

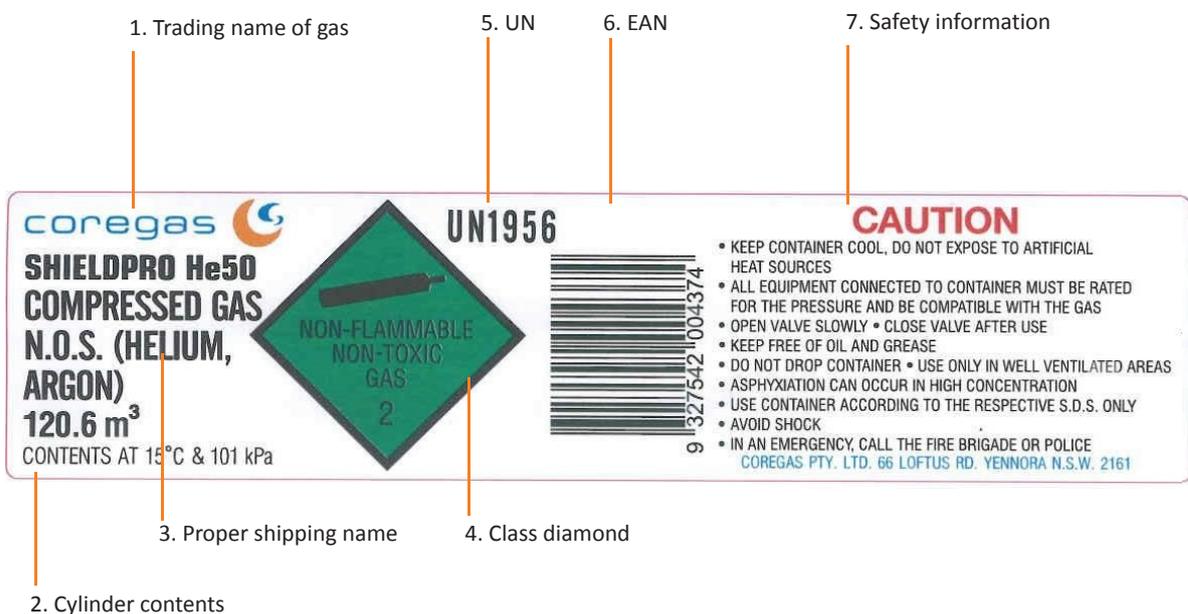
PRODUCTS

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GAS SYMBOLS

Gas	Symbol
Argon	Ar
Carbon dioxide	CO ₂
Oxygen	O ₂
Helium	He
Hydrogen	H ₂
Nitrogen	N ₂

PRODUCT LABEL



- Trading name:** Refers to Coregas' specific order reference.
- Cylinder contents:** Contents are at "normal conditions" (15°C and 101 kPa), not storage conditions.
- Proper shipping name:** As per ADG 7. N.O.S. (not otherwise specified). Components are listed by risk, not concentration.
- Class diamond:** Identifies the class of gas
- UN:** Used by emergency services to assess the associated risks with gas.
- EAN:** Barcode identifies the product.
- Safety information:** Details the "dos and don'ts" for users.

GAS REGULATORS

- Reduce the high cylinder storage pressure to a usable working pressure.
- Allows for variable working pressure adjustments.
- Maintains a constant gas pressure.
- Threads will be left or right hand, depending on the gas in use.
- Connections are male or female, depending on the gas in use.

INDUSTRIAL GASES

Shielding gases

- Shielding gases are inert gases used in a number of welding and related processes.
- The basic role of shielding gases is to protect the weld/weld pool from atmospheric contamination
- Shielding gases are most commonly used in:
 - » Gas Metal Arc Welding (GMAW), otherwise referred to as MIG welding
 - » Gas Tungsten Arc Welding (GTAW), otherwise referred to as TIG welding

Shielding gas types - Carbon steel



Coregas 07

7% O₂ - 93% Ar for GMAW of carbon steel

- Used for materials up to 8mm thick
- Thin gauge material
- Minimal spatter
- Excellent welding arc stability
- Not ideal for out of position welding
- Lower welding penetration



Coregas 5/2

5% CO₂ – 2% O₂ - 93% Ar for GMAW of carbon steel

- Used for materials up to 9mm thick
- Most commonly used shielding gas
- Excellent arc stability
- Wide operating envelope
- Low oxidation potential



Coregas 10

10% CO₂ 90% Ar for GMAW of carbon steel

- Used for materials of all thicknesses
- Good for low and medium carbon steels
- Good arc transfer
- Smooth appearance
- Little spatter
- Good for robotic welding



Coregas 18

18% CO₂ - 82% Ar for GMAW and FCAW of carbon steel

- Used for materials that are 3mm to 15mm in thickness
- Heavy sections, rusty and mill scale steels
- All welding positions
- Wide operating envelope
- High welding deposition rates
- Dip, spray and pulse transfer
- Good bead shape/penetration



Coregas 25

25% CO₂ - 75% Ar for GMAW and FCAW of carbon steel

- Used for materials with a 10mm or greater thickness
- Heavy sections, rusty and mill scale steels
- Excellent on coated, pre primed and galvanized materials
- Wide operating envelope
- Good weld appearance
- High welding deposition rates
- Many flux cored wires including stainless steel grades
- Good short arc characteristics



Coregas He 30

10% CO₂ - 30% He – 60% Ar for GMAW of carbon steel

- High welding deposition rates
- Mainly for automation
- Good weld profile and penetration
- Good for heavier section galvanised material



Coregas 16/3

16% CO₂ - 3% O₂ - 81% Ar for GMAW of carbon steel

- Used for materials with a 10mm or greater thickness
- Carbon and low alloy steels
- Dip, spray and pulsed transfer
- Excellent arc stability
- Good penetration
- Welding in all positions
- High welding deposition

Shielding gas types - Stainless steel



Argon – GTAW

100% Ar for GTAW of stainless steel as well as all materials that are welded

- Used for materials with all thicknesses
- Most commonly used shielding gas



Shieldpro 20 – GMAW

2% CO₂ - 98% Ar for GMAW of stainless steel

- Used for materials of all thicknesses
- Dip and spray arc transfer
- Excellent for pulsed transfer
- Excellent arc stability
- Good penetration and good weld profile
- Minimal oxidation



Shieldpro 21 - GMAW

1% O₂ - 98% Ar for GMAW of stainless steel

- Used for materials up to 3mm in thickness
- Dip and spray arc transfer
- Reduced penetration
- Smooth arc transfer
- Ideal for 3CR12



Shieldpro 22 – GTAW

5% H₂ - 95% Ar for GTAW of austenitic stainless

- Used for materials that are 2mm or above in thickness
- Hydrogen gives higher welding speed due to hotter and more constricted arc
- Austenitic stainless steels only
- Ideal for automation
- Reduced oxides
- Improved weld profile and appearance



Shieldpro 30 – GMAW

2% CO₂ - 20% He - 78% Ar for GMAW of stainless steel and duplex

- Used for materials that are 3mm or above in thickness
- All-round gas for stainless steels and duplex
- Good deposition and weld profile
- Increased penetration and fluidity of the weld pool
- Higher welding speed due to the helium
- Ideal for material 253MA (pulse if available)



Shieldpro 31 – GMAW

2.8% CO₂ - 35% He – 64.1% Ar for GMAW of stainless steel

- Used for materials with all thicknesses.
- Good weld deposition rates
- Excellent weld profile
- Smooth surface appearance
- Excellent arc stability
- Good weld penetration



Shieldpro 33 – GMAW

1% O₂ - 35% He – 64% Ar for GMAW of stainless steel and duplex

- Stainless steel and duplex
- Good weld deposition rates
- Reduced spatter
- Good edge wetting
- Good for Duplex 2205

Shielding gas types - Copper and alloys



Argon – GMAW and GTAW

100% Ar for GMAW and GTAW

- Used for materials that are below 3mm in thickness
- Acceptable weld deposition rates
- Acceptable weld profile



Shieldpro He 25 – GMAW and GTAW

25% He – 75% Ar for GMAW and GTAW

- Used for materials that are above 3mm in thickness
- Good weld deposition rates
- Good weld profile

Shielding gas types - Nickel and alloys



Argon – GMAW and GTAW

100% Ar for GMAW and GTAW

- Used for materials that are below 3mm in thickness
- Acceptable weld deposition rates
- Acceptable weld profile



Shieldpro 22 - GTAW

5% H₂ - 95% Ar for GTAW

- Used for materials that are 2mm and above in thickness
- Ideal for automation
- Reduced oxides
- Improved weld profile and appearance

Shielding gas types - Non-ferrous aluminium



Argon – GMAW and GTAW

100% Ar for GMAW and GTAW of aluminium

- Used for materials that are below 3mm in thickness
- Acceptable weld deposition rates
- Acceptable weld profile



Shieldpro He 25 – GMAW and GTAW

25% He – 75% Ar for GMAW and GTAW of aluminium

- Used for materials that are above 3mm in thickness
- Good weld deposition rates
- Good weld profile



Shieldpro He 75 – GMAW and GTAW

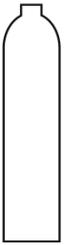
75% He – 25% Ar for GMAW and GTAW of aluminium

- Used for materials that are over 6mm in thickness
- Good weld deposition rates
- Good weld profile
- Smooth arc characteristics
- Smooth surface

MEDICAL GASES

- White cylinder body differentiates medical gas cylinders from industrial gas cylinders.

Medical Oxygen



- In anaesthesia, Oxygen is a carrier gas for the delivery of anaesthetic agents to the tissues of the body.
- In respiratory therapy, Oxygen is administered to increase the amount of Oxygen and thus decrease the amount of other gases circulating in the blood.
- Widely used in high altitude and underwater breathing, and hyperbaric chambers.
- Used to manage sudden cardiac and respiratory arrest, whether drug induced or traumatic.
- Used to resuscitate the critically ill when circulation is impaired and in neo-natal resuscitation.

Medical Nitrous Oxide



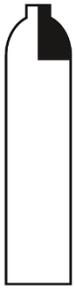
- Widely used as a base anaesthetic and is generally supplemented with either potent volatile or intravenous anaesthetic agents.
- Used extensively for relative analgesia and as a freezing agent in cryosurgery.

Medical Equanox



- 50% N₂O, 50% O₂
- Used as an analgesic agent in first aid, emergency services, obstetrics, ambulances, nursing services and in doctors' and dental surgeries.
 - Used for the relief of short term pain including acute trauma, dental procedures and other painful procedures such as childbirth, wound and burn dressing, wound debridement and suturing.

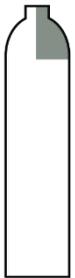
Medical Air



- Used for human respiration in breathing apparatus
- Dry grades may be used for driving surgical air tools.
- Used as a replacement for contaminated atmospheric air
- In anaesthesia, it is used as a carrier gas for volatile agents
- Used as a power source for pneumatic equipment
- Used in ventilators and incubators to provide uncontaminated and controlled air flows.



Medical Carbanox



5% CO₂, 95% O₂

- Used to stimulate respiration in situations such as the investigation and assessment of chronic respiratory disease
- Used to stimulate breathing after a period of apnoea
- Added to a number of anaesthetic and oxygenation mixtures
- Inhalation of Carbanox has demonstrated benefits in vascular dilatation and mucous clearance in COPD patients.



Medical Carbon Dioxide



- Used in the stimulation of breathing and anaesthesia.
- Supplements various anaesthetic and oxygenation mixtures under situations such as cardiac pulmonary bypass surgery and the management of renal dialysis.
- Used in the investigation and assessment of chronic respiratory disease

