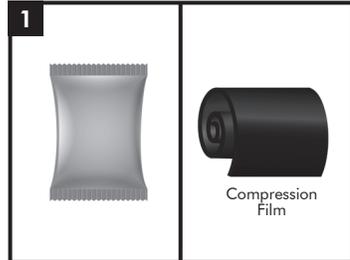


Scar-Guard®

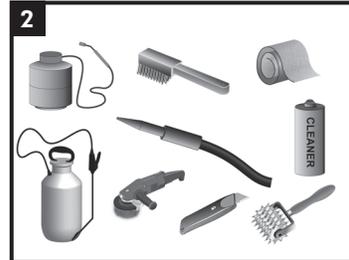
Composite Mechanical Protection for Directionally Drilled Pipelines

Product Description



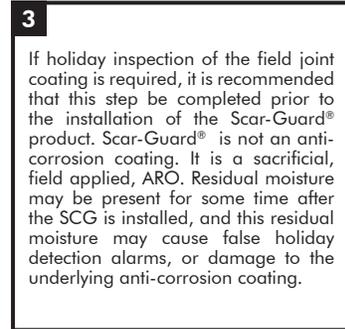
Scar-Guard® (SCG) is supplied in a heat sealed foil pouch. Compression Film is supplied separately.

Equipment List



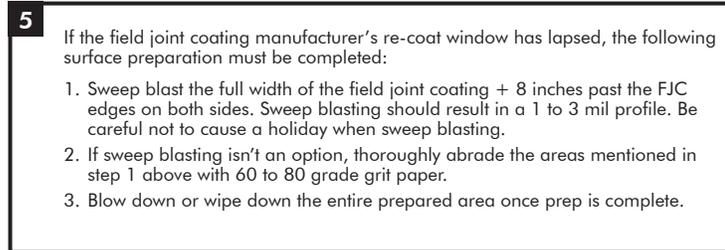
Appropriate tools for surface abrasion and preparation (wire brush/power wire brush or grit blaster, abrasive paper (40-80 grit), knife, lint free rags, approved solvent and high volume water sprayer, perforation tool, standard safety equipment: gloves, safety glasses, hard hat, etc.

Note

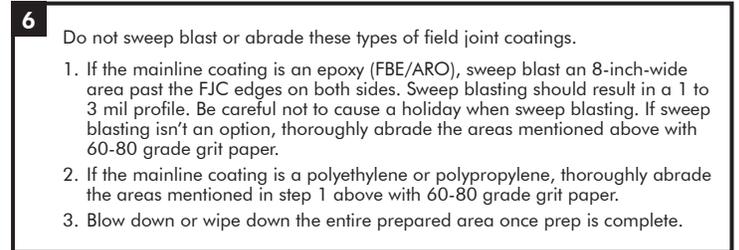


The field joint coating should be installed per the manufacturers recommended guidelines.

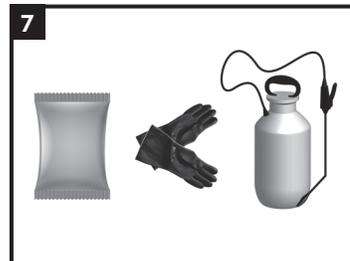
For Epoxy Field Joint Coatings:



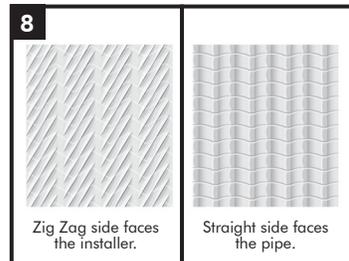
For Heat Shrink Sleeves, Tapes, Etc:



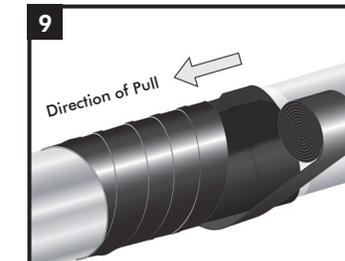
Outer Wrap Application Scar-Guard®



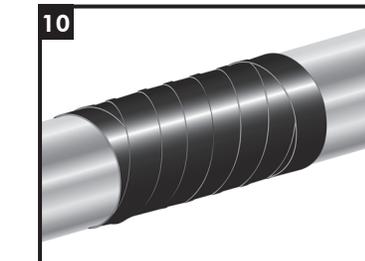
Water is needed to activate Scar-Guard®. Open the foil pouch, remove the roll. Once opened, the product cannot be repackaged. Scar-Guard® is activated using a high volume water sprayer to soak each layer as it is wrapped.



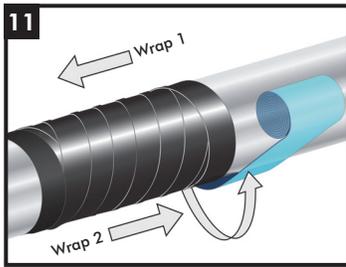
SCG must be wrapped onto the field joint in the correct orientation as shown above. The "Zig Zag" side of the SCG is the side that must face outward towards the installer. (Zig Zag Out). The straight side of the SCG is the side that must contact the pipe's surface.



After preparation has been completed, soak the entire area to be wrapped with water. Open the foil pouch and remove the roll. Starting at the leading edge (edge closest to the bore hole), begin the application at a distance of 150 mm (6") past the corrosion coating edge. Extend the wrap 150 mm (6") beyond the corrosion coating on the trailing edge. Apply the first wrap circumferentially around the pipe at a 90° angle, then begin spiral wrapping with a 50% overlap. Apply tension during application by pulling firmly on the roll as it is applied. Squeeze and mold firmly in the direction of the wrap until tight. THOROUGHLY SOAK each layer (both sides, top, and bottom) of the SCG as it is being applied, not just the outer layer. SCG is applied in 1 pass with 50% overlap to achieve a 2 layer system.

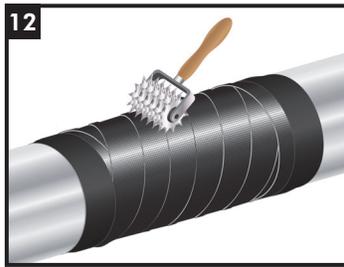


End with a circumferential wrap applied at 90° to the pipe. A 2 layer system is the minimum requirement for all SCG installations. For high shear or impact requirements, additional layers may be required.



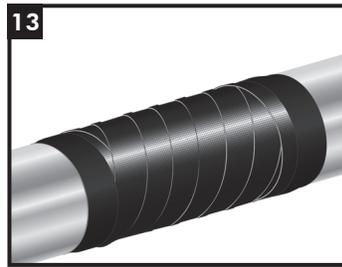
Starting on the leading edge, apply the compression film in the same spiral direction as the SCG with a 50% overlap. Start min. 150 mm (6") beyond the outer edge of the SCG, pulling firmly during application to compress all SCG layers together, and end 6" past the SCG on the opposite edge. The compression film must be installed 4 layers thick (2 passes at 50% overlap). Apply compression film with high tension.

NOTE: Compression film should be applied before excess foaming is observed. The compression film must be applied and perforated immediately after the installation of the SCG.



Perforate the compression film using the perforation tool. Use enough downward force to perforate the compression film ONLY. Perforation allows the CO² gas generated by the curing process, and excess water, to escape. Compression film should remain in place as long as possible, and should be removed just prior to pulling the pipe in. The film will help protect the SCG from UV degradation should the pull-back be delayed. If a UV resistant SCG is required, please contact your local Canusa representative.

Prior to Pulling



Allow SCG to reach a Shore D Hardness of 60 prior to pulling. SCG is fully cured at a Shore D Hardness of 80 at 72°F.

Storage & Handling

For ideal shelf life, store in a cool, shaded area at ambient temperature 72°F (23°C). Do not expose to temperatures above 110°F (44°C) or below 40°F (5°C). **Do not open bag containing Scar-Guard (SCG) until you are ready to use it**, as SCG cures when exposed to atmospheric moisture/humidity.

Caution must be taken when handling the sealed bags to prevent puncturing or scuffing. If the protective foil pouch is punctured, the composite wrap will cure within the sealed foil pouch.

These installation instructions are intended as a guide for standard products. Consult your Canusa representative for specific projects or unique applications.

Hot & Cold Weather Installations

Cold Weather Installations

Follow procedures above however, use a 50/50 mix of ethylene glycol and water in the sprayer to speed up the curing process, since SCG will not cure on its own at temperatures below 40°F (5°C). Store unopened bags of SCG in a heated truck if possible.

Hot Weather Installations

Follow procedures above however, use ice water in the sprayer to slow down the curing process, thus allowing the installer more working time. Store unopened bags of SCG in an ice chest if possible.