



OPERATIONS & MAINTENANCE MANUAL

(FOR THE BLEACH-GUARD SYSTEM™)



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WARRANTY CLAIMS FORM

(FOR THE BLEACH-GUARD SYSTEM™)

CUSTOMER _____

DETAIL CLAIM DESCRIPTION: _____

JOB # _____

MODEL # _____

SERIAL # _____

DATE OF PURCHASE _____

DATE OF CLAIM _____

SIGNATURE _____



OPERATIONS & MAINTENANCE MANUAL

(FOR THE BLEACH-GUARD SYSTEM™)

THE BLEACH-GUARD SYSTEM™ IS A PROPRIETARY PRODUCT OF THE PROTECTOPLAS COMPANY. THE BLEACH-GUARD SYSTEM™ IS A REGISTERED TRADEMARK OF PROTECTOPLAS COMPANY, STREETSBORO, OH U.S.A.

IMPORTANT!
Read and Understand the ENTIRE manual before using product.

CUSTOMER _____

JOB # _____

MODEL # _____

SERIAL # _____

DATE SHIPPED _____

FOR SERVICE OR TECHNICAL INFORMATION CALL (330) 562-TANK (8265), BETWEEN THE HOURS OF 9 AM and 5 PM EST, MONDAY THROUGH FRIDAY.

COMPLETE REQUIRED VACUUM TEST AND WATER TEST AND RETURN A COPY OF THIS FORM TO FAX #: (330)562.2560 OR EMAIL: SALES@PROTECTOPLAS.COM

VACUUM TEST REPORT

(SEE SECTION VII. VACUUM TESTING for more information)

DATE OF TEST _____

(MONTH/DAY/YEAR)

TESTED BY _____

(PRINT YOUR NAME)

LENGTH OF TEST _____

(HOURS:MINUTES)

VERIFICATION OF

PRIMARY CONTAINMENT (YES) (NO)

WATER TEST REPORT

(SEE SECTION VIII. WATER TESTING for more information)

DATE OF TEST _____

(MONTH/DAY/YEAR)

TESTED BY _____

(PRINT YOUR NAME)

LENGTH OF TEST _____

(HOURS:MINUTES)

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*REFER TO YOUR ORDER ACKNOWLEDGEMENT AND SHOP DRAWING 'NOTES' FOR SPECIFIC CONDITIONS REGARDING YOUR TANK.

SCOPE:

READ ALL INSTRUCTIONS FOR EACH COMPONENT OF THIS SYSTEM.

This manual is intended to familiarize the user owner with the usage of the **BLEACH-GUARD SYSTEM™**. The **BLEACH-GUARD SYSTEM™** is a double containment system designed expressly for the storage of sodium hypochlorite in concentrations up to 17% at room temperature. It is available in sizes from 55 gallons to 40,000 gallons. Sizes up to 12,000 gal. are shipped from Streetsboro, Ohio, ready for installation. If you encounter a situation where you are not sure of the proper action, call our service department at (330) 562-TANK (8265), 9 AM to 5 PM, EST.

I. SHIPPING:

- Generally, tanks 2000 Gal or < will be shipped via common carrier and larger tanks shipped via dedicated truck. For tanks that must be shipped on their sides, the most direct method will be employed.

II. RECEIVING:

- **UPON RECEIPT LOOK FOR SHIPPING DAMAGE.** While this is not common, damage must be noted on the freight company receipt in order for claims to be pursued.
- **IMMEDIATELY UPON RECEIPT, CHECK THE INSIDE OF THE TANK TO ENSURE THE PRIMARY CONTAINMENT IS NOT MISALIGNED.** The **BLEACH-GUARD SYSTEM™** is shipped with a vacuum on the interstitial space.

(SEE SECTION VII. VACUUM TESTING for more information on completing the customer required vacuum test)

III. HANDLING:

- **TAKE CARE REMOVING TANK AND EQUIPMENT FROM PALLET OR TRAILER.** Remove all dunnage that may cause damage to the tank. DO NOT remove fitting 'blanks' or 'plugs' until piping installation.
- **WHEN LIFTING, USE NYLON STRAPS AND SLINGS AND ENSURE ALL LIFT POINTS ARE SECURE. FOR LARGE TANKS, ALWAYS USE A SPREADER BAR.** DO NOT use chains to handle tanks.
- **DO NOT PRE-DRILL ANCHOR LOCATIONS.** Match drill to lug locations when the tank is on site.

IV. STORAGE:

- **SHORT TERM STORAGE (up to 6 weeks):**
Upon receipt, tank must be stored in a vertical or horizontal position--depending on tank orientation--insuring that all fittings are protected and manways are in place. DO NOT remove any fitting blanks until piping installation
- **LONG TERM STORAGE (over 6 weeks):**
Follow the steps above for SHORT TERM storage. If you must store your tank for more than 6 weeks, fill 1-2" of clean water at the bottom of the tank to ensure primary containment placement. Store in a warm area, do not allow water to freeze.
- **ALL TANKS THAT HAVE BEEN STORED MUST BE VACUUM TESTED PRIOR TO WATER TESTING.** This will remove any existing condensate. It is possible and likely that condensation can form in the interstitial space of tanks that have been stored prior to use. As all fittings are shipped blanked off, outside weather conditions will dictate the formation of condensate. Condensate will not be an increasing or continuing liquid from the monitor port.

It is possible depending on the size of tank for an appreciable amount of condensate to form in the interstitial space.

*(SEE the **box** in SECTION IX. OPERATIONS for proper procedure to remove condensation)*

V. INSTALLATION:

A) PLACEMENT

- REFER TO HANDLING INSTRUCTIONS WHILE MOVING TANK.
- DO NOT ALLOW TANK TO 'SWING' WHILE BEING STOOD UPRIGHT. Avoid any sharp contact or unnecessary force to the tank or its fittings during handling.
- PLACE TANK ON A FLAT, SOLID AND CLEAN LEVEL SURFACE FREE OF ALL DEBRIS AND 100% BOTTOM SUPPORT. Check the tank to ensure no rocks or foreign objects are stuck to the bottom surface.

(FOR TANKS WITH A STAND): Ensure the tank is in a vertical and plumb position and the stand is secured to a clean, level surface. **(FOR TANKS WITH CABLE SYSTEMS):** Install cables after tank stand has been positioned and secure.

- DO NOT TIGHTEN HOLD DOWN CABLES TO YOUR PAD. You must allow for tank expansion and contraction during usage.

B) PIPING

- ALL PIPING TO SIDEWALLS, (EITHER BY FLANGES OR COUPLINGS) MUST BE NON-RIGID AND 100% INDEPENDENTLY SUPPORTED FROM THE TANK TO ALLOW FOR TANK EXPANSION.
- ALL FLANGED NOZZLES (WFN, WPFN) REQUIRE 8-11 ft-lbs. OF TORQUE TO SEAL. DO NOT over-tighten.
- WPFN or 'Pad FLANGE' NOZZLES MUST BE INSTALLED WITH THE CORRECT BOLTS. DO NOT over-tighten.

- THE BLEACH-GUARD SYSTEM™ IS EQUIPPED WITH AN OVERFLOW NOZZLE AND MUST BE FREE OF DEBRIS AT ALL TIMES. DO NOT pipe overflow above fitting elevation as tank is designed to hold a specific head pressure. Piping your overflow above fitting elevation can cause primary containment to overflow into interstitial

AS INSTALLATIONS VARY WITH FIELD CONDITIONS, YOU MUST CHECK YOUR PIPING TO ENSURE YOU HAVE ADEQUATE ROOM (1.5% DIMENSIONAL MOVEMENT) FOR THE TANK TO EXPAND AND CONTRACT.

(SEE SECTION IV. for proper STORAGE)

- IF EXPANSION JOINTS ARE REQUIRED, THEY MUST BE IN PLACE AT THE TANK FITTING TO ISOLATE THE TANK FROM VIBRATION/FORCE. Proper alignment is required when piping to a plastic tank. DO NOT push/pull fitting to match piping under any circumstances, as it may cause damage to the tank or fitting.

C) VENTING

- ALL TANKS MUST HAVE A FREE VENT TO THE ATMOSPHERE. Tanks are designed to operate at atmospheric pressure.
- ALL TANKS ARE EQUIPPED WITH PROPER VENTING FOR THE DRAIN INCLUDED. If you have purchased a tank or you are adding additional inlets/outlets ensure the tank will remain at atmospheric pressure at all times. FAILURE or NON-REPAIRABLE DAMAGE may occur if improperly vented. Serious injury or death may occur if tank were to implode or explode.
- WHILE CONNECTING VENT PIPING ENSURE THAT LINE LOSSES DO NOT CAUSE PRESSURE ON THE TANK. When connecting to a vent line that is assisted with an exhaust system; insure that a negative condition does not exist in the tank.
- AIR (PNEUMATIC) UNLOADING CHEMICAL/PRODUCT INTO ANY TANK IS DANGEROUS. DO NOT employ this type of filling procedure.

IMPORTANT!

IMPROPER VENTING CAN CAUSE PREMATURE TANK FAILURE AND VOIDS ALL WARRANTIES.

VI. HOLD DOWN SYSTEMS (if applicable)

- **DO NOT PRE-DRILL CONCRETE PAD.** Your cable hold down system comes with pre-drill base plates which are used to mark anchor locations.
- **ALL SYSTEMS MUST HAVE PROPER ANCHORS INSTALLED IN THE CONCRETE.** Set your base plates a minimum of 2" from tank wall. All anchors are 'by others,' check with local regulations for size/type requirements.
- **ALL CABLE SYSTEMS COME WITH PRE-CUT CABLE COVERS.** Make sure to install cable cover where the cable loops through your tanks hold down lug(s). Failure to install cable covers can and will result in damage to your tank.

VII. VACUUM TESTING

- **DO NOT REMOVE FITTING BLANKS** until after the vacuum test has been completed.
- **REQUIRES 1-2 Hp SHOP VACUUM.** Connect vacuum to tank monitor port, ensure that connection is air tight and valves are open to the monitor port.
- **TURN VACUUM ON FOR 3-5 MINUTES OR UNTIL PRIMARY CONTAINMENT IS TIGHT TO TANK WALLS.** Verify this through the top manway.
- **IF THE PRIMARY CONTAINMENT IS TIGHT,** close the valves, turn off the vacuum and let the **BLEACH-GUARD SYSTEM™** sit for a minimum of 4 hours.

- **AFTER THE FULL FOUR HOURS,** listen for air rushing at the top manway. If there is NO air rushing, the vacuum test is complete and water testing can be performed.

(SEE SECTION XIV. for TROUBLE SHOOTING)

VIII. WATER TESTING

- **TANK HAS BEEN FACTORY TESTED TO ENSURE QUALITY,** however damage can occur during shipping or install. Water testing is a necessary requirement to ensure tank is fully functional.
- **AFTER TANK HAS BEEN PIPED,** close any bottom fittings and fill to the top of the straight shell with water at full tank capacity (usable gallonage) for 24 hours minimum. **DO NOT USE PRODUCT** until this has been completed. Once the time has elapsed and there are no leaks, you may put your tank into service.
- **DO NOT USE PRODUCT UNTIL WATER TEST HAS BEEN COMPLETED.** Once the time has elapsed and there are no leaks, you may put your tank into service.
- **CONDENSATION MAY FORM ON THE OUTSIDE OF YOUR TANK.** This does not mean it is leaking. Make sure to thoroughly inspect all questionable areas before making a decision. If you do find a problem contact Protecto-plas immediately.

IX. OPERATIONS

- **ANY CHANGES TO THE INSTALLATION OF THE TANK MUST NOT AFFECT THE VENTING.** This tank must be kept atmospheric at all times.
- **CHECK CHEMICAL COMPATABILITY.** Tanks are designed and built to ASTM D1998-06 for rotationally molded, type II or linear polyethylene standards. **PROTECTOPLAS DOES NOT WARRANT FOR CHEMICAL ATTACK OR PRODUCT MISUSE.**

- The **BLEACH-GUARD SYSTEM™** is designed for use with commercial grade sodium-hypochlorite (bleach) or water **ONLY**. **USE OF THIS BLEACH-GUARD SYSTEM™ WITH OTHER CHEMICALS WILL VOID THE WARRANTY.**
- **DO NOT OVERFILL THE TANK.** The working capacity of the vessel is the straight side capacity. You must monitor the liquid level if the tank is not equipped with an overflow.
- **CHECK THE MONITOR PORT, ON A REGULAR BASIS** to ensure is no breach in the primary containment.

SHOULD A BREACH OCCUR, PROMPT ACTION MUST BE TAKEN TO REMOVE THE CONTENTS OF THE TANK. THE SECONDARY CONTAINMENT IS NOT INTENDED FOR LONG TERM STORAGE (over 30 days).

IMPORTANT!

- The **BLEACH-GUARD SYSTEM™** is equipped with secondary containment access ports and vents. Fittings are to be maintained at all times to ensure proper working order of the vent and maintain that there is no build-up of condensation in the secondary containment.
- Monitor the bottom of the tank to ensure that sludge does not accumulate. Remove sludge by vacuum or flushing.
- **DANGER! AIR UNLOADING OF PRODUCT OR CHEMICAL INTO PLASTIC TANK IS UNSAFE.** Using air to “clean” fill lines leading to a plastic tank can cause over pressurization and ultimately catastrophic failure. A safe filling procedure should be designed and implemented to avoid this issue.

IF THE INTERSTITIAL SPACE HAS PRODUCT, CONDENSATION OR ANY OTHER CONTENTS PRESENT, NEVER DRAIN ALL CONTENTS FROM THE ‘PRIMARY’ STORAGE FIRST. THE INTERSTITIAL SPACE MUST BE DRAINED FIRST BEFORE DRAINING PRIMARY STORAGE.

IN THE EVENT THAT CONDENSATION IS PRESENT IN THE SECONDARY CONTAINMENT IT MUST BE REMOVED.

- The secondary tank must remain atmospheric while removing condensation. Remove vent port to allow max airflow into secondary tank. Insert suction hose from pump into secondary through one of the access ports and remove contents. Contents should be tested to verify primary tank has not developed a leak.

X. MAINTENANCE

- **WITH PROPER INSTALLATION THE TANK ITSELF WILL NOT NEED SERVICE.** Mixers and other parts may need attention periodically.
- **(TANK):** If you feel that the tank has become misshapen, brittle, or found to be cracked contact Protecplas technician be for using.
- **(FITTINGS):** Make sure all piping remains independently supported with all expansion joints in place. Expansion joint must remain attached directly to fitting. Check bolt tension on flanges to ensure they are at 11 ft-lbs., and make sure fittings are not carrying any weight.
- **(STANDS, LADDERS AND PLATFORMS):** Steel stands, ladders, platforms, or cable hold down systems may require touch-ups with high-quality spray paint from time to time to ensure longevity. If oxidation occurs smooth with grinding disk/sand paper and use spray paint to cover. If severe corrosion is evident, consult a Protecplas technician before continued use.
- **(HOLD DOWN SYSTEMS):** Cable hold down systems have (2) styles. One connects the tank to a steel stand. This is to prevent the tank from moving or rotating on the stand. The second style system has a powder coated base that sits approx. 1" from the tank side wall.

It is anchored to surface by others and will usually come with (2) or (4) bases ranging in various size. Periodically check the tension on the cables and the position of the cable sleeves for either style. Make sure the cable has not come free from cover as it can cut or dig into the plastic hold down lug on the tank. For systems with bases, refer to "stand" above for further instructions.

XI. REPLACEMENT PARTS

- **THERE ARE NO PARTS THAT SHOULD REQUIRE ROUTINE REPLACEMENT.** Fittings should not require replacement under appropriate operating conditions.
- **THE ADDITION OF NOZZLES OR FITTINGS REQUIRES A FACTORY SERVICE CALL.** To schedule maintenance call the service department at (330) 562-TANK (8265). 9 AM - 5 PM EST.
- **STOCK PARTS AND SIZING ARE AVAILABLE.** Visit our website at www.protectoplas.com for more information.

XII. REPAIRS

- **THERE ARE NO CUSTOMER REPAIRS THAT CAN BE MADE.** The **BLEACH-GUARD SYSTEM™** is a proprietary product of Protectoplas. If you feel a condition requires action, contact our service department to discuss the situation. *PLEASE PROVIDE SERIAL NUMBER AND MODEL NUMBER.*
- **FOR WARRANTY CLAIMS A WARRANTY REPAIR FORM MUST BE COMPLETED.** This will be supplied by the service department.

XIII. WARRANTY

- **THIS TANK IS WARRANTED FOR 1 YEAR from the DATE OF SHIPMENT to be FREE FROM DEFECTS in the MATERIALS AND WORKMANSHIP,** and further warrants all upright storage tanks for an additional 3 years on a prorated basis, subject to the following:

1) Products must be mounted and supported in a manner approved by the manufacturer.

2) Where special warranty limitations address the storage of transport of particular materials, due to reactions which might occur under conditions outside the control of the manufacturer, those limitations expressly apply.

3) Warranty does not cover misuse, fire, accident, negligence or unauthorized alterations to the product.

4) To obtain a warranty repair you will be required to provide a minimum 5" x 5" cutout from the damaged tank. Failure to provide the required sample will void all warranty on the tank.

- **PROTECTOPLAS CO. DOES NOT WARRANTY FOR CHEMICAL ATTACK OR MISUSE OF PRODUCT. IT IS THE RESPONSIBILITY OF THE CUSTOMER TO ENSURE THAT CONTENTS AND TEMPERATURE ARE COMPATIBLE WITH HIGH-DENSITY LINEAR POLYETHYLENE.**
- **PROTECTOPLAS DOES NOT WARRANT ANY DAMAGE DUE TO IMPROPER PIPING.**
- **PNEUMATIC (AIR) UNLOADING CHEMICAL/PRODUCT INTO ANY TANK IS DANGEROUS AND VOIDS ALL WARRANTIES GIVEN OR EXPRESSED. DO NOT EMPLOY THIS TYPE OF FILLING PROCEDURE.** To discuss proper filling procedures call a Protectoplas technician for more information at (800) 525-2661.

(SEE previous SECTIONS for proper use and maintenance of product)

- **LIABILITY OF THE MANUFACTURER UNDER THIS WARRANTY** (and under any other warranty, expressed or implied, statutory or otherwise) is **LIMITED TO REPAIR** or at the manufacturer's option a **A REPLACEMENT OF DEFECTIVE PRODUCT** which is shown to have been defective when shipped. **ONLY THEN IF THE MANUFACTURER HAS BEEN NOTIFIED OF THE DEFECTS within the warranty period and PRODUCT IS PROMPTLY DELIVERED--transportation charges prepaid--to its factory in STREETSBORO, OHIO.**

Manufacturer's liability hereunder shall not be enforceable until such equipment has been fully paid for. Except to the extent expressly assumed herein, manufacturer's liability for incidental and consequential damage is hereby excluded to the full extent permitted by the applicable law. Manufacturer's liability as stated herein cannot be altered or enlarged except by a writing signed by an officer of the manufacturer.

PRODUCTS AND EQUIPMENT SUPPLIED BY PROTECTOPLAS CO. BUT MANUFACTURED BY OTHERS ARE SUBJECT TO WARRANTIES OF THEIR RESPECTIVE MANUFACTURER. For warranty information on any product of this nature contact the manufacturing company. If the manufacturer is unknown, contact Protectoplas Co. for assistance.

If you have any questions or concerns pertaining to these instructions, please call Protectoplas at (330) 562-TANK (8265) 9-5 Eastern Standard Time

XIV. TROUBLE SHOOTING

- **WHEN VACUUM TESTING**, if the primary separates significantly from the secondary in 4 hours, ensure that all fitting blanks are sealed. If all blanks are sealed then draw the vacuum again by repeating steps 1-4 in **SECTION VII. VACUUM TESTING**. Listen for air rushing at the top mayway, if this happens, it would indicate a breach in the primary. Call the Protectoplas service department for further assistance.