNT 262-1	1.035" - 14 NGO INT	Toxic	Sulphur Dioxide, Chlorine
ABNT 209-1	0.830" - 14 NGO INT	Non Flammable	Carbon Dioxide
ABNT 209-2	0.830" - 14 NGO LH INT (Round Nipple)	Toxic, Flammable	Carbon Monoxide, Phosphine, Silane
ABNT 209-4	0.830" - 14 NGO LH INT (Flat Nipple)	Toxic	Hydrogen Chloride, Hydrogen Sulphide
ABNT 166-1	G 3/8" A - ISO 228-1	Oxidiser	Nitrous Oxide

AFNOR (Association Française de Normalisation)

Connector type	Connector description	Generic gas property	Example gases or mixtures components
NF B	W 30 x 1.75	Oxidiser	Industrial Air
NF C	SI 21.7 x 1.814	Inert Gases	Argon, Helium, Nitrogen
NF E	SI 21.7 x 1.814 LH	Flammable	Hydrogen, Hydrogen Mix >4%
NF F	SI 22.94 x 1.814 INT	Oxidiser	Oxygen
NF G	SI 26 x 1.5 INT	Oxidiser	Nitrous Oxide
NF H	W 22.91 x 1.814 LH INT	Flammable	Acetylene
NF J	W 25.4 x 3.175	Corrosive	Chlorine
NF K	W 27 x 2	Corrosive	Hydrogen Chloride
NF L	W 27 x 2	Oxidiser	Inert gases + Oxygen Mix > 21%
NF M	W 30 x 2	Oxidiser	Inert gases + Oxygen Mix > 21% & CO2 < 7%
NF P	W 27 x 2	Oxidiser or corrosive	Nitric Oxide, Nitrogen Dioxide

BS 341 (British Standard)

Connector type	Connector description	Generic gas property	Example gases or mixtures components
BS 341 No. 2	G 5/8" LH	Flammable	Acetylene
BS 341 No. 3	G 5/8" INT	Inert	Air, Argon, Neon, Nitrogen
BS 341 No. 3	G 5/8" INT	Oxidiser	Oxygen
BS 341 No. 4	G 5/8" LH INT	Flammable	Acetylene, Hydrogen
BS 341 No. 4	G 5/8" LH INT	Flammable	Carbon Monoxide, Methane, Natural Gas
BS 341 No. 6	G 5/8"	Toxic	Chlorine, Hydrogen Chloride
BS 341 No. 7	G 5/8" LH	Flammable Refrigerants	Flammable Refrigerants
BS 341 No. 8	W 0.860" x 14 TPI	Non Flammable	Carbon Dioxide
BS 341 No. 10	G 1/2"	Toxic	Ammonia
BS 341 No. 12	G 1/2"	Toxic	Sulphur Dioxide
BS 341 No. 13	W 11/16" - 20 TPI	Oxidiser	Nitrous Oxide
BS 341 No. 14	G 3/8"	Toxic	Hydrogen Cyanide, Nitric Oxide
BS 341 No. 15	G 3/8" LH	Toxic	Carbonyl Sulphide, Hydrogen Sulphide

CGA (US Compressed Gas Association)

Connector type	Connector description	Generic gas property	Example gases or mixtures components
CGA 110	0.3125 - 32 UNEF INT	Small Cylinders	All Gases
CGA 170	9/16" - 18 UNF INT	Non Corrosive, Small Cylinders	Argon, Helium
CGA 180	5/8" - 18 UNF INT	Small Cylinders	All Gases
CGA 240	3/8" - 18 NPT	Toxic	Ammonia
CGA 296	0.803" - 14 UNS INT	Oxidising Mixtures	Oxygen Mix > 23%
CGA 300	0.825" - 14 NGO	Refrigerant	Ethyl Chloride
CGA 320	0.825" - 14 NGO	Non Flammable	Carbon Dioxide
CGA 326	0.825" - 14 NGO	Oxidiser	Air
CGA 330	0.825" - 14 NGO LH	Toxic	Hydrogen Chloride
CGA 346	0.825" - 14 NGO	Oxidiser	Air
CGA 350	0.825" - 14 NGO LH	Flammable	Hydrogen, Methane
CGA 510	0.825" - 14 NGO LH INT	Flammable	Propane
CGA 540	0.903" - 14 NGO	Oxidiser	Oxygen
CGA 580	0.965" - 14 NGO INT	Inert	Argon, Nitrogen
CGA 590	0.965" - 14 NGO LM INT	Oxidiser	Air
CGA 330	1.030" - 14 NGO	Toxic	Hydrogen Sulphide
CGA 679	1.030" - 14 NGO LH	High Pressure	Nitrogen
CGA 705	1.125" - 14 UNS LH	Toxic	Ammonia

## DIN 477 (Deutsche Industrie Norm)

Connector type	Connector description	Generic gas property	Example gases or mixtures components
DIN 477 No. 1	W 21.8 x 1/14" LH	Flammable	Hydrogen, Propane
DIN 477 No. 2	W 21.8" x 1/14" LH	Flammable	Propane
DIN 477 No. 3	Yoke	Flammable	Acetylene
DIN 477 No. 3.1	M 24 x 2" LH	Flammable	Acetylene
DIN 477 No. 5	W 1" x 1/8" LH	Toxic	Carbon Monoxide
DIN 477 No. 6	W 21.8 x 1/14"	Various	Argon, Helium, Carbon Dioxide
DIN 477 No. 7	G 5/8"	Toxic	Sulphur Dioxide
DIN 477 No. 8	W 1" x 1/8"	Toxic	Boron Trichloride
DIN 477 No. 9	G 3/4"	Oxidiser	Oxygen
DIN 477 No. 10	W 24.32 x 1/14" RH	Inerts	Nitrogen
DIN 477 No. 11	G 3/8"	Oxidiser	Nitrous Oxide (>3 l size)
DIN 477 No. 12	G 3/4" INT	Oxidiser	Nitrous Oxide (<3 l size)
DIN 477 No. 13	G 5/8" INT	Non Flammable	Air
DIN 477 No. 14	M 19 x 1.5 LH	Various	Mixtures

IRAM 2539 (Instituto Argentino de Racionalización de Materiales)

Connector type	Connector description	Generic gas property	Example gases or mixtures components
IRAM 2539 No. 1	3/4" BSP x 1/14" - INT	Flammable	Acetylene
IRAM 2539 No. 2	W 21.8 - 1 1/4	Various	Oxygen, Sulphur Hexafluoride
IRAM 2539 No. 3	5/8" BSP - INT	Non Flammable	Argon, Nitrogen
IRAM 2539 No. 4	W 21.8 - 1/4	Flammable	Ethane, Hydrogen
IRAM 2539 No. 5	3/8" BSP - INT	Oxidiser	Nitrous Oxide

ISO 5145 (Provisional standard, previously NEVOC)

Connector type	Connector description	Generic gas property	Example gases or mixtures components
ISO 5145 No.1	W 24 x 2 11,2 - 16,8 RH	Inert	Medical Helium & Xenon
ISO 5145 No.2	W 24 x 2 11,9 - 16,1 RH	Oxidiser	Oxygen
ISO 5145 No.4	W 24 x 2 13,3 - 14,7 RH	Inert	Inert gases & mixes, except He & Xe
ISO 5145 No.9	W 24 x 2 13,3 - 14,7 LH	Flammable	Mixes with a flammable gas, except Hydrogen
ISO 5145 No.10	W 24 x 2 14 - 14 LH	Flammable	Hydrogen
ISO 5145 No.11	W 27 x 2 11,8 - 20,2 RH	Inert	Nitrogen
ISO 5145 No.17	W 27 x 2 16 - 16 RH	Inert	Carbon Dioxide
ISO 5145 No.24	W 27 x 2 16 - 16 LH	Flammable	LPG
ISO 5145 No.30	W 30 x 2 15,9 - 20,1 RH	Inert	Helium, Argon, Nitrogen, inert mixes*
ISO 5145 No.32	W 30 x 2 17,3 - 18,7 RH	Oxidiser	Oxygen*
ISO 5145 No.38	W 30 x 2 15,2 - 20,8 LH	Flammable	Mixes with a flammable gas*
ISO 5145 No.41	W 30 x 2 17,3 - 18,7 LH	Refrigerants	Refrigerant gases**

\* Working pressure above 250 bar in Europe and 182 bar in USA

\*\* Flammable according to ISO 5145, for inert No. 4 can be used when FTSC codes fit with the mixture

ITC EP-6 (Instrucción Técnica Complementaria - Equipos Presión)

Connector type	Connector description	Generic gas property	Example gases or mixtures components
TIPO B	M 30 x 1.75	Non Flammable	Air
TIPO C	W 21.7 x 1/14"	Inert	Argon, Helium, Nitrogen
TIPO E	W 21.7 x 1/14" LH	Flammable	Hydrogen, Methane, Propane
TIPO F	G 5/8" INT	Oxidiser	Oxygen
TIPO G	M 26 x 1.5 INT	Oxidising mixtures	Oxygen Mix > 23%
TIPO H	G 5/8" LH INT	Flammable	Acetylene
TIPO J	W 1"	Toxic and Corrosive	Hydrogen Chloride, Hydrogen Bromide
TIPO M	M 19 x 1.5 LH	Mixtures	Calibration Gas Mixtures
TIPO T	W 31.75 x 1/7" 237	Toxic or Corrosive	Chlorine Drum Tanks
TIPO U	G 3/8"	Oxidiser	Nitrous Oxide



NEN 3268 (Nederlandse Norm)

Connector type	Connector description	Generic gas property	Example gases or mixtures components
LU 0	M 19 x 1.5 LH	Flammable Mixtures	Flammable Mixtures
LU 1	W 21.8 - 1/14" LH	Flammable	Hydrogen, Methane
LU 4	W 25.4 x 3.175" LH	Toxic	Hydrogen Cyanide
RI 2	G 22.91 x 1.814" RH	Oxidiser	Oxygen
RU 1	W 21.8 - 1/14"	Refrigerants	Ammonia, Carbon Dioxide
RU 3	W 24.32 - 1/14"	Inert	Argon, Helium, Nitrogen
RU 4	W 25.4 x 3.175" RH	Toxic	Chlorine, Hydrogen Chloride, Sulphur Dioxide
RU 6	W 28.81 x 1.814" RH	Oxidiser	Air

UNI (Ente Nazionale Italiano di Unificazione)

Connector type	Connector description	Generic gas property	Example gases or mixtures components
UNI 4405	W 20 x 1/14" LH	Flammable	Hydrogen
UNI 4406	W 21.7 x 1/14"	Non Flammable / Oxidiser	Carbon Dioxide, Oxygen
UNI 4407	W 30 x 1/14"	Toxic	Ammonia
UNI 4408	W 1" x 1/8"	Toxic	Chlorine
UNI 4409	W 21.7 x 1/14"	Inert	Nitrogen
UNI 4410	W 30 x 1/14"	Non Flammable	Air
UNI 4411	W 22.9 x 1/14"	Flammable	Acetylene
UNI 4412	W 24.5 x 1/14"	Inert	Argon, Helium
UNI 9097	G 3/8" EXT	Oxidiser	Nitrous Oxide

AS 2473.2 (Australian Standard)

Connector type	Connector description	Generic gas property	Example gases or mixtures components
Type 10	G 5/8" RH INT	Non Flammable	Argon, Helium, Oxygen =< 20,000 kPa
Type 11	G 5/8" RH INT	Oxidiser	Oxygen >20,000 kPa, =< 25,000 kPa
	Extended nipple		
Type 20	G 5/8" LH INT	Flammable	Acetylene, Hydrogen, Ethylene, Methane
Type 21	0.885" - 14 NGO LH INT	Flammable	LPG, Propane
Type 30	0.860" - 14 BSW RH EXT	Non Flammable / Oxidiser	Carbon Dioxide, Nitrous Oxide
Type 31	G 5/8"	Chemical Gases	Sulphur Hexafluoride, Phosgene, Methyl Bromide
Type 32	G 1/2"	Toxic	Ammonia, Sulphur Dioxide
Type 33	G 1/4"	Non Toxic, Non Flammable Mixtures	Small cyls <4.5l water capacity
Type 34	G 3/4"	Refrigerants	R134a
Type 40	G 5/8" LH EXT	Toxic	Ethylene Oxide
Type 41	G 3/8" BSP LH EXT	Flammable	LPG, Propane
Type 42	G 1/2" LH EXT	Toxic	Methylamine
Type 43	0.825" - 14 NGO LH EXT	Toxic / Corrosive	Hydrogen Chloride, Hydrogen Sulphide
Type 44	G 3/8" BSP	Toxic, Non Flammable Mixtures	Calibration gas mixtures
Type 50	24x2 Whit	Inert	Nitrogen =<20,000 kPa
Type 51	1.045" - 14 NGO RH INT	Inert	Nitrogen >20,000 kPa
Type 60	27x2 Whit	Non Flammable	Air =<20,000 kPa
Type 61	0.825" - 14 NGO	Non Flammable	Air >20,000 kPa