PREECEPRECISION

SAFETY INSTRUCTIONS AND SAFETY FACTS

CARBON DIOXIDE GAS AND GENERAL CO2 CHARACTARISTICS

GENERAL CO2 FACTS. PLEASE BE SURE TO READ ALL INSTRUCTIONS AND SAFETY DATA PROVIDED BY THE MANUFACTURER

SAFETY INSTRUCTIONS & SAFETY FACTS – Your safety is very important to the manufacturer. PLEASE READ CAREFULLY

CARBON DIOXIDE FACTS

A CO2 cylinder is filled with liquid CO2 by weight. At the time of fill, the temperature of the charge is extremely cold and the pressure is around 100 psi (pounds per square inch). When a fully charged CO2 cylinder warms up to room temperature (70˚ F), the pressure inside the cylinder increases to 837 psi.

When the same cylinder reaches 87.9˚ F the charge becomes a gas, no matter what the pressure. A fully charged CO2 cylinder at 87.9˚ F will have an internal pressure of approximately 1100psi.

At 120˚F the same cylinder will have an internal pressure of nearly 2000 psi. This cylinder at 120˚ F now has an internal pressure greater than the marked service pressure of a cylinder that is properly filled (not overfilled).

When the temperature of the fully charged cylinder increases, the pressure increases. At 155˚F the same cylinder will reach a pressure of 3000 psi, a pressure great enough to activate the safety vent on the valve, venting the CO2 charge. **THIS IS NORMAL AND DESIGNED TO HAPPEN.** You will hear a loud noise and sudden subfreezing spray of CO2 will release through the pressure relief device. This temperature can easily be reached in many different environments. (Parked vehicles, metal storage sheds, etc) Unexpected venting of a cylinder through its safety can be startling potentially leading to accidents, property damage, or personal injury. Coming into contact with the venting of the CO2 charge of a cylinder can cause personal injury such as frostbite. Allow the cylinder to fully vent before handling. Exit the closed environment and allow the area to properly ventilate. After the safety relief device is ruptured it will need replacement. Your Carbon Dioxide supplier will have replacements as this can be quite common with CO2 cylinders. When using, handling, transporting, and storing a CO2 cylinder always be aware of the temperature to which the cylinder will be exposed. This is not just the temperature the cylinder is exposed to but also the maximum temperature that the cylinder will be exposed to at any time. The he CGA (Compressed Gas Association), recommends that CO2 cylinders not be used at temperatures exceeding 120˚ F.

CO2 TANK SAFETY PRECAUTIONS

- Do not expose your tank to any heat source, open flame, or any condition where temperature is in excess of 300˚ F. All tanks introduced to 350˚F, fire damage, arc burns, refinished with heat treated paint or powder coating must be condemned and/or hydrostatically tested. **Please call your Carbon Dioxide supplier for more information.**
- Do not over fill your Co2 tank. Only fill your Co2 tank to the specified weight at certified filling station by a well trained technician.
- Inspect the Co2 tank everytime it is filled. Look for dings, gouges, cuts and corrosion. If any of these conditions are found, release the gas from the tank and contact a certified hydrostatic tester. Your Carbon Dioxide supplier can assist with referrals.
- The Co2 tank must be re-certified by a hydrostatic tester every 5 years from the manufacturer date. This is mandated by DOT.
- Do not mount your Co2 tank in any position vulnerable to puncture, protruding objects or where the valve and regulator can be interfered by a foreign object. Make sure your Co2 tank is located where it is clear of debris, dirt and mud to assure proper operation and safety.
- Do not use oil or lubricant of any kind on the valve, regulator and any component of the Co2 tank as this can be dangerous and cause damage.
- Never attempt to remove the on/off valve from the cylinder. This can be done by certified technicians.
- Do not use stripper or caustic cleaners on your Co2 tank. If you need to repaint, spray enamels can be used. **DO NOT HEAT TREAT.**
- Check you Co2 tank for leaks. Do not continue use if leaks are detected. Please contact your Carbon Dioxide Supplier for further instructions.
- Do not use the Co2 tank in any position other than upright in a vertical position. The Co2 tank operates off the gas (cylinder head pressure) and if used in any other position, this will introduce liquid through the valve, regulator and hose causing damage to your regulator and your tools.
- When the Co2 tanks is used extensively for long periods, freezing will occur. Please be aware when this occurs and only use the carry handle for transporting the tank.
- Never pressurize the regulator before connecting your hose or accessory. Always purge/bleed the residual of the gas in the hose assembly before disconnection. Carbon Dioxide expands with changes in temperature. Trapped CO2 can expand and exceed the working pressure of the hose assembly rapidly causing premature bursting of the hose assembly.