
Specifications for Application of Fluorolast LC-4200X Protective Coating over Polyethylene Foam Insulation



A. Precaution

Read the MSDS on this product. Fluorolast SB contains solvents and chemicals. Adequate safety and health precautions should be taken during handling, application, and drying of this product. The material should be applied under local, state, and federal regulations as well as in accordance with OSHA and ANSI bulletins on safety requirements. Use caution when handling this or any other solvent-based coating.

B. Contractors/Applicators

Applicators or contractors selected by the owner of the facility or engineer should have had adequate experience in applying other protective coatings in an industrial setting. A Fluorolast representative will be available upon request to assist with questions pertaining to the application of its coatings.

C. Equipment

Fluorolast LC-4200X is a high-solids content, solvent-borne protective coating formula and may only be applied with a brush or roller. Spraying this coating is not recommended. Please refer to the MSDS sheet regarding special personal-protection equipment information.

D. Substrate Profile

Application of the LC-4200X coating requires that only the rough side of the polyethylene foam substrate receive the coating. With its tiny holes, pits, and textured surface profile, it presents a more suitable substrate than the smooth reverse side. A polished finished is not desired since chemical bonding is impossible.

However, the textured surface allows remarkable adhesion through mechanical bonding of the coating to the polyethylene foam. Properly applied and allowed to cure, an attempt to remove the LC-4200X protective film from the polyethylene foam substrate will result in the destruction of the foam insulation material.

E. Other Conditions

Depending upon the weather and other environmental factors, the temperature of the substrate should not be too warm or hot in order to allow adequate wetting out of the coating during application. Air and surface temperatures during application should be at least 50°F and no more than 110°F and at least 5°F above the dew point.

F. Surface Preparation

As usual, it is important that there is no contamination of any kind on the surface of the substrate prior to applying the LC-4200X. Where this

condition exists, it must be corrected prior to coating application. Before proceeding with the application of the coating, start with a clean and dry substrate that is free of contaminants.

G. First Application

When ready to begin application, pour the CA-20 catalyst (7% by wt.) into the container of Fluorolast LC-4200X coating. Stir sufficiently for a few minutes so that it will go into complete solution with the coating. Fluorolast premeasures the bottle of catalyst accompanying each container of coating to the correct amount prior to shipment.

It is critical that the first coat of LC-4200X is brush or roller-applied with a procedure using both side-to-side and up-and-down strokes. This will ensure that the coating penetrates into the tiny holes, pits, and textures of the polyethylene foam's surface.

The coating should be applied in a manner that will cover the substrate completely and uniformly. It will dry to a thickness of about 3-4 mils. After it has been allowed to dry completely (see H below), it may then be re-coated in the same fashion (as described above) with another coat of LC-4200X (or any of the other high solids Fluorolast SB high performance formulas LC-8130, LC-8140).

H. Subsequent Applications and Drying Time

It is vitally important that there is adequate drying time between coating applications (in conjunction with other conditions) to allow the solvent in the coating solution to evaporate out of the film and avoid solvent entrapment. At 70°F and 50% RH, this can be as little as 20-30 minutes. The presence of higher temperatures and lower humidity will reduce the LC-4200X's (as well as other SB coatings) drying time accordingly. To repeat, it is imperative that you do not begin the next coating application until the previous one has dried completely.

You may normally be able to apply the second coating application within one half hour or less after the first one has been put down. However, certain conditions affecting evaporation and suitable drying should be considered. Factors involving low temperatures and high humidity may require some adjustment in time between applications in order for the solvent to evaporate completely out of the film. Conversely, warmer and less humid conditions more ideal to evaporation may permit re-coating in less time.

I. Achieving Desired DFT

To reach the optimum dry film thickness of the coating over the polyethylene substrate, apply a second coat of the LC-4200X over the first (completely dry) one. Under normal circumstances, this should be the final coating application necessary. However, in order to assure a greater level of creep resistance and other beneficial properties

needed in especially harsh environments, a third coating application may be warranted to deliver additional rigidity and protection needed.

Whether this is determined right away or some time later may not be considered urgent (with regard to intercoat adhesion) as, the Fluorolast SB series coatings will bond to each other even after an extended length of time.

J. Cure time

Under normal circumstances, all Fluorolast SB coatings including the LC-4200X will cure ambiently after about 3 to 5 days from the end of application. Again, ambient cure time projections are dependent upon variable conditions such as atmospheric temperature, relative humidity, wind speed, direct sunlight, etc. Thus, in a warm or hot environment with adequate air movement and low humidity, the coating could reach final cure in less than two days.

K. Pre-Coating of Polyethylene Foam

The LC-4200X coating system also presents the welcome prospect of being able to pre-coat whole sheets of polyethylene foam *prior* to their final installation within the plant. This can be done in a special designated area, a separate paint room, on site or off site.

The benefits: 1) possibility for a more controlled environment ideal for coating application; 2) reduced risk of contamination of the foam substrate by dust or particulates; and 3) no loss of production time due to inclement weather, worker activity in installation area, or other unforeseen circumstances.

Since the LC-4200X has great elongation characteristics, elastomeric flexibility, etc., it will still permit the polyethylene foam insulation material to be installed just as before even after the coating has been applied, dried, and cured. After the coated sheets have been mounted and joined, coat the seams (as described above) with the LC-4200X to complete the protective seal.

L. Clean Up

Use of MEK or Acetone will dissolve and remove unwanted dried coating from most surfaces and equipment. Proper disposal of any remaining catalyzed but unused coating, brushes, rollers, etc. should be observed and followed.

M. Maintenance of Fluorolast SB Coatings

Care should be taken not to perform activities on or around the coated surface before it has been allowed to cure. Similarly, if solvents or other chemicals are to be used in the coated area, be sure they are compatible with the chemical resistance of the Fluorolast coating as originally intended.

Hot work (blowtorch, welding) should not be performed in the proximity of coated areas unless a heat blanket is used to protect the coating. Fluorolast coatings are formulated to minimize hazards from contact with many hot acids, vapors, and chemicals, but not super high temperature sparks or cinders.

Fluorolast coatings are formulated to stand up to incidental bumping and rubbing. Use normal caution as necessary when bringing sharp-edged equipment into contact with the coated area so as not to cause damage to the coating.

Fully-cured Fluorolast coatings are designed to withstand normal operating conditions as discussed with your Fluorolast representative prior to application. If conditions other than those discussed do arise, please contact Fluorolast before attempting to address those conditions.

N. Repairing Damaged Fluorolast SB Small areas

All Fluorolast SB formulas (including the LC-4200X) like themselves very much! This simply means that new coating will normally adhere to clean old coating with no problem. In case of damage after any Fluorolast SB formula coating has been previously installed; it may be easily repaired simply applying new coating over the damaged area.

Start with a clean damp cloth to wipe and clean the damaged coated surface and surrounding area. (If this does not prove sufficient, use a cloth dampened with either Acetone or MEK.) Allow the wiped area to dry completely. Next, apply consecutive coats of Fluorolast LC-4200X (as per the directions above) onto the area affected. Allow the coating to dry and cure as previously discussed.

O. Repairing Damaged Fluorolast SB Large areas

If a larger area of Fluorolast SB coating becomes damaged or fails to perform, the company should be made aware of the situation. Any major repairs should be discussed with a Fluorolast representative.

P. Coating Storage, Shelf Life & Pot Life

When stored properly in a moderate temperature environment, the UN-catalyzed Fluorolast SB coatings have an indefinite shelf life. With the introduction of catalyst into the coating, normal pot life is about 1 hour with normal agitation (dipping brush, paddle stirring).

The addition of the catalyst along with normal evaporation of solvent out of the coating will slowly increase the viscosity of the LC-4200X. If during application, the catalyzed coating remaining in the container becomes too thick, use a small amount of MEK to thin.

The presence of high temperatures or having the lid removed without agitation of the coating will increase the rate of both the curing process and evaporation of the solvent out of the coating which could reduce pot life accordingly.

Q. Contacting the Company

Fluorolast Coatings is available to assist you whenever you encounter questions involving the application and use of its protective coatings. Please refer your questions and requests for information to us by phone during regular business hours at (800) 785-3601. You may also contact us by fax at (330) 339-1515 or send e-mail to Fluorolast@lauren.com. Visit us on the Internet at www.fluorolast.com.

Warranty Disclaimer: The manufacturer does not make any representations, nor does it assume any responsibility, as to any other materials or products to which this manufacturer's product will be used or applied, whether in combination with other materials or not; and, therefore the manufacturer disclaims all warranties, express or implied, concerning any particular use of this product, whether used in accordance with directions or not, or for any processes or uses of the product whether disclosed or not. It is the sole responsibility of the user of this product to test for and determine the suitability of this product for any use of the product with any material or combination of materials.