

## **MAINTENANCE GUIDELINES:**

### **GacoRoofFoam 2733 and GacoFlex S20 Series/GacoFlex S2100 Silicone Roofing System**

#### **INSPECTION:**

Gaco Western recommends a general inspection of roof condition on a regular basis to identify possible damaged areas. Spring and fall are good times as they fit into normal maintenance cycles. A spring inspection will catch any winter damage while minor, while fall is often part of a regular schedule to clean gutters, drain water lines, etc. in preparation for winter.

GacoFlex S20 Series or GacoFlex S2100 Silicone Coatings will protect the polyurethane foam insulation for many years. The purpose for regular inspections is to check for physical damage which may have been caused by people, animals, or windblown debris and to repair such damage. During the inspection, it is necessary to check for exposed foam.

Many reported roof leaks can be traced to water back-up due to plugged drains or scuppers. Regular maintenance should include clearing drains of leaves, rocks, bottles and other debris.

Always identify a problem before deciding on any corrective action. Skylights, vents, HVAC ducts, expansion joints and flashings can sometimes be the source of the problem when leaks are reported.

#### **LIMIT CASUAL TRAFFIC:**

Polyurethane foam surfaces can be damaged by physical abuse and therefore are not suitable for recreational or casual foot traffic.

If there is a need for frequent servicing of roof mounted equipment, install GacoFlex SF2036 WalkPad which is specifically formulated for compatibility with the GacoFlex S20 Series or GacoFlex S2100 Silicone System. Require people to stay on marked walkways to equipment requiring service or repairs. If it is determined that walkways are needed after the roofing system has been installed, contact a Gaco Western Qualified Applicator or the local Gaco Western Representative for a recommended GacoFlex SF2036 WalkPad installation.

#### **TIPS FOR WORKMEN:**

Polyurethane foam can be damaged when compressed by loaded wheelbarrows, carts, or blunt objects. When moving heavy objects or placing equipment with legs or sharp corners, place a minimum of 3/8" plywood on the roof surface to protect it and disperse the weight proportionately. Dropping metal pipes or other heavy materials will puncture the polyurethane foam, necessitating repairs. Wearing sharp heeled boots or shoes can cause damage to a roof. Rubber soled shoes must be worn when walking on a polyurethane foam roof.

Fuel, grease, oil or other petroleum derivative products should not be allowed to spill onto the roof, since such compounds could damage any roof system and subsequent repairs could be difficult.

Extreme caution must be taken when using flame cutting torches in the vicinity of polyurethane foam. It is an organic material and will burn if extreme heat or flame is applied to it. Immediate access to a fire extinguisher is mandatory any time cutting, soldering or welding is being done on a polyurethane foam roof.

Open flame, welding, smoking or other ignition sources are not allowed in a building, overhead, or near a building where polyurethane foam or a coating is being installed, or has been recently applied, nor should they be allowed downwind of such an installation.

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### SPECIAL WEATHER CONSIDERATIONS:

**Summer:** GacoFlex S2000/S2100 White Silicone Coatings are highly reflective white coatings and dark glasses are recommended to protect the eyes.

**Winter:** In areas where heavy snowfall is experienced, it may be necessary to remove the snow from the roofs to protect it from a snow overload. Leave a thin layer of snow on a polyurethane foam roof. Do not remove the snow down to the roof surface, since the sharp edges of a snow shovel or snow blower can cause roof damage. A rubber edged bladed shovel or snow blower should be used for snow removal from a polyurethane foam roof.

**Fall:** Before winter weather arrives, check all scuppers, gutters and drains to make sure that they are clear of leaves, debris, mud, etc. A clogged drain could result in water backing up to the point of infiltrating past flashings or causing damage from weight loading.

### CUTTING THROUGH A POLYURETHANE FOAM ROOF FOR THE INSTALLATION OF A VENT, PIPE OR OTHER PENETRATION:

Measure and lay out the location of the proposed hole, creating approximately a 1/2" gap all around. Use a sharp knife to cut around the perimeter of the intended hole. Make sure to cut completely through the polyurethane foam to the roof deck. Remove the polyurethane foam, taking care not to disturb the adjacent roof area. Continue to cut through the structure as required by the proposed construction. Install the item and fill the open gap between it and the existing foam with an expanding polyurethane foam sealant. Fill the opening about one third the height of the adjacent surface, since the polyurethane foam sealant will expand approximately thirty percent its original volume. Allow the polyurethane foam sealant to cure for several hours; then trim it as necessary, using a sharp knife. Apply the GacoFlex S20 Series or GacoFlex S2100 Silicone Coating following Gaco Western's recoat instructions.

Do NOT open the roof without having the proper materials on hand for the repairs.

### TEARS AND PUNCTURES:

Tears and punctures in a polyurethane foam roofing system are often caused by people who do not follow the recommended procedures for protecting the roof.

Tears and punctures are repaired as follows:

1. Remove the loose coating and polyurethane foam insulation from the damaged area and properly dispose of the debris.
2. Use GacoFlashFoam Spray-Applied 3 lb. Polyurethane Foam Flashing to fill small holes or slight depressions in the polyurethane foam insulation. Maintenance personnel can easily repair most damaged areas by simply filling the hole or crack with GacoFlashFoam and recoating the area. Apply 22 mils of GacoFlex S20 Series or GacoFlex S2100 Silicone Coating. Allow GacoFlashFoam to dry for approximately one hour before applying the protective coating.

### EXPOSED AND WEATHERED FOAM:

Foam which has been exposed to sunlight and weathering will become powdery and dark in color. It is always better to repair the roof before it deteriorates to that point.

Any exposed and weathered polyurethane foam surface must be cleaned of its weak and powdery surface before recoating. Sweep the exposed polyurethane foam with a stiff bristle broom and blow off or vacuum up the dust. Prime the prepared areas with a coat of GacoFlex E5320 2-Part Epoxy Primer/Filler at an application rate of 250 square feet per gallon. Allow the primer to dry to the touch. Then apply 22 mils of GacoFlex S20 Series or GacoFlex S2100 Silicone.

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**BLISTERS:**

Polyurethane foam blisters are caused when water trapped in the roof system turns to vapor, creating enough pressure to delaminate the polyurethane foam from the substrate, or delaminate the coating from the polyurethane foam. Re-roofing over one that is improperly vented or one which has existing wet insulation is the primary cause of blisters.

Blisters are found in all types of roofing systems including BUR, modified bitumen, single-ply, or those that are liquid applied. They are always a concern because they are susceptible to damage from foot traffic. Use an aerosol can of paint to mark blisters to identify them so they can be avoided until repaired.

Blisters in a polyurethane foam roof should be noted and brought to the attention of the spray foam roofing contractor for the appropriate repair. Neither building owners nor their maintenance crew should attempt to repair blisters in a polyurethane foam roof.

**REPAIR OF COATING BLISTERS:**

Blisters in the coating can be repaired as follows:

1. Use a sharp knife to cut around the coating blister. Use care not to damage the polyurethane foam while removing the coating to a clean, dry surface.
2. Apply 22 mils of GacoFlex S20 Series or GacoFlex S2100 Silicone Coating, allowing adequate time to dry between coats.

**MATERIALS FOR REPAIR:**

Materials for minor repairs should be kept on the premises for emergencies. The following is a list of such items:

12 tubes (one case) – 100% silicone sealant

5 gallons – GacoFlex S20 Series or GacoFlex S2100 Silicone Coating

GacoFlashFoam Kit

1 can – Spray paint to mark areas requiring repair

*GacoFlex Products can be purchased from authorized Gaco Western Dealers.*

**CAUTION:** Asphalt and coal tar roofing cement are not compatible with GacoFlex Coatings. Repairs made with either material will seriously impair the ability to make the proper repairs and will compromise the long term performance of the polyurethane foam roof system.

**TOOLS FOR REPAIR:** There are no special tools required.

The following is a list of those tools that should be readily available:

Caulking gun	Butcher knife (to cut and trim the foam)
Paint roller frame	Putty knife
Paint roller covers	Disposable 2" paint brushes
Razor knife	Rubber gloves

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**CLEANING:**

1. Remove heavy deposits of dirt, leaves and other debris.
2. Wet the surface with clean water.
3. Apply GacoWash with a diluted solution of 1 part GacoWash to 9 parts water. Apply the solution in an arc pattern with a Hudson type garden sprayer or a chemical pick-up attachment on a pressure washer.
4. Allow the cleaning solution to soak for 10-15 minutes. *Note: Do not allow it to dry!*
5. Lightly scrub the areas of heavy dirt build-up with a soft bristle broom \* \*\*
6. Thoroughly rinse the cleaning solution from the roof surface with a hose or pressure washer (< 1,500 psi).

Caution must be taken as the wet coating may be very slippery!

Notes: \* A stiff bristle broom may cause mechanical damage to the coating system.

\*\* Any organic growth (mildew, algae, etc.), that is not removed by the cleaning solution and light scrubbing may be treated with environmentally friendly chemicals. Follow the chemical manufacturer's instructions.

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