

CHEMTANE[®]

The Cutting Fuel for Cutting Cost

Portable Nitrogen - Bulk Tank Injector



CHEMTANE ENERGY, LLC
"ENVIRONMENT FRIENDLY ADDITIVE SOLUTIONS"



The cutting fuel for cutting cost.

Chemtane 2 **Mixing Ratios**

Cylinder/ Size Nominal (Lbs.)	Propane (Gallons)	Concentrate fl oz	Concentrate Gallons
6	1.5	1	0.008
25	6	3.8	0.030
60	14	9	0.070
100	23	14.7	0.115
400	100	64 (1/2 Gal.)	0.5
800	200	128 (1 Gal)	1
2,000	500	320	2.5
4,000	1,000	640	5
12,000	3,000	1920.0	15
40,000	10,000	6400.0	50

For all Safety and Handling Procedures, please refer to Chemtane 2 concentrate MSDS. For chemical spill, leak, accident, or fire exposure notify Chemtrek (24hr. 800-424-9300). Please note that Chemtane 2 concentrate is a flammable liquid and should not be near open flames.

Chemtane 2 concentrate weighs 5.24 pounds per gallon.



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Portable Nitrogen Bulk Tank Injector

OPERATING INSTRUCTIONS

Nitrogen provides a safe inert gas pressure to propel the Chemtane 2 Concentrate (additive) into a bulk tank. **NOTE:** Alternate containers can be used to transfer the C2 Concentrate from the Concentrate drum to the Concentrate tank on your Portable Nitrogen Injector. You can also use a stainless steel drum pump to pump from the drum to the Concentrate tank. Grainger and other supply houses sell assorted style drum pumps. A stainless steel fuel drum pump with teflon or viton seals is recommended.

STEP 1 | NITROGEN CYLINDER

- Place nitrogen cylinder onto cart and properly secure with chain.

STEP 2 | NITROGEN REGULATOR

- Connect the nitrogen regulator to the cylinder and tighten securely.
- Connect the end of the ¼" hose on the regulator to the ¼" quick connect fitting on the Concentrate tank.

STEP 3 | CONCENTRATE CYLINDER FILL

- All valves should be in the **CLOSED** position.
- Remove the plug on the ¾" fill valve on the Concentrate tank.
- **SLOWLY** Open the fill valve (releasing any possible pressure) to the full open position
- Place supplied or similar funnel in fill valve opening. (secure funnel during filling process)
- Fill the Concentrate tank completely with Concentrate.
- Close all valves when fill is complete

STEP 4 | PURGE AIR FROM SYSTEM

- The "T" handle on the nitrogen regulator should be in the neutral position by turning counter clockwise. (Do Not Remove)
- Slowly Open the valve on the nitrogen cylinder
- Turn the "T" handle clockwise to **MAXIMUM 5 PSI** on the regulator.
- Slowly Open ¼" valve on nitrogen hose which is connected to the Concentrate tank.
- Allow tank to completely pressurize.
- Insert the end of the ½" Concentrate fill hose into 2" opening on the C2 Concentrate drum. (Alternate container may be used for purging, return excess Concentrate to drum)
- Slowly Open ½" valve on end of Concentrate fill hose after inserting into drum or other container.
- **SLOWLY OPEN** gate valve on the Concentrate tank. Opening this valve slowly will prevent damage to the meter.
- Air and Concentrate will begin to flow through the meter rotating the numbers on the meter.
- Purge air till full flow of concentrate is recognized.
- Close fill hose valve only.



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Portable Nitrogen Bulk Tank Injector

OPERATING INSTRUCTIONS

STEP 5 | CONCENTRATE RATIO

- Determine quantity of Concentrate to be injected into bulk tank.
- Refer to your ratio chart for correct amount to be injected
(Note: 199:1 is the correct ratio C2 Concentrate) One (1) gallon concentrate to 200 gallons of propane.
- Check tank to be injected of its current propane pressure at the current ambient temperature.
- Turn "T" handle clockwise on the nitrogen regulator to only 5 PSI above the tank pressure being injected.

STEP 6 | INJECTION

- Reset the meter to "0"
- Connect the end of the fill hose to the bulk tank to be injected.
- Slowly open valve on the end of the fill hose while observing the revolving numbers on the meter.
- Monitor the meter at all times during injection to ensure proper amount of C2 Concentrate is being injected.

NOTE: A minimal increase in Nitrogen pressure may be required to reach optimal flow of concentrate and accurate meter reading.

STEP 7 | FINAL STEPS & BLEED OFF INSTRUCTIONS

- Close all valves upon completion of injection on the injection unit and nitrogen cylinder.
- **SLOWLY** remove the fill hose from the bulk tank and place end of fill hose into 2" opening of the Concentrate drum.
- Turn T-handle on nitrogen regulator counter clockwise several revolutions but do not remove.
- **SLOWLY** Open Gate Valve on Concentrate Tank.
- **SLOWLY** Open valve on the end of the fill hose while end of hose is in the Concentrate drum. This will allow the nitrogen pressure to bleed off the Concentrate tank and purge the remaining Concentrate and nitrogen from the injection system back into the Concentrate drum.
- Close all valves and properly store the Portable Nitrogen Bulk Tank Injector.

**FACE SHIELD AND GLOVES SHOULD BE WORN AT ALL TIMES
DURING THE SET UP AND INJECTION PROCESS**

**NEVER OPEN ANY VALVES ON THIS SYSTEM BEFORE
CHECKING TO ENSURE THERE IS NO PRESSURE**

**NEVER LOOK DIRECTLY INTO HOSES OR FITTINGS
WHEN SYSTEM UNDER PRESSURE**



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Chemtane 2 Concentrate Tank Functions

The image shows a top-down view of a grey metal concentrate tank mounted on a red frame. Several yellow hoses are connected to the tank. A central valve with a red handle is visible. A blue cap is located near the bottom of the tank. A "CAUTION" label is partially visible on the right side of the tank. Yellow arrows point from text boxes on the left to specific components on the tank.

Concentrate Gate Valve

Never open Fill Valve while cylinder is under pressure

Remove 3/4" Fill Valve Plug and insert Funnel here for filling

Nitrogen Valve

Gloves and Face Shield are required during all fill or transfer of concentrate or LPG



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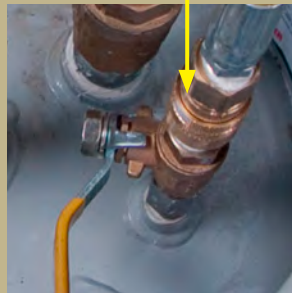
STEP 1 - NITROGEN CYLINDER

- Place nitrogen cylinder onto cart and properly secure with chain.



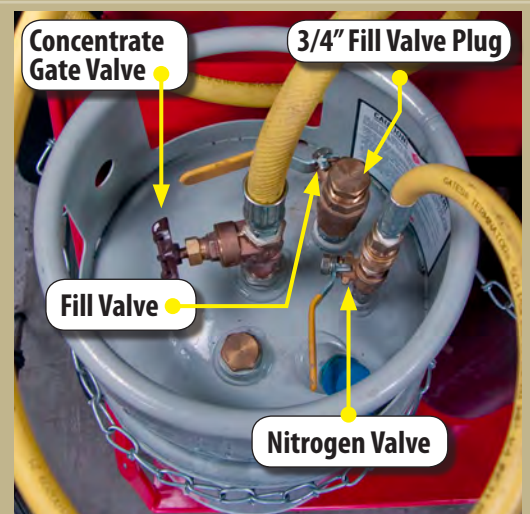
STEP 2 - NITROGEN REGULATOR

- Connect the nitrogen regulator to the cylinder and tighten securely.
- Connect the end of the 1/4" hose on the regulator to the 1/4" quick connect fitting on the Concentrate tank.



STEP 3 - CONCENTRATE TANK FILL

- All valves should be in the **CLOSED** position.
- Remove the plug on the 3/4" fill valve on the Concentrate tank.
- **SLOWLY** Open the fill valve (releasing any possible pressure) to the full open position
- Place supplied or similar funnel in fill valve opening. (secure funnel during filling process)
- Fill the Concentrate tank completely with Concentrate.
- Close all valves when fill is complete

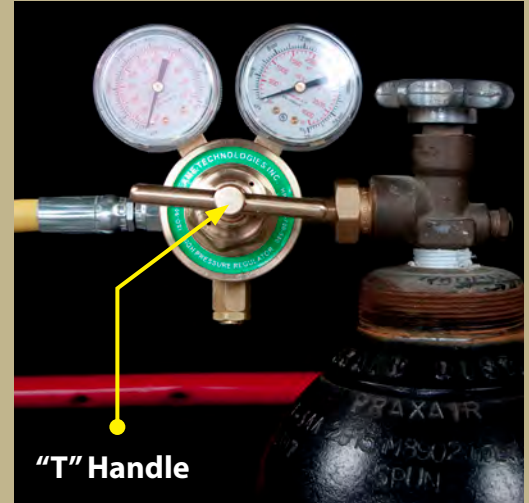




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STEP 4 - PURGE AIR FROM SYSTEM

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NOTE: A full size Chemtane 2 Mixing Ratios Chart is located on page 1 of this manual.

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STEP 7 - FINAL STEPS & BLEED OFF INSTRUCTIONS

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Macnaught Industrial Register Meter

The Macnaught Industrial Register Meter (pictured below), is specially designed for accurate flow measurement. It is constructed with stainless housing and oval gears for durability. This meter has two registers for cumulative totals and a total for each process that may be reset by the dial located on the side of the meter (Figure 1).

To better protect the meter from surges that could potentially damage the meter, a gate valve (Figure 2) has been installed. The valve should be opened slowly to avoid damage to the meter gears.

Figure 1



**CONCENTRATE
GATE VALVE**

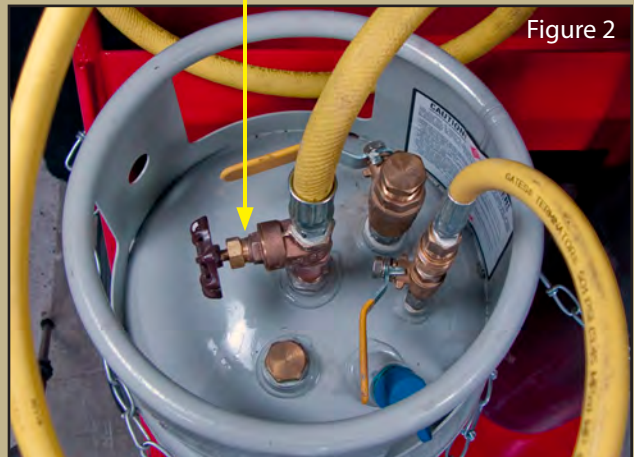


Figure 2