Access Anvil Corp. dba Scott System
109 General Fellows Road
Greenwich, New York 12834
Phone: 518-383-0500
Fax: 518-992-5140
www.scottsystem.com

January 1, 2021

Scott System Formliner Application Guide

For use by Contractors as an application guide to Install Urethane Formliners.

Access Anvil Corp. dba Scott System
109 General Fellows Road
Greenwich, New York 12834
Phone: 518-383-0500
Fax: 518-992-5140
www.scottsystem.com

Formliner Application Guide

January 1, 2021

FIELD ADVISORY BULLETIN – S2020

READ BEFORE USE

The following recommendations cover the basic use of Scott System formliners in the field. We recommend the following items to ensure positive results.

1. Each shipment must be checked BEFORE unloading at jobsite. Note any damage to crate, pallets and formliner on the freight line's delivery ticket. No claims for damage can be made without a signed and documented delivery ticket.

2. Protect formliners from exposure to UV rays and/or freezing temperatures. Indoor storage is recommended. Store and use formliners at temperatures between 40 degrees F and 140 degrees F.

3. Elastomeric formliners will expand or shrink in hot or cold temperatures. Verify lines and levels of formwork and formliner patterns are within allowable tolerances.

4. A release agent must be applied to formliners prior to use with concrete. Use only approved release agent, Scott Lease 440, or Cresset 880. No equals are accepted.

5. Thoroughly vibrate concrete to achieve consolidation and minimize voids. Internally vibrate into previous lift to avoid lift lines. Avoid vibrator contact with the formliner.

6. Remove/strip formliners from concrete within 24 hours after concrete placement if acceptable. The form can be replaced back onto the wall for the concrete curing specifications, but the initial strip needs to be within 24 hours.

7. Proper cleaning and storage of formliners is required to obtain acceptable results. Prevent matrix buildup on the liner surface. Scrub the liner surface with a stiff bristle scrub brush dipped repeatedly in one of the approved release agents. All excess release agent shall be blown or wiped off before the form and liner is placed back into service.

8. Elastomeric formliners comply with HCLP test and may be disposed of in landfills.

Disclaimer: Scott System is a formliner manufacturer providing a component to be used, maintained, and installed by the Purchaser. Scott System has no control over the use of the product when in the care and custody of the Purchaser. Scott System will not be liable and/or responsible for any claims, delays, back charges, damages or withheld payments because of utilizing our product.

Limited Warranty: Scott System warranties its products against defects in materials (materials to be of consistent quality within manufacturing specifications) and workmanship and will perform as represented, provided that the concrete construction methods are consistent with the manufacturer's recommendations. Manufacturer's obligation under this warranty shall be limited to replacing or refunding the purchase price of that material supplied.

Access Anvil Corp. dba Scott System
109 General Fellows Road
Greenwich, New York 12834
Phone: 518-383-0500
Fax: 518-992-5140
www.scottsystem.com

Formliner Application Guide

January 1, 2021

Section 1: Release Agents and Formliner Application

Architectural concrete forms are not going to cycle as fast as smooth faced forms. They will strip harder and more care must be taken with them. Formliners must properly release with an approved release agent that is non-staining and non-reacting. Scott System's formliner requires a coating of release agent between each use. Scott System approves and recommends the following release agents for use with its elastomeric formliners:

1. SCOTT LEASE 440 SCOTT SYSTEM 518-383-0500
2. CRETE-LEASE 880 CRESSET CHEMICAL CO. 419-669-2041

If you prefer to use a different release agent, we recommend avoiding products with high solvent concentrations. Release agents with high solvent concentrations will make the formliner swell. Additionally, it is recommended that test pours are completed to determine the effectiveness of the release agent when stripping the formwork form the concrete. *NOTE: Using a release that is not approved, will void any warranty protection and release agent should be applied as close to pour time as possible.*

RELEASE AGENT APPLICATION: Varied Weave Pattern

1. Spray release agent on both sides of the "varied weave pattern" in all directions (up to down and left to right). For best results, the formliner should be lying flat on the ground ensuring the release agent saturates the formliner and soaks in. If spray is applied in only one direction, the release agent will not get the far side of the pattern. Apply a LIGHT, even coating ensuring complete coverage on both sides of the pattern.
2. Utilizing a natural bristle brush, scrub the release agent into the formliner where release agent had been applied.
3. Tight patterns, 1/4"-1/2" etc., require extra care because it is difficult to spread the release agent between the tight patterns. Be sure both sides are covered.
4. A light coating is best. More is not always better.

RELEASE AGENT APPLICATION: HYDRO EDGE LINERS

Hydro Edge Formliner – A hydro edge formliner is a urethane formliner that is either backed by or submerges plywood (typically ¾" AC grade) into the wet cast urethane during fabrication.

Access Anvil Corp. dba Scott System
109 General Fellows Road
Greenwich, New York 12834
Phone: 518-383-0500
Fax: 518-992-5140
www.scottsystem.com

January 1, 2021

1. Apply release agent as you would any other formliner according to the direction of the pattern. Be sure to apply release to the formliner edges and the form joints as well. This provides a slipping action from one form to another and helps to reduce buildup on the form edges and facilitates stripping.

Section 2: General Guidelines & Maintenance

1. Try to strip as soon as possible. If applicable, strip within 24 hours. The longer the formliner is on the concrete, the tougher the strip will be.
2. Keep dirt, PETROLEUM BASED PRODUCTS and impurities off the released formliner.
3. Do not let the formliner sit face up in the sun for long durations of time. Ultraviolet rays will deteriorate the urethane and cause the urethane formliner to expand.
4. If it rains, cover the formliner so the release agent is not washed off.
5. Always apply release agent to the formliner face, edges, and ends.
6. Use release agent between each pour or as needed.
7. A simple and effective tool for workers in the field is a BENT SCREWDRIVER. Bend a screwdriver so the wedge tip is in line with the handle. The wedge tip inserts easily into the joint and the blade edge will scrape and clean any concrete buildup as the hook is pulled out.
8. Use formliners in temperatures between 40°F and 140°F. Steam curing is NOT recommended.
9. Formliner with release agent on it may be flammable. Be cautious of using cutting torches or other power tools near formliners and release agents. On hot days, fumes may build up.
10. Always strip WITH THE PATTERN DIRECTION of the formliner. Stripping “cross grain” will cause the liner to key onto itself and make the process more difficult.

Access Anvil Corp. dba Scott System
109 General Fellows Road
Greenwich, New York 12834
Phone: 518-383-0500
Fax: 518-992-5140
www.scottsystem.com

January 1, 2021

Section 3: Cutting and Sanding

CUTTING

Formliner is a synthetic rubber. Too much friction during cutting will cause the formliner to melt and gum-up saw blades. Use a slow, steady pace. A Skill or Milwaukee worm drive saw with water feed attachment and air works well to keep the liner cool minimizing gum-up on the blade. If you must use a regular saw, go slow. Use a lubricant like WD40 in advance of the cut. Let the blade work for you. To cut a THIN liner without plywood, you may use a utility knife. Several deep passes will work better that trying to make one deep, continuous cutting pass.

TO CUT

1. Snap a line.
2. Nail a guide down on the liner and into the back up material.
3. Cut or saw along the guide. The guide will also hold the liner down flat on the back up material.

   Equipment Options:

   a. Carbide tip skill blade with 24 teeth
   b. Utility knife
   c. Fine Tooth or Smooth Edge Saber saw
   d. Hand saw

SANDING

Formliner can be a challenge to cut, but it is easy to sand. Sometimes it is easier to take off 1/8" with a disc sander than to try and shave it with a circular saw. The sander will help clean up a cut surface. After lamination it is easy to dress the edge with a sander. Use a sander to put a bevel on the edge or to "clean" the cut and take off high spots.

Equipment: #36 grit belt or disc sander

TO DRILL

Steel or wood bits will work. A *HOLE SAW* will cut precise, clean holes for the bigger ties. It is best to drill from the face side. Working from the back can cause delaminating of the formliner in the drilled opening area. Apply silicone to the plywood in the drilled opening. The silicone will help seal this area and protect the opening from excessive moisture. Tie holes tend to swell up and become ragged

after a few pours. Minimize the affect by avoiding moisture contact with the plywood. Also a bottle brush dipped in release agent will swab out any concrete matrix if used between the pours to clean the tie hole.

Section 4: Repairing Tears and Cuts

Formliners can be repaired by using commercial rubber adhesives. Scott System recommends:

1. Lawson #90281 Rubber Bonder. This product is a fast-acting glue like a contact adhesive.
2. E-6000 Rubber Mender. This product will cure to be just as flexible as the formliner itself. It usually cures in about 4 hours and can be sanded after it is fully cured. E-6000 can be used to fill voids and then tooled to shape.

   This product is also good for re-bonding the formliner to the plywood and small repairs.

Note: Be careful with fingers and other exposed skin areas. 90281 can set up fast and will stick skin to skin.

Section 5: Stripping and Setting

Note: Means and methods are the responsibility of the Purchaser. We are offering recommendations that will assist in achieving the desired result.

1. A porta-power self-contained jack can be used to start stripping the form away from the concrete.
2. Begin slowly by building up some tension against the form. Wait about 30 seconds, and then gently pull the form and formliner away from the concrete. Remember you are working AGAINST SURFACE TEXTURE and SUCTION.
3. Add a little more pressure and wait again.
4. If a pry bar is needed, be sure not to pry directly against the liner surface. Place something (i.e. a piece of Styrofoam or plywood) between the bar tip and the liner.
5. On some deep textures it may help to pour water down into the crack between the liner and the concrete. It acts as wetting agent to help break the suction. In extreme cases you may add a liquid detergent to the water.
6. If you need leverage down in the form, don't use bricks or other sharp items. A piece of Styrofoam block jammed into the opening works well. Rock the form back and forth.
7. **Architectural forms should be stripped in 24 hours**. The form can be replaced back onto the wall for the concrete curing specifications, but the initial strip needs to be within 24 hours. The longer hydration continues, the tighter the suction between curing concrete and rubber liner will be, making for a more difficult strip.

8. Once the formliner has been stripped, prepare it for your next pour:
    a. Use the bent screwdrivers to clean the joints and form edges of buildup. Check for buildup of pockets in liner face.
    b. Swab out the tie holes with the bottle brush and release agent.
    c. Release agent should be re-applied as needed. **Reapplication recommendations**:
        I. Spray from bottom to the top of the formliner in the direction of the pattern. This allows the release to run down the texture face.
        II. Spray at a 45° angle up and underneath the texture.
        III. Spray both sides of the flute (weave) and edges.
9. When setting the form into place for the next lift, avoid contact with rebar ends and stubs. Occasionally a kick plate between the form edge and the landing can give some protection against tearing the liner and plywood edges.
10. Be aware that the following factors can make stripping very difficult:
    a. Out of range hydration temperatures. This will occur with mass concrete or some of the new self-consolidating concrete.
    b. Leaving the liner in the concrete for more than 24 hours.
    c. Not using bent screwdrivers and scrub brushes and letting the buildup get out of hand.
    d. Steam curing and exceeding temperatures over 140°.
    e. Incorrectly stripping liner against the grain of the texture.

Section 6: Shipping and Storing

SHIPPING AND RECEIPT OF MATERIAL

Hydro Edge Formliner is shipped on flat pallets. Although careful measures are taken at the factory to protect your shipment, occasionally freight arrives in poor condition. You have the option to refuse shipment if it is damaged. Contact supplier immediately. If your shipment is damaged upon arrival at the job site, please **make a note of it on the driver's delivery ticket**. Your note must include the following:

1. The nature of the damage.
2. Note the part of bundle that is affected.

3. Provide Date and Time of delivery and inspection.
4. Your name and phone number.
5. Photographs of the damage.

Scott System does not ship torn or damaged goods. Claims need to be made immediately.

STORING OF MATERIAL

1. Keep liner stored out of direct sunlight (all rubber and plastics are affected by UV exposure).
2. If the formwork is assembled and stacked, place Styrofoam dunnage between the forms. Do not let rigid metal or wood dig directly into the liner face; it will permanently deform the liner and will reflect in your concrete walls.
3. If you band liners together, use edge protectors so you don't cut into the liner.

Section 7: Tolerances

Elastomeric formliners are rubber. They expand with heat and contract with cold. Our manufacturing tolerances are + or 1/4" in 10'.

Section 8: Helpful Hints

1. Clean the formliner with high pressure hot water and soap. NEVER use a wire brush on the liner. Always use a natural bristle type.
2. End to end butt joints of liner to liner will ALWAYS show in concrete.

Thank you for your purchase of Scott System Formliners.

Please call us at 518-383-0500 for any assistance with our products.