

SIPLASTFLASH

Proper surface preparation of the area to be heat-welded is critical to forming a good, long-lasting seam. Heat-welding uses the thermoplastic nature of the material to melt two pieces of material together, fusing them into a single piece. To properly fuse two discrete pieces of material, the pieces must be clean and dry. If not clean and dry, contaminants will interfere with the weld and, generally, the result is a poor or false weld.

When Do The Seams Need To Be Cleaned Before Welding?

- Satisfactory heat-welding requires that the membrane be clean of dirt and contaminants, and free from airborne debris, dew, rain, and other sources of moisture.
- Factory-fresh new membranes should be clean when unwrapped and unrolled on the job site. Typically, the new membrane will not require cleaning before welding, provided that welding is performed immediately after placement of the membrane. Therefore, any material rolled out and put into place should be welded the same day, including welding of any detail work.
- Membrane will require cleaning if it has been exposed for a longer period of time (e.g., for more than 12 hours or overnight) or has become dirty due to foot traffic or other contamination. Cleaning methods will depend on the type of contamination present.

Types of Contamination and Cleaning Procedures

Siplast categorizes membrane contamination into four types:

1. **Light Contamination:** Membrane that has been exposed to airborne debris, foot traffic, dew, or light precipitation for a few days can usually be cleaned with a cloth moistened with Parasolo TPO Seam Cleaner or Parasolo TPO CleanWeld™ Conditioner (low VOC) for TPO membranes. For PVC or PVC KEE membranes, Parasolo PVC Membrane Conditioner can be used. Be sure to wait for the solvent to flash-off before welding.
2. **Dirt-encrusted Contamination:** A membrane that is dirt-encrusted will require the use of a low-residue cleaner such as Formula 409 and a mildly abrasive scrubbing pad to remove the dirt. Rinse the area thoroughly with clean water and allow it to dry. This must be followed by cleaning with a cloth moistened with Parasolo TPO Seam Cleaner or Parasolo CleanWeld™ Conditioner (low VOC) for TPO membranes. For PVC or PVC KEE membranes, Parasolo PVC Membrane Conditioner can be used. Be sure to wait for the solvent to flash-off before welding.
3. **Weathered or Oxidized Contamination:** A membrane that is weathered/oxidized will require the use of a low-residue cleaner such as Formula 409 and a mildly abrasive scrubbing pad to remove

the weathered/oxidized top surface layer. This must be followed by cleaning with a cloth moistened with Parasolo TPO Seam Cleaner or Parasolo CleanWeld™ Conditioner (low VOC) for TPO membranes. For PVC membranes, Parasolo PVC Membrane Conditioner should be used. Be sure to wait for the solvent to flash-off before welding.

4. **Chemical-Based Contamination:** Membranes that are contaminated with bonding adhesive, asphalt, flashing cement, grease, oil, and most other contaminants usually cannot be cleaned sufficiently to allow an adequate heat weld to the membrane surface. Removal and replacement of the membrane is required in these situations.

Seam Cleaning Summary Recommendations

Type of Contamination	Membrane Cleaner	Method	General Cleaning Tips
Light	TPX: Parasolo TPO Seam Cleaner or Parasolo TPO CleanWeld™ Conditioner (low VOC) PVC or PVC KEE: Parasolo PVC Membrane Conditioner	•Clean with a cloth moistened with membrane cleaner. •Allow solvents to flash off.	• Rinse the area thoroughly with clean water. • Use white terry cloth; avoid use of industrial cleaning cloths. • Colored cloths can transfer dye to the area to be welded and should not be used. • Do not overuse cloths; dispose of them when dirty. • Use scrub brushes sparingly as they can damage the membrane • Drying time for the cleaner increases 3-5 minutes for every 10°F drop in temperature.
Dirt-Encrusted	TPX: Parasolo TPO Seam Cleaner or Parasolo TPO CleanWeld™ Conditioner (low VOC) PVC or PVC KEE: Parasolo PVC Membrane Conditioner	•Scrub with low-residue cleaner (409) using a mildly abrasive pad. •Clean with cloth moistened with membrane cleaner. •Allow solvents to flash off.	
Weathered or Oxidized	TPX: Parasolo TPO Seam Cleaner or Parasolo TPO CleanWeld™ Conditioner (low VOC) PVC or PVC KEE: Parasolo PVC Membrane Conditioner	•Scrub with low-residue cleaner (409) using a mildly abrasive pad. •Clean with a cloth moistened with membrane cleaner. •Allow solvents to flash off.	
Chemical-Based	•Not Recommended; consult Siplast Technical Services	•Remove and replace membrane	

Note: Ambient conditions are a key variable in the time it takes for a cleaner to dry before welding

Questions?

Siplast Design Support Can Assist You... with these and other questions you may have regarding your new roof installation. Design Support can be contacted at 855-861-6460. The Siplast website is a great resource for just about any question you may have or for additional information you may require. Please visit www.siplast.com to find the latest information on our products and their installation.

Important: This document supersedes any prior Siplast Technical Bulletins on this topic. Please always check www.siplast.com to make sure you have the most up-to-date information.