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TOOLBOX TALK

# Compressed Gas Cylinder Safety

**WHY THIS MATTERS**

Compressed gas cylinders store gases at up to 2,200 PSI. Mishandled cylinders can become deadly projectiles, explode, or release toxic gases. Proper handling and inspection prevent serious injuries and fatalities every year.

**2,200**
PSI — typical cylinder pressure

**~4,000**
Injuries per year from pressurized containers (BLS)

**20 ft**
Min. separation: oxidizers & flammables

## 5 Rules for Compressed Gas Cylinder Safety

Every worker handling cylinders must follow these rules:

1. **SECURE CYLINDERS**
   Always chain or strap cylinders upright to a wall, cart, or rack. Never leave a cylinder free-standing — a falling cylinder can crush limbs or shear its valve.

2. **CAP WHEN NOT IN USE**
   Keep the valve protection cap on whenever the regulator is not attached. The valve is the most vulnerable part — if broken, the cylinder becomes a projectile.

3. **IDENTIFY BY LABEL**
   Never rely on cylinder color for identification. Always read the label and verify contents before connecting. Wrong gas = wrong reaction.

4. **USE CORRECT REGULATOR**
   Each gas requires its own regulator type. Using the wrong one can cause leaks, fires, or explosions. Never force fittings that do not match.

5. **STORE PROPERLY**
   Keep cylinders in well-ventilated, dry areas away from heat (max 125°F). Separate oxidizers from flammables by at least 20 feet or a fire-rated barrier.

## Before You Start — Quick Checklist

- Are all cylinders secured upright with chains or straps?
- Are valve protection caps in place on stored cylinders?
- Is each cylinder clearly labeled and identified?
- Are oxidizers separated from flammable gases by 20 ft?
- Is the correct regulator available for the gas being used?
- Do all workers know the location of the SDS for each gas?

## Cylinder Inspection — Before Every Use

**Body:** Check for dents, bulges, gouges, corrosion, or burn marks. Do not use a damaged cylin der — return to supplier.

**Valve:** Ensure the valve operates smoothly. Do not force stuck valves. Check for leaks with s oapy water, never a flame.

**Cap:** Verify the protection cap threads are intact and cap fits securely. A loose cap canno t protect the valve.

**Label:** Confirm the label is legible, matches expected contents, and the cylinder is within i ts hydrostatic test date.

**Regulator:** Inspect for oil, grease, or dirt on connections. Never lubricate oxygen regulators — oil + O2 = explosion risk.

**Hoses:** Check all hoses and fittings for cracks, wear, or loose connections. Replace damaged components immediately.

### Common Mistakes That Kill

- ✗ Dragging, rolling, or dropping cylinders instead of using a proper cart
- ✗ Leaving cylinders unsecured — a toppled cylinder can shear its valve and become a rocket
- ✗ Using a cylinder without verifying its contents — wrong gas can cause asphyxiation or explosion
- ✗ Storing cylinders near heat sources or in direct sunlight above 125°F
- ✗ Failing to close the valve when not in use — slow leaks displace oxygen in enclosed spaces

### Safety Tips to Remember

- ✓ Always transport cylinders on a proper cart with cap on and secured with a strap or chain
- ✓ Open valves slowly — stand to the side of the regulator, never in front of the outlet
- ✓ Keep oxygen cylinders 20 ft from flammable gas cylinders or use a 5-ft fire-rated barrier
- ✓ Mark empty cylinders "MT" and store separately from full ones — empty cylinders still contain residual pressure
- ✓ Never use compressed gas to dust off clothing — it can cause eye injuries or ignite saturated clothing

## Discussion Questions for Your Team

1. What types of compressed gas cylinders are used on our site?
2. Where are our cylinders stored and are they properly separated?
3. When was the last time you inspected a cylinder before use?
4. What would you do if you found a cylinder with a missing label?
5. Do we have a plan for handling a leaking cylinder?

### TOOLBOX TALK SIGN-OFF

Date: _____ Supervisor: _____

Project: _____ Location: _____

Attendance sheet attached: [ ] Yes