E-las-tek®
CERTIFIED COOL ROOF COATINGS

Basic Information for Coating Metal Roofs

Refurbishing metal roofs with E•las•tek® elastomeric roof coatings can dramatically reduce cooling costs and extend roof life. The roof becomes sustainable as it may be recoated periodically. The cost of roof replacement is deferred indefinitely.

Some knowledge and experience with metal roofs is necessary. Corrugated conventional and standing seam roofs have different characteristics. Particular care needs to be exercised regarding where it is safe to walk and work without damaging the roof or breaking seals and flashings.

Types of Metal Roofs

- **Standing seam and batten-seam** with no exposed fasteners and 3/12 or greater pitch
- **Corrugated metal roofs with panels** ranging from wavy to box rib for slopes of 1/2 by 12 or greater
- **Custom metal roofs**

A wide range of surface treatments are used. We recommend coating over zinc, zincalume, galvalume, and factory-applied paint finishes.

Steps

1. Size up the Job.

Consider the type of roof:

- Exposed metal
- Factory-coated
- Structurally sound
- Skin fully attached
- Panels requiring replacement
- Skylight type and condition (integrated or roof mounted)
- Condition of roof-mounted equipment

Consider the condition of roof-penetrations and flashings:

- Evidence of rust and corrosion
- Fasteners missing or missing gaskets
- Seam and flashing problems
- Drainage problems
- Dried-out plastic asphalt or seam sealant
- Coating problem leaks

Can problems readily be fixed and is this a suitable roof for coating? Will roof panels, skylights, or other items need replacement to do a quality job?

Coating adhesion to bare metals such as aluminum, galvanized, galvalum, etc. is best when aged for three months or more or the surface etched.

2. Prepare the Surface.

Pressure-wash the roof using a strong cleanser such as TSP or TSP Substitute to remove dirt, oil, grease, chalk, other contaminants, and flaking coatings. TSP will also etch new bare metal surfaces making them coatable. Follow label instructions of cleaning products. Rinse thoroughly and allow drying. Kitchen vents often leave a difficult greasy film that require extra cleaning. Chemical vents may be discharging solvents or other chemicals that will harm roof coatings. Scrape and remove any loose or damaged coatings. Check these out.

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3. Make the Repairs.

Tighten or replace metal fasteners as needed. Remember, holes around fasteners elongate over time. Apply a liberal coat of *E•las•tek #103 Crack & Joint Sealant* around fastener heads. Flashings, roof penetrations, seams, and joints should be reinforced by applying a liberal coat of Crack & Joint and embedding 4" or 6" polyester roof fabric into wet sealant. Recoat with Crack & Joint. All problem areas with gaps should be treated in this manner.

Gaps over 1/8" should be closed with fasteners or pop rivets before coating. Panels, skylights, flashings, or hardware with gaps over 3/8-inch are not readily sealed and should be replaced.

Where panel seams are tightly sealed, roll-able sealant *E•las•tek #105 Super Seal* and fabric may be used in place of Crack & Joint to speed application. All roof penetrations should be sealed with Crack & Joint and reinforced with fabric extending at least 4" up the penetration and 4" out on the roof.

Remove areas of surface rust or corrosion and primer with appropriate commercial rust-preventativ primer.

Crack & Joint is most easily applied with a chip brush. Super Seal may be applied by brush or by a narrow ¾" nap or larger roller cover on a frame.

4. Coat the Roof.

When cleaning and repairs are complete and sealant has dried, E•las•tek elastomeric coating may be applied. When a basecoat or primer is to be applied, use *E•las•tek #121 High-Tek Basecoat.* When a topcoat is used as a first coat, use *E•las•tek #120 Solar Tek Extreme* or *E•las•tek #100 Solar Mastic.* Solar Tek has superior dirt pickup resistance and long-term durability.

5. Make Final Inspection.

Once the coating is dry enough to walk on, walk the roof carefully, inspecting for areas of thin coatings or imperfectly sealed seams and flashings. Correct as necessary.

Spray Notes

With rare exception, coating application will be done by airless spray. A unit designed to spray elastomeric coatings should be used. A machine with at least a 2-gallon-per-minute and 3000 lb. line pressure is recommended. A starting point for tip orifice size is .027 (.77 gallons-per-minute) for primers/basecoats and .031 (1.03 gallons-per-minute) for topcoats. Use only reversible tips and replace tips when the spray pattern becomes uneven. A tip with a fan width of 16-inches is usually preferred for spraying large areas.

All E•las•tek basecoats and topcoats are filtered for particles. Great care should be exercised to prevent the contamination of coating to be sprayed. Do not allow coating used for other purposes to be mixed in with spray coating or allow dried coating created in the container to become part of the spray-able coating. Keep product out of the sun whenever possible and seal the lids when not in use. When working from drums, the plastic liner can be tied off to eliminate any headspace above the coating during storage to eliminate drying out. Employ standard good housekeeping with spray equipment.

For roll-down application, see instructions on product labels and/or product Information sheets.

If necessary, small polyester fabric patches can be installed on the fly during coating application. Keep material and scissors handy. After each coat, carefully inspect the entire coated surface to locate and correct areas missed or coated too lightly.

Rate of Application

Apply basecoat at 100-120 sq. ft. per gallon. Apply topcoat at 100 sq. ft. per gallon. Apply coating as evenly as possible to assure an 18 to 20 dry mil thickness (or more for longer term warranties). Be sure all seams and flashings are well coated. Apply additional coating to areas that hold water or were not fully sealed during roof preparation. Apply additional coats at 90 degrees to the last coat.

Spray applications are best made by an experienced and very consistent applicator using the 50% overlap method.

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