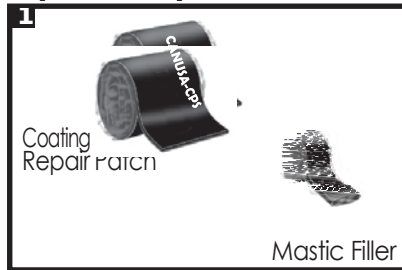


Pipeline Repair Products

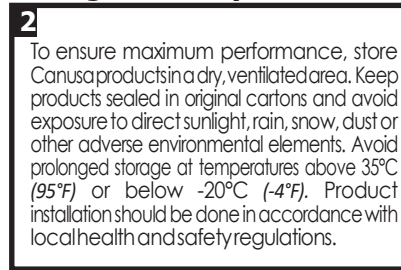
Repair Patch and Butyl Mastic Filler

Pipeline Repair Products



The Coating Repair Patch (CRP) is typically shipped in bulk rolls and can be cut-to-size in the field. Mastic Fillers are used to repair holidays and/or fill voids.

Storage & Safety Guidelines



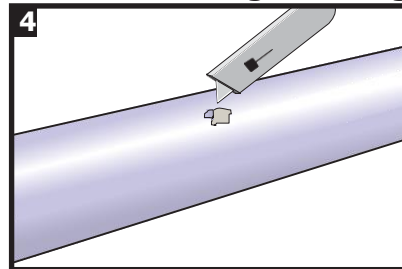
To ensure maximum performance, store Canusa products in a dry, ventilated area. Keep products sealed in original cartons and avoid exposure to direct sunlight, rain, snow, dust or other adverse environmental elements. Avoid prolonged storage at temperatures above 35°C (95°F) or below -20°C (-4°F). Product installation should be done in accordance with local health and safety regulations.

Equipment List



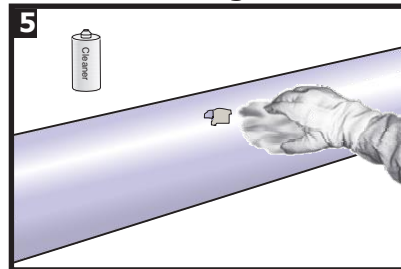
Propane tank, hose, torch & regulator. Appropriate tools for surface abrasion and cleaning, including wire brush, abrasive paper, rags & approved cleaner. Temperature measuring device. Misc. tools such as; knife, putty knife, roller, paint brush or paint roller, tape measure, and marker. Standard safety equipment; gloves, goggles, hard hat, etc.

Removal of Damaged Coating



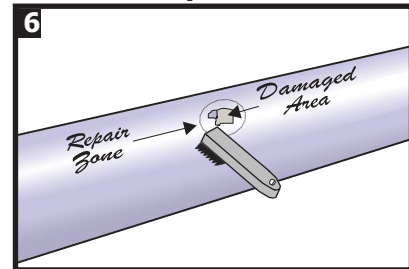
Remove damaged coating with a knife or hand grinder to prevent crack propagation in the coating.

Solvent Cleaning



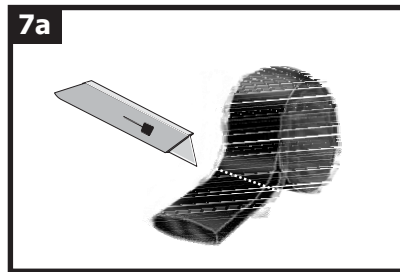
Clean exposed steel and adjacent pipe coating with an approved cleaner (as per SSPC-SP-1) to remove the presence of oil, grease and other contaminants.

Surface Preparation

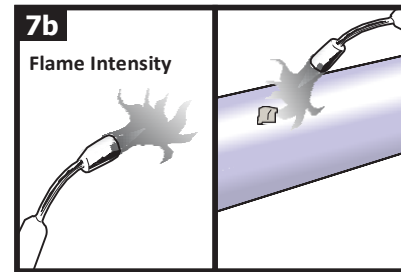


Remove adhering rust, coating chalk, dirt, and roughen the mill applied coating in the repair zone using an abrasive paper/cloth or wire brush.

Mastic Filler Installation

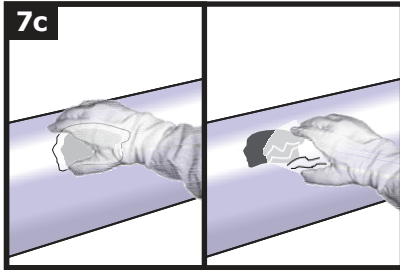


Fill deeper crevices with UCC Butyl Mastic strip. Unroll the filler material and cut off the required amount, leaving the release paper in place.

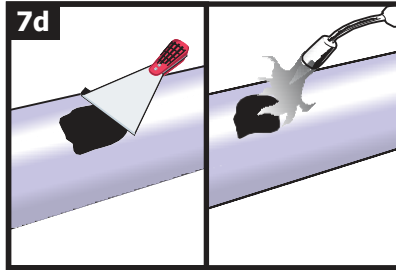


Use a low intensity yellow flame for pre-heating the coating and applying the repair products. With quick back and forth strokes, pre-heat repair area to 60°C minimum to remove moisture and assist in adhesion.

Pipeline Repair Products

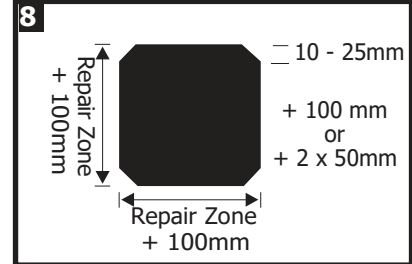


Place the filler material onto the damaged area with the release paper facing up. Firmly press the material into the damaged area by hand and remove the release paper.



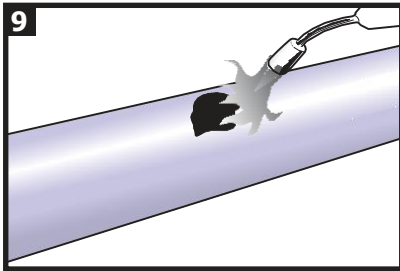
After filling the damaged area, remove the excess filler to create a smooth surface. As an option, use a low intensity yellow flame to warm the filler material and assist in smoothing it out.

Patch Preparation



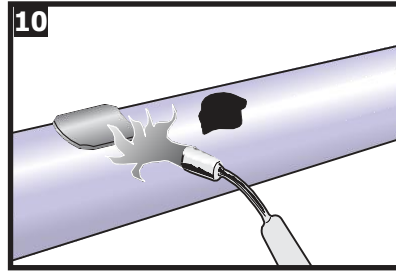
Cut a patch of CRP large enough to extend a minimum of 50mm (2") beyond the edge of the repair zone. Trim each corner of the patch about 10-25mm (½" - 1") at a 45° angle. If the damage has a diameter greater than 10cm (4"), use an appropriate heat-shrinkable sleeve.

Pre-Heat

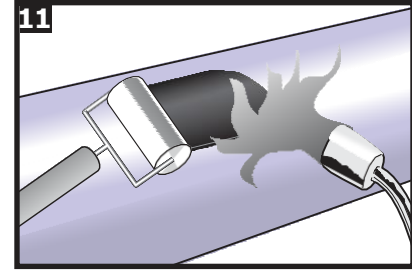


Warm the damaged area (repair zone + 50mm (2") overlap) to remove moisture and assist in adhesion.

Patch Installation

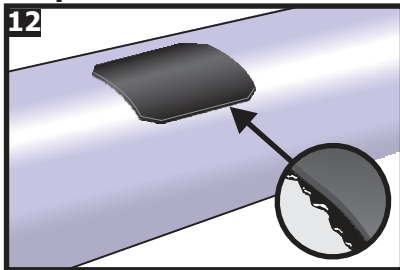


After removing the release liner from the cut patch, place the patch with the adhesive side up on a gloved hand, on top of the pipe, and heat gently. Heat until the adhesive softens and the surface becomes glossy. Also, reheat the damaged area to keep it warm.



Apply the softened adhesive side of the patch to the damaged area and press down firmly. Heat the patch with a low intensity flame, and using a roller or a gloved hand, pat down and remove wrinkles. Roll to ensure a good bond.

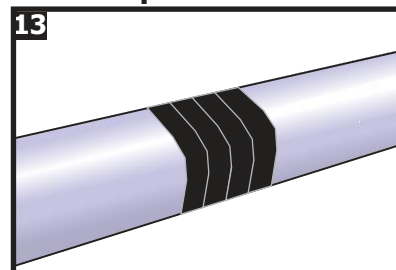
Inspection



Visually inspect the installed patch for the following:

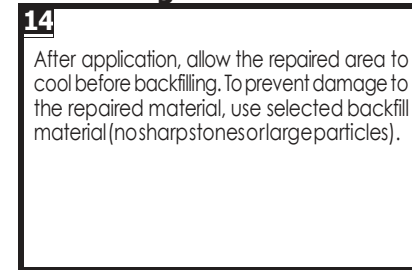
1. Patch is in full contact with the pipe coating.
2. There are no loose edges.
3. A successful patch has adhesive flow on the edges.
4. The patch has fully conformed to the coating.
5. No cracks or holes in patch backing.

Overwrap Patch



Spirally overwrap the patch with UCC PVC overwrap extending about 150mm either side of the patch.

Backfilling Guidelines



After application, allow the repaired area to cool before backfilling. To prevent damage to the repaired material, use selected backfill material (no sharp stones or large particles).



Tim Paragreen
Steel Mains Pty Ltd
 Unit 6, 152 Bluestone Circuit
 Seventeen Mile Rocks
 QLD 4073
 Australia Office: +61 449 556 933
tim.paragreen@steelmains.com