

Cold Weather Application SBS & PMMA Products

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SIPLASTFLASH

During periods of cooler weather, it is important that installation and storage techniques be modified to ensure proper application of Siplast roofing and waterproofing products. The following recommendations, developed over many winter seasons, are designed to improve the quality of cold weather applications. They are intended as guidelines only - the quality of the finished application will determine whether the conditions are suitable for roofing operations. Remember, wind and cloud cover can have as significant an effect as ambient temperature on roofing operations. Be sure to take them into consideration.

General Guidelines

To facilitate the application of adhesive at ambient temperatures below 70°F (21°C), all materials such as resins, adhesive, and roll goods should be stored in a warm place such as a heated trailer or other climate-controlled storage area prior to use.

Application in cool weather can be completed more effectively by cutting warmed rolls into halves or thirds and stacking the sheets with the unsurfaced-side upward to allow for solar heating. Cut sheets should be allowed to lay flat for a minimum of 30 minutes (time will vary based on the ambient temperature and solar load) to allow them to “relax.”

PA-311 Adhesive and SFT Adhesive Applications

The minimum material temperature at the point of application for Siplast PA-311 series and SFT Adhesives is 70°F (21°C). Warm adhesives tend to flow more easily, facilitating ease of application and reducing wear and tear on equipment. Therefore, pre-heating the adhesive is suggested for most application conditions in cool/cold weather. The use of bulk warmers, inline heaters, or other pre-heating equipment such as thermostatically-controlled warming blankets should be considered to maintain the proper temperature and viscosity of the adhesive products. The use of “band heaters” should be avoided for safety reasons. When heating materials, always exercise caution and never leave the materials/equipment unattended. Siplast adhesives should never be exposed to open flame for heating purposes. Care should be taken to ensure that the adhesive does not exceed the flash point (flash point temperatures are listed on the Safety Data Sheets).

Adhesive application should be suspended in situations where the adhesive cannot be applied at temperatures allowing for even distribution at proper application rates.

“Fly” the pre-cut roofing sheets by placing them into the adhesive rather than rolling them into position. “Flying in” sheets is an effective, efficient technique that is equally appropriate in warmer weather.

Note: Refer to the PA-311 Adhesive(s) and SFT Adhesive product information sheets for application usage rates and monitor application to prevent over-application of adhesive.

Self-Adhesive Membrane Applications

Paradiene 20 SA products should be installed when the outside temperature is 60° F (16° C) and rising with sunny conditions. In temperatures below 60° F (16° C), TA-119 Primer should be considered to facilitate proper bonding of the SA membrane for horizontal applications (TA-119 Primer is already required for all Paradiene 20 SA and Paradiene 20 TS SA vertical applications.) The laps of the Paradiene 20 SA or TS SA should be top heated to ensure they are sealed. The torch-applied cap sheet should be installed over the Paradiene 20 SA or Paradiene 20 TS SA during the same day. When using "P" products with the Syntan Acrylic Coating, the Parapro Roof Membrane System should be installed the same day as the Paradiene 20 SA P or TS SA P sheet.

Parapro, Paracoat, and Terapro Applications

Parapro, Paracoat, and Terapro Resins are available in summer and winter grades. Summer grade resins may be applied when the ambient temperature is between 59°F (15°C) and 104°F (40°) and the substrate temperature is between 59°F (15°C) and 122°F (50°C). Winter grade resin may be applied when the ambient temperature is between 23°F (-5°C) and 68°F (20°) and the substrate temperature is between 23°F (-5°C) and 77°F (25°C).

Recommended ambient application temperatures for summer and winter grade material overlaps from 59°F to 68°F. At ambient temperatures below 59°F, winter grade resin should always be used. Pro Primer R, Pro Primer W, Pro Primer T, Pro Matrix Flashing Resin, Pro Color, Pro Clear, and Pro Paste Resins are not produced in winter and summer grades. Please refer to the Parapro and Terapro Installer's Guides for specific detail regarding application temperatures and catalyzation.

Paracoat Roof Coating may be applied when the ambient temperature is between 32°F (0°C) and 95°F (35°C) and the substrate temperature is between 32°F (0°C) and 104°F (40°C).

Asphalt Applications

Special precautions must be taken to ensure that Type IV asphalt maintains a minimum acceptable 400°F (204°C) temperature at the point of sheet application. Asphalt must not be overheated to compensate for cold weather conditions. The use of insulated handling equipment is strongly recommended. Hot luggers, mop carts, and kettle-to-roof supply lines should be insulated. Hand mops used in cool weather should be smaller than those used in the summer season to facilitate short mopping leads. Luggers and mop carts should never be more than half filled at all times.

During application, asphalt should never be applied more than 5 feet ahead of the roll, which should be unrolled continuously at a steady pace. The moppings should always be "squared off" between mopping intervals, and the roll should be rolled through the mopped areas and then be backrolled, exposing 2 to 3 inches of asphalt. This procedure eliminates excess asphalt build-up at roll "stops." Pressure should be kept on the roll throughout installation to ensure proper embedment. Air pockets beneath the system or between plies are unacceptable. Any such pockets should be broomed in immediately while the asphalt is still hot. Use of a weighted roller on the laps is recommended.

While application is in progress, ongoing assessments should be made to determine whether conditions are suitable for roofing operations. In all applications, the determining factor as to the acceptability of temperature and conditions is the contractor's ability to install the products properly. The membrane should always lay flat, without buckles, air pockets or voids, and must be fully bonded. If this cannot be accomplished, application should be discontinued until more favorable temperatures and weather conditions prevail.