



# HSE BULLETIN

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## Safe Handling of Compressed Gas Cylinders

### Product Identification:

- Color code is the primary method of identification of gases.
- Know the contents through labels, Name stenciled on the cylinder and not ONLY color codes
- Gas labels also distinguish different gases and provide WARNING SIGNS to flammable, compressed nonflammable, toxic and hazardous gases.



### Storage of Cylinders:

- Cylinders should be stored outside the analyzer house.
- They should be placed in cylinder cage secured with chains.
- All empty cylinders should be properly marked & tagged.
- Store cylinders under a shade or away from heat.
- Filled cylinders should never be exposed to a temperature of 52 degree Celsius.

### Hazards Associated with Gases

- Asphyxiation / oxygen deficiency
- Cryogenic burn / frost bite
- Material embrittlement
- High Pressure
- Flammable gases
- Oxygen enrichment
- Toxic gases Celsius.

### Warning Sign

Dangerous Goods Diamond	Class	Examples
	Class 2.1 Flammable gas	LPG, hydrogen, acetylene
	Class 2.2 Non-flammable, non-toxic gases	Compressed air, nitrogen, argon, carbon dioxide, helium
	Class 2.2, Sub-risk 5.1 Oxidizing gas	Oxygen, nitrous oxide, Entonox (50% oxygen, 50% nitrous oxide)
	Class 2.3 Toxic Gas	Methyl bromide, anhydrous ammonia, chlorine.

### Don't

- Carry cylinder beyond your capacity.
- Lift cylinder in its valve and/or cap
- Drop/ drag/ slide/ strike cylinders.
- Allow to strike each other.
- Roll 2 cylinders at a time.
- Use as rollers to move equipment.
- Allow safety devices to be tampered.
- Remove labels and decals unless it is to be replaced.



### Handling Fire gas cylinders



- First try to extinguish the fire with an ABC or Chemical powder extinguisher if it is safe to do so.
- Cylinders should be sprayed with water from a safe distance to keep them cool.
- Care should be taken not to extinguish the flame of a leaking gas cylinder unless it is safe to do so.
- Close surveillance should be given to the extinguished cylinder and make sure it is completely cooled.

### Vital Rules

Cylinders containing flammable gases such as LPG, propane, hydrogen, or acetylene must not be stored in close proximity to open flames, areas where electrical sparks are generated, or where other sources of ignition may be present.

Cylinders containing flammable gases shall have a minimum distance of 6 meter from oxidizing gases and electrical sources.