

TOOLBOX TALK: OXYGEN AND ACETYLENE CYLINDERS

Welding with Oxygen and Acetylene Cylinders

If proper safety guidelines are not followed when using oxygen/acetylene welding equipment, it is equivalent to handling live explosives.

SAFETY PRECAUTIONS FOR HANDLING AND STORING THESE CYLINDERS

Oxygen:

Normal air is composed of more than just oxygen. In fact, dry air only contains approximately 21% oxygen and over 78% nitrogen. Oxygen by itself is an accelerant and must be handled with care.

Acetylene:

Acetylene is a pungent-smelling hydrocarbon gas that can become unstable and violently decompose when more than 15 pounds per square inch gauge (psig) is used. Free acetylene should never be stored under high pressure. The cylinders are packed with a porous material, crushed fire brick and saturated with acetone. The acetone absorbs the acetylene. Acetylene cylinders must also be stored, transported, and used in the upright position.

Storage for Oxygen and Acetylene Cylinders

- They are to be stored upright in a cage or secured to prevent them from falling over.
- The storage area will be well ventilated and not subjected to heat or direct sunlight.
- The storage area is to be away from doorways, aisles, stairs, and emergency exits.
- The cylinders must also be stored 20 feet away from each other and any other flammable material. Sometimes that distance is not possible. When storing oxygen with other flammable or combustible material (oil or grease) nearby, they must be separated by a 5-foot barrier with a fire-resistance rating of at least a half-hour.
- The valve caps must be installed and never used to lift the cylinder.
- No Smoking signs must be in place around the storage area.

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