DROP-IN TANK LINERS

PROLONG THE LIFE OF YOUR TANK WITH A CUSTOM BUILT DROP-IN LINER
Unit Liner Company opened its doors in 1967, manufacturing one product for one specific application. Since that time, we have added five divisions which are individually guided and supported by outstanding management teams, each devoted to its customer and product lines. Diversity through various factors within the company has made us stronger and better as a whole.

Exceptional customer service is a major factor in our philosophy. Unit Liner Company has grown because of our many repeat customers. We understand the level of service and commitment necessary to maintain our company to customer relationships. We want our clients to be completely satisfied with every aspect of our business.

Unit Liner Company is committed to quality. Whether serving a first time customer or a long standing client, we ensure quality service in keeping with our dependable reputation.
One piece vat, or drop-in liners are designed to prevent corrosion and prolong the life of a new or existing tank. Liners are available in a variety of different materials and thicknesses to meet your special needs. Choices of materials to withstand high temperatures, acids, waste fluids, water, or extremely corrosive liquids are available from 30 mil to 3/16” thick. Liners are custom fabricated with dielectric machines to form full material tear strength and smooth bonding of all seams. Custom forming means a custom fit.

Drop-In Liners are used for tank repair and in new or good tanks to prevent leaks. In good tanks they can extend the life of the tank many years.
Standard Grade Material

The standard grade has been used for many years in plating tanks. Under correct conditions, standard grade liners should last 3 - 5 years in a tank. Standard grade liners are industrial gray in color. This formula has been the work horse for over 18 years. Standard grade is lower in cost, will withstand temperatures up to 140 degrees Fahrenheit and works well for most plating solutions. Standard grade is great for most room temperature solutions, rinse tanks, and secondary containment floor coverings.

Products Contained - Temperatures up to 140° F, acids, waste fluids, water or extremely corrosive liquids.

Life Expectancy - Three to five years in room temperature solutions, rinse tanks, and containment floor coverings.
**Premium Grade Material**

Premium grade material was developed to meet the need for a more chemical and high temperature resistant liner. Premium grade material is clear with no color added. Premium grade material will sustain a constant temperature of 180 degrees Fahrenheit. When highly corrosive chemicals and high temperatures are expected, or extra long service is desired, we generally recommend premium grade material. Premium grade material is a favorite of chrome platers.

**Products Contained** - Constant temperatures up to 180° F and extremely corrosive liquids.

**Life Expectancy** - Three to five years in high temperature solutions. Great for chrome platers.
We fabricate liners from durable 30 mil aquaculture grade flexible PVC (black or blue) that is safe for all fish and plant life. Many of these liners are sold as round tank liners to fish hatcheries, and can be used for potable water storage as well.

We also have a variety of other materials that can accommodate many situations. Just tell us what you need to contain and we will work with you to get the proper lining material.

We are more than happy to discuss any situation with you, feel free to ask any questions or send any blueprints or drawings that you may have. Our liners can be built to many shapes and sizes, and hold many different types of fluids.

**Aquaculture Grade Material**

**Liner Construction**

30 mil flexible PVC liner.

**Products Contained**

Potable water, fish safe & plant safe. Great for hatcheries.
Easy Installation

One-Piece Drop-In liners are easy to install with minimal downtime involved. Most liners are easily installed by your own personnel, or we can provide installation if needed.

Drop-In Liners

- Custom manufactured to any shape, size or configuration.
- Can be put over Koreseal lined, lead lined or coated tanks.
- Can be used in steel, plastic, wood, concrete, fiberglass tanks, old and new.
- Can hold a wide range of chemicals from pH1-pH14; and will withstand temperatures up to 180° F because they are made from a variety of available materials.
- Quality quick fix that will extend the life of your existing tank.
- Virtually maintenance free.
- Perfect for the electroplater where an insulator is needed for steel tanks and helps prevent build up.
- Used in almost all industries where corrosion and/or contamination is a problem.

Square or Rectangle Liners

The liner material must be compatible with the liquid being stored. We have the experience and knowledge to recommend the right liner for the right job.
VARIOUS DROP-IN LINERS & TANKS

Dual Compartment Liner With Multiple Outlets

One-Piece Triple Compartment Tanks

J-Shaped Tank

Cylinder Tanks with Multiple Outlets

A tank liner can meet secondary containment requirements if the tank is good. The liner becomes the primary and the tank becomes the secondary containment. The tank shell will contain the leak until the liner can be repaired.
Our liners can be built to accommodate many situations. Some of these situations may include accessories such as weirs, sumps, inlets and outlets, overflows, and dams which can be installed in our facility, or supplied separately for installation on site.

- Overlap lip with grommets and rope secures liner at top
- Bulkhead fitting
- Spool Piece for Flange
- Sleeve slips over and bands to inlet and outlet pipes
- Boots are built to go thru an outlet and have a flange to match the pipe flange
- Inlet installed on a 60 mil Standard liner

Our records show most tank liners last 5 to 15 years. In most instances you can count on about 10 years of service. Statistics indicate most failures are the result of human error rather than material failures.
Skirted Liner

In our many years of experience with chrome platers we have established that if liner failure occurs, it will most frequently be at the fluid/air exchange. As gases form at this point the plasticizer will migrate leaving the material stiff and brittle leading to eventual cracking. It is our standard practice to recommend, to all our customers with chrome tanks, a skirt or double lining over the top 12 to 24 inches of the tank. This doubles the thickness and will in effect add years to the life of a liner. We’ve identified skirted premium material tank liners lasting 8 years in hard-chrome tanks.

The liner material must be compatible with the liquid being stored. We have the experience and knowledge to recommend the right liner for the right job.
**Encapsulated Teflon Skirted Liner**

Teflon is the best material you could use for a vat liner. It’s chemical and temperature resistance is unsurpassed. So is the price! An alternative is to use a PVC liner with a Teflon skirt covering the fluid/air contact point. Teflon will not bond directly to PVC. The liner industry has used various methods to attach the Teflon to the PVC with mixed results. After years of research we have developed what we call an encapsulated Teflon skirt. The Teflon is encapsulated between the liner and an additional layer of 3/32” Premium High-Temp PVC material. The 3/32” or surface layer is a sacrificial layer and eventually develops cracks or leaks where the fluid will contact Teflon and be stopped. This is acceptable because the surface layer is only there to hold the Teflon in place and it will continue to do so.

Tanks with flexible liners can be cleaned, however caution should be exercised because the liner can be damaged by sharp edges of normal cleaning tools. We suggest the using a high pressure hose to clean the liner, rather than scraping it.
Double (Hydrolytic) Bottom

A hydrolytic bottom is designed for the customer that is prone to dropping parts and possibly causing damage to the bottom of the tank liner. The second bottom is spot welded in place but not sealed. By allowing the fluid to stand between the liner bottom and the second bottom, a shock absorber effect is created. When a falling part hits the first bottom, it is slowed down by the shock absorbing fluid. In turn, the part does less damage. Typically, the hydrolytic bottom is made of 3/16” thick PVC, but any thickness or grade is beneficial in preventing damage to the actual liner bottom. So, if mechanical failure caused by dropped products, tools, etc. is a likely occurrence we would recommend using a Hydrolytic bottom.

When installing a new drop-in liner, most tanks can be back in service in 1 - 3 days, depending on the tank size.
**Drop-in Liner Installation**

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**Tank Preparation**

Preparing a tank for liner application is one of the most important steps that must be taken to insure longer life of your liner. The tank should be thoroughly inspected for any sharp objects that may protrude and puncture the liner or cause wearing through of the liner. Particular care should be given to the edges and corners. We offer Geotextile underlay fabric for rough surface tanks to be placed before the liner install to prevent wear.

**Liner Installation**

Remove liner from package and place liner in bottom of tank. Unfold liner. Starting at either end, raise liner up and work the liner into the corners and bottom. Clamps can be used to hold liner in place at the top of the tank while you work. Continue raising liner and working it into place at sides and bottom. As you work around, keep the top clamped off until you have liner in correct position for the final securing. When liner is hung, fasten the top with straps or rope and grommets. Rope and grommet method is a simple, built-in draw string that extends over the tank lip 2 inches. No tools or clamping devices are needed. We also offer stainless steel clips to be used with the grommets instead of rope for a more secure fit.

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**Stainless Steel Clips**

Stainless steel clips are recommended for liners of 1/8” and 3/16” thick that are over 8’ long. Tanks that are not square or rectangle should also use Stainless Steel Clips.
DROP-IN LINER INSTALLATION

Installation of Stainless Steel Clips

PLACE CLIP ON LINER

SECURE CLIP TO LINER

RAISE LINER

PUSH CLIP ON LIP OF TANK

STAINLESS STEEL CLIPS IN PLACE

Stainless Steel Clips
The tank pictured here has a lip that is over and down. Flat lips also work well for Stainless Steel Clips.
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**Batten Strips**

Batten strips may be used to attach the liner when other methods are not practical. With the rope hem above the batten strip, sandwich the liner between batten strip and tank wall at desired location. Drill through the strip, liner and wall. While making sure nothing shifts out of line, drive in anchor. Anchor each hole before moving to the next one. Continue to work your way around the tank until finished, then go back, checking anchors for tightness. We offer HDPE batten strips in 2” wide x ½” thick x 2’, 4’, 6’, or 8’ lengths.

Drop-In Liners are flexible so they can give with temperature changes and you don’t have to worry about holidays as you do with coatings. Much less down time for installation of liners can be expected. In addition, liners are less expensive.
“Unit Liner Company is committed to meeting challenges and creating solutions. Our promise is to meet or exceed our commitments to the customers we serve, and in doing so, lead our industries in quality and innovation.”

- Unit Liner’s Mission Statement