

EcoStar Tips and Tricks for Cold Weather Installations

Version: 1.0

INTRODUCTION

Installing EcoStar tiles in cold weather presents unique challenges, durability, and warranty of your roofing system. When temperatures drop below 7°C EcoStar tiles shrink with the cold and 4°C, self-adhered underlay become less flexible, adhesives may not activate properly, and wind or ice can compromise the integrity of the installation.

This guide is designed to help roofing professionals understand the best practices for cold weather installation. It covers everything from material handling and surface preparation to nailing patterns and sealing techniques—ensuring your roof performs reliably through the harshest conditions.

The ideal temperature range to install EcoStar Tile is between 10°C to 29°C. If you're installing it at cooler temperatures (below 10°C), here are our suggested steps.

1. Best Time to Install

Ideally, wait until spring to install. If that's not possible, only proceed on days when temperatures are 10°C and consistently rising.

2. Peel and Stick Adhesion Tips in Cold or Windy Conditions

If your Peel-and-Stick Underlayment membrane isn't adhering properly, it's likely due to cold temperatures, wind, or both.

- **Cold Weather Tips**

- a) Below 10°C, the bitumen adhesive in Peel-and-Stick Underlayment membrane becomes less tacky. You'll need to hand nail carefully. Cut the roll into manageable lengths (3–5 meters) and make sure side laps are at least 90mm and end laps are at least 150mm. Just like with waterproofing, ensure laps are facing the correct direction.

- b) Preheating the rolls overnight in a warm-room or heatbox to between 10–29°C improves adhesion. Keep in mind that the roof deck may still be colder than the air, so a few nails might still be needed to help manage the roll—especially if one end cools before it sticks. Also, heat the lap joints and roll them firmly – do not use any type of flame torch to heat lap joints.

- **Windy Conditions**

- c) Use primer adhesive SES301 to help hold the membrane in place during windy installations.

Note: These are temporary measures. As the roof warms up, the adhesive bond will strengthen and become more permanent.

3. Handling EcoStar in Cold Weather

EcoStar tiles are thermally contractive—expanse with heat and shrink in the cold. EcoStar have been designed to be installed at 9.5mm apart, this is to combat thermally contractive; if you install the tiles below 7°C, once the roof warms up, it could expand beyond the 9.5mm. Bending cold tiles is also more challenging, it's best to warm them up before use. Cold installed tiles can oil-can or warp once temperatures start to rise. Here are three easy ways to do that:

- Lay the bundles out on the roof or ground and let the sun naturally warm it.
- Store the pallet in a garage or enclosed space with a heater running overnight. Only bring out packs as needed.
- Use a warming blanket, ideally on unstacked packs, for more even heating.

5. Underdriven Nails

Incorrect nail gun pressure can lead to poor fastening. Over driven nails can cause the tiles to cup up, increasing the risk of wind damage. To help to avoid this:

- a) Adjust nail-gun pressure as needed throughout the job.
- b) In extreme cold, consider hand-nailing.
- c) Aim to work with materials warmed to between 10–29°C for best results.

6. Hip and Ridge Caps

Hip and ridge caps are more difficult to bend over the ridge below 7°C. Hip and ridge caps cannot be installed until all individual caps are heated enough to freely fold over the peak.

1. Never use any type of flame torch to heat caps.
2. In most installations, tightly fitted tiles at all hips along with installing ridge vents create a near watertight roof. Installation of Hip and Ridge caps may be able to be delayed until ambient temperatures rise.
3. Be mindful of expansion and tiles get warmer.

7. Ice Dams & Water Intrusion

Improper sealing at eaves and valleys, along with ice buildup on flat roof sections, can cause water to back up under the shingles. Prevent this by:

- a) Using Peel-and-Stick Underlayment membrane at eaves, valleys, and flat areas.
- b) Improving attic ventilation and insulation.

8. Uneven Appearance

Cold tiles may not lay flat, which can affect the roof's appearance and lead to curling at the corners. To manage this:

- a) Allow tiles to warm and relax before installation.
- b) Let clients know that minor unevenness may self-correct as temperatures rise.

9. Important Reminder

DO Not install tiles, if tiles are colder than 7°C and ambient temp is less than 1°C.

Don't install self-adhered underlay when the material is less than 10°C, where possible.