

Cold Temperature Recommendations for Air Barrier Applications

Bulletin Scope

The following outlines procedures and recommendations for Tremco ExoAir® products at temperatures lower than 40°F (4°C). At temperatures below 32°F (0°C), the presence of ice and frost on bonding surfaces becomes more likely. These cold conditions can affect the overall cure, adhesion and ultimate performance of the air barrier products.

General Cold Weather Guidelines

The following guidelines should be followed in order to optimize the performance of these products in cold weather:

1. For best working properties store the ExoAir products on inside or where temperatures will not go below 50°F (10°C). If storing the products at the jobsite, warming the product to 60°F (15°C) or greater is preferred.
2. ExoAir 120 and 220 are asphaltic emulsions and ExoAir 130 and ExoAir 230 are synthetic membrane. These products can freeze when being installed at temperatures below 32°F (0°C). Caution should be taken if installing at freezing temperatures as the product could freeze prior to the membrane drying. This freezing of the product will not affect the performance of the product as it will eventually dry as the temperatures increase. However, if the membrane is exposed to rain prior to completely drying the product could experience wash out and run off the wall.
3. If using spray equipment, the equipment must be kept above 32°F (0°C), to prevent the material inside the pump and hoses from freezing. Once the application starts, do not stop. Freezing can occur in the application pump and hoses if the heated membrane is not constantly flowing. Use of heat-assisted equipment (such as a heat exchanger) is strongly recommended if material is used in conjunction with a co-spray and ambient temperature is below 32°F (0°C).
4. Primer should be stored as mentioned in (1). At temperatures lower than 32°F (0°C) primer will take longer to dry than at warmer temperatures. Care should be taken to ensure adequate primer dry time prior to air barrier application.

ExoAir Cold Weather Guidelines

The following are specific guidelines for applying Tremco ExoAir products:

1. ExoAir 120, 130, 220, and 230: Tremco recommends ExoAir fluid products be applied when ambient (air) and substrate temperatures are 32°F (0°C) and rising and it is expected that the ambient air temperature will not fall below 32°F (0°C) within 48 hours, unless co-spray method is utilized (see (2)). When applying the product below these temperatures, the applicator should be aware that the product could freeze prior to the membrane drying as noted above in item #2. Additionally, the product should not be applied if it is raining, or if the possibility of rain is likely within 24 hours.
2. ExoAir 120 can be co-sprayed to temperatures down to 20°F (-7°C). Use of heat assisted equipment (such as a heat exchanger) is recommended when co-spraying at temperatures below 32°F (0°C). Once application is in process, do not stop until finished. Freezing can occur in the application pump and hoses if the heated membrane is not constantly flowing. Apply the coating using a one-coat technique. 60 wet mils of the membrane should be applied in one pass instead of two to prevent an ice layer from forming between passes. The co-sprayed ExoAir 120 must be fully cured prior to any further construction installations. The cure time will vary based on temperature and humidity. Complete cure usually occurs in 1-2 hours after co-spray application. Consult the local Tremco representative or Technical Services in Beachwood, OH for assistance prior to co-spray applications if the contractor is not trained in co-spray technology prior to application of products.
3. ExoAir Sheet Applied Membranes: it is always best practice to keep self-adhered membranes at an appropriate storage temperature prior to use on the job site, typically 60°F-80°F (15°C-26°C). The adhesive will maintain tack better if kept warm just prior to application vs. trying to warm the membrane up prior to use.
 - a. ExoAir 110AT should not be installed at temperatures below 0°F (-18°C).
 - b. ExoAir 110 should not be installed at temperatures below 14°F (-10°C).
 - c. ExoAir 210AT Should not be installed at temperatures below 20°F (-7°C).
4. Sealants/Mastics: *(Please refer to the Cold Weather Caulking Recommendations for more information)*

- a. Dymonic 100: This single component polyurethane sealant should be used with caution below 40°F (5°C). However, following proper surface preparations and storage will allow work to continue below 40°F (5°C). The Dymonic 100 will cure at a slower rate as the temperature drops.
- b. ExoAir Termination Mastic: This single component mastic should be used with caution below 40°F (5°C). However, following proper surface preparations and storage will allow work to continue below 40°F (5°C). The ExoAir Termination Mastic will cure at a slower rate as the temperature drops.
- c. Tremcfix 834: Water based sealants such as Tremflex 834 may freeze when stored at temperatures lower than 32°F (0°C). Care should be taken to store this sealant at temperatures warmer than 40°F (5°C) and to follow the general cold temperature surface prep recommendations.
- d. Spectrem 1: This single component silicone sealant should be used with caution below 40°F (5°C). However, following proper surface preparations and storage will allow work to continue below 40°F (5°C). The Spectrem 1 will cure at a slower rate as the temperature drops.

Conclusion

In general, any project should be evaluated on an individual basis since environmental conditions can differ significantly from day to day. These climatic variations are very pronounced during the cold weather months. When cold weather air barrier application procedures are required, please consult your local Tremco representative or Technical Services in Beachwood, OH for assistance.