



LANDFILL COVER INSTALLATION GUIDELINES

All large panels are accordion folded into a stack and rolled onto a heavy-duty 6" I.D. core then packaged in two separate outer wrap materials. When the panels are unloaded on site, they should be positioned per the deployment instructions. Each panel should contain a deployment instruction sheet detailing how to roll out the panel to length and pull from the accordion folded stack to cover the width of the area. Confirm that the area to be covered is free of any materials that could damage the cover.

Check weather conditions prior to starting installation and do not try to deploy covers in windy conditions. Site personnel should be spaced the length of the cover about every 15' to 30' depending on the weight or thickness of the material being deployed. The site supervisor should coordinate the deployment of the cover material making sure the entire crew is pulling the cover material in equal proportions evenly across the entire length of the cover. Depending on the wind conditions, the crew should be able to take advantage of a slight breeze by pumping a layer of air under the cover material to help float the material while deploying. If at anytime the air underneath becomes excessive, the deployment crew should pull the material closer to ground level to help push out some of the air. If a large wind gust comes up during deployment the crew should hold the material down to the ground temporarily until the wind gust passes.

The deployment crew should ballast the leading edge at any point they stop to prevent wind damage. The material should be loosely laid out and never pulled tight or tensioned. Wrinkles or folds in the cover material should be worked throughout the overall area to prevent any stress points in the cover. Laying the material out loosely will allow for the expansion and contraction properties that are inherent to polyethylene. Normally, about 5% slack is recommended in each direction. Upon completion of the deployment process, the entire area should be inspected to insure that the 5% slack is evenly dispersed.

Once the cover has been completely inspected, the perimeter of the cover should be temporarily secured either with ballast or in an anchor trench. In most installations the cover is deployed and left out overnight, with weather conditions permitting, to assure the cover will not be shrinking any further due to cool weather after anchoring the perimeter. Once the cover has been determined to have sufficient slack, the cover can be anchored permanently. Attach to structure or placed into the trench and secure with backfill or other ballast materials.

Typically sandbags are used as ballast and should be placed as required in the specifications per the actual site layout. Sandbags are normally spaced approximately 10' on center across the width direction and 5' on center the length direction. If used on perimeter, place bags end to end. When placing sandbags on slopes it may be advantageous to run a rope up the slope anchoring each sandbag accordingly. When material must be deployed on windy days it is suggested to pull out short sections and immediately place ballast on the material prior to moving on to the next sections.

When installing multiple panels, the additional panels should be deployed following the same procedures as listed above. The additional panels should be deployed and positioned to achieve the necessary overlap for seaming.

The "field sewing" method is a very feasible and reliable method to join our large panels of reinforced films. Sewing is not recommended for unsupported films where thermal welding is the method of choice. As always, before

choosing a seaming method, consideration must be given to the application, outdoor conditions, longevity of the project, or the design engineer's recommendations for that particular application. Sewn field seams are normally acceptable for applications including oil field pit liners; general outdoor covers and rain shed covers for landfills. Sewing is a simple procedure and can be accomplished by a contractor or general laborer with minimal instruction. The equipment is inexpensive and can be purchased or leased at a minimal cost to the installer.

Raven recommends using a 2 thread, single needle machine (a Union Special 2200 CLASS hand held), using F or FF thread with 3 stitches per inch. Polyester or Polyester/Cotton is recommended. A "J" seam, is the easiest seam to form in the field and it performs well because you are joining four layers of material. This helps keep the thread from pulling through the material under stress.

If the seam area does not need to be completely water tight, sewing alone may be acceptable. If the seam needs to be as water tight as possible, it can be taped with a layer the Raven R25B adhesive tape, however the longevity of almost any tape in an exposed condition is limited. In most conditions there is very little moisture seepage from sewn seams and therefore taping is not warranted.

The above Cover Installation Guide to be used as a guide only.

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Weather conditions, experience of installation crew, and ground and/or pile surface conditions will affect installation procedures and methods.

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