SOLAR PANEL BRACKET BONDING WITH LORD® 810S/20GB ACRYLIC ADHESIVE

Application Guide – India/SEA only

Preparation

1. Place bracket to be bonded on metal roof, and mark area where bracket will be attached (see Figure 1).
2. Grind the application area marked on the roof using a hand scrubber, grinder or sander (see Figure 2).
3. Clean application area with dry rag wipe or solvent wipe (IPA).
4. If bracket has galvanized coating or anodic coating, properly grind bracket to prevent improper bonding.

Note: It has been found that generally after galvanization process, the passivation and neutralization processes are not followed properly in India. This will result in poor bonding on that specific bracket area. Therefore substrates need to be properly grinded. In the case of anodization, it is recommended to grind anodized area of the bracket where bonding will be done. If not, adhesive testing on the anodized bracket will assist in determining if grinding is required prior to installation.

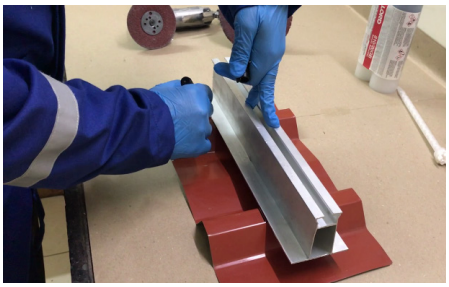

Figure 1. Mark application (bondline) area on metal roof using marker

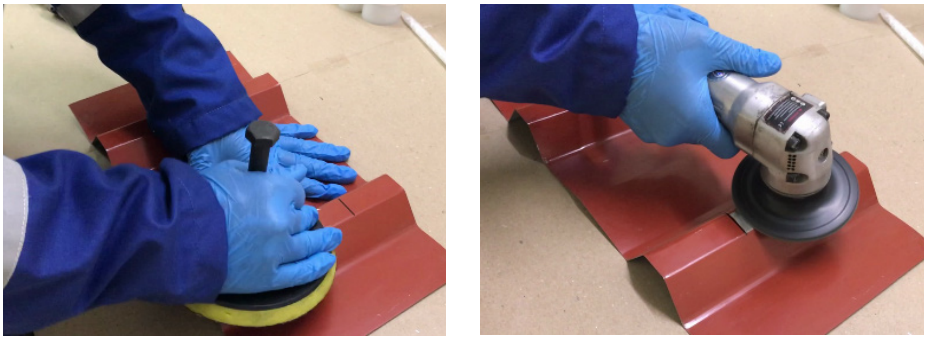

Figure 2. Grind application area only

5. Remove any caps and plugs from the adhesive cartridge, and insert the cartridge into the dispensing gun.
6. Dispense a small amount of material to level the plungers and remove any air from the cartridge (see Figure 3).

Note: Process of leveling plungers must performed on each new cartridge used.

7. Attach static mix tip to cartridge. Dispense enough adhesive on scrap material to ensure proper mix ratio and removal of air (see Figure 4). Uniform grey color indicates adhesive is correctly mixed.

Note: Procedure must be repeated whenever new mix tip is attached to cartridge.

Figure 3. Dispense material to level plungers

Figure 4. Attach mix tip and dispense material to ensure proper mix ratio

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Application

1. Apply adhesive to one substrate, either bracket or grinded area (see Figure 5).
2. Place bracket on application area of roof (see Figure 6). Apply pressure to squeeze out excess adhesive. Keep excess adhesive in place in order to seal corners of bracket.
3. Handling strength of LORD® 810/20GB adhesive develops within 10-15 minutes at ambient temperature [86-95°F (30-35°C)].
4. Solar panels can be installed one hour after bonding. Initial cure (60-70% cure strength) is achieved after one hour.
5. Full cure is achieved in 24 hours at room temperature. Full cure properties include UV resistance, temperature resistance, water resistance and other chemical properties.

Figure 5. Apply adhesive to grinded area

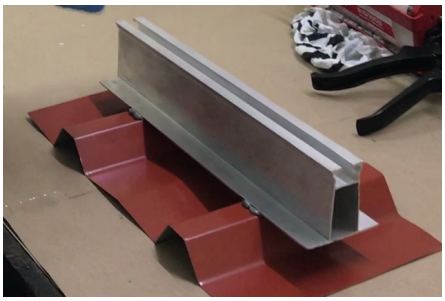

Figure 6. Place bracket on roof

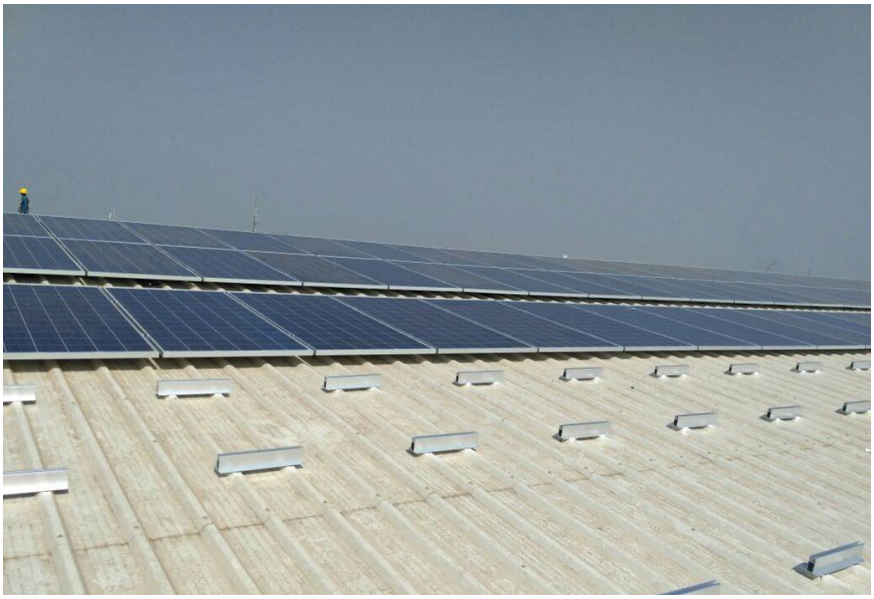

Figure 7. Actual site photograph

Useful Video Links:

The video links listed can be found on the Parker Lord YouTube channel.

- How to Bond Solar Panel Brackets to a Metal Roof
- LORD-Pak 50 ml Cartridge Manual Dispensing Gun: Instructional Video

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