

Propane Safety

(Propane Filling = Your Safety; Propane Charging = Your Money)

Propane Charging: Most common methods for your money

Charging by the gallon: Usually your best bet

Less common: Filling by pound

Charging by flat rate: Can be good, but only if cylinder is completely empty

Prefilled cylinders for barbecue: A bad deal unless your small cylinder is damaged or dated

Generally available only in 20 lb / 5 gallon size

Propane Filling: Most common methods for your safety

Filling by volume

Open the small bleeder valve and fill until liquid propane spews out

Environmental concerns

Filling by weight (pounds in US; kilos in CA)

TW + propane capacity; set scale to resulting amount and fill until scale tips

TW: Tare weight; weight of cylinder without propane

WC: Water capacity; $WC \times 0.42 =$ propane capacity of your cylinder



What is not safe: filling by the gallon

Other stuff: US

OPD valves in US and CA: Internal float valve

Not permitted for use by professional fillers in US: OPDs installed, but never inspected



The 80% fill

Allows for expansion of propane at warmer temperatures

Already factored into both filling methods

RV cylinders produce propane vapor, not liquid

Not all cylinders produce liquid and are thus not for use on RVs

Propane (LPG) and butane

Boiling points: Propane -44°F / -42°C ; Butane 32°F / 0°C

Burn temps in air (not pure oxygen): Propane 1967°C / 3572°F ;

Butane 1970°C / 3578°F

Cylinder recertification for transportable cylinders

US DOT, Original: 12 years; Visual recertification: 5 years

CA: Every 10 years; visual recertification

US: ASME vs. DOT: permanently installed vs. transportable; different filling procedures

CA: Transport Canada TC marking

Other markings: WCW (water capacity weight; pounds, kilos); DT (dip tube: length in inches, mm)

Transporting propane cylinders: Upright, open to air on side or bottom

Do not transport in enclosed areas like mocho compartments, truck beds

Ethyl mercaptan: stink

US Governmental oversight for filling in the United States: States, not fed

National Fire Safety Association (NFPA) 58: Liquefied Petroleum Gas Code

US Governmental oversight of cylinder design: DOT (portable) or ASME (permanent)

CA Governmental oversight for filling: Provincial based on national code

CA Governmental oversight for cylinder design: National code

Questions: lynneubank@yahoo.com