

Safety: Gas Cylinders

- Ordering:
 - Order only returnable cylinders and try not to order a bigger cylinder than needed
 - Inspect new cylinders for leaks or damage
 - If a cylinder is no longer needed, return it as there is a monthly rental fee e.g. in the Cohen lab:
 - 4 CO₂ cylinders
 - Forming gas, N₂, He, Ar

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- Compressed gas cylinders must be restrained securely using a chain, belt, or strap
 - Must be secured above center of gravity (2/3)
 - Should only have one cylinder per bench strap
- Must use valve cap when moving a cylinder and whenever a regulator is not attached
- Label cylinders (Full, In Service, Empty)
- Gas cylinder is considered empty at 25 psig
- Use hand truck if moving cylinders over large distances

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- Do not use Teflon tape on CGA valve fittings
- Avoid flexible tubing
- Need pressure relief valves for any equipment which can not withstand full cylinder pressure

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- Oxidizers (e.g. O₂)
 - Use only regulators designated for O₂ service
 - Never lubricate valves, connections
 - Label components (e.g. “oxygen – use no oil”)
 - Recommend locating in a “cut-off room of non-combustible construction”

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- Flammable gases (e.g. H₂)
 - Requires permit for storage
 - Must be stored at least 20 ft. from oxygen or combustible materials
 - No more than 400 ft³ (1-2 cylinders) in one area
 - Adequate ventilation required
 - Cylinders and piping should be grounded
 - Flashback arrestors are recommended

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