

Airless Silicone Roof-Restoration Coating Application JHA

Worked instructional example

Work and worksite

Trained applicators will spray white GacoFlex S4200 renewal coating over prepared accepted weathered EPDM. Repairs, adhesion and required priming are separately accepted. The evaluated GH933 16U281 route uses a rated Silver Plus HP 273334 gun and compatible hose/tip system. Protected application ends with cleaning and cure handover. This fictional example contains planned controls, without inspection findings or authorization.

- The actual renewal specification accepts the sound existing roof, adhesion evidence, completed preparation/repairs, primer disposition and required coating coverage/cure criteria. Current S42 PDS Rev 07/2026 and spray guide GW-6-5 Rev 03/2021 govern this route; spraying does not repair an unaccepted substrate.
- Actual current S4200 and selected GacoFlex T5135 cleaner SDS must be supplied and accepted before chemical use. The manufacturer's current SDS portal was inaccessible during research; no current SDS review, exposure limit or product-specific first-aid determination is claimed.
- Roof maintenance 238160-35 and low-slope roofing 238160-28 are partial connections: single-component airless renewal film only. Membrane installation, two-part insulation adhesive, reinforced penetration resin, substrate removal/repair, dilution, pump repair and occupied-area exposure without accepted controls are excluded.

Questions before work

- Who accepts the sound prepared roof, actual adhesion/primer evidence and coating specification before spraying begins?
- Which compatible pump, rated gun/hoses/tip and actual chemical SDS govern operation, exposure controls, cleaning and pressure relief?
- How are occupants, ventilation intakes, adjacent trades and the cure area protected from mist, cleaner vapor and premature access?

Task Hazard Control

1 Accept the roof renewal and chemical/equipment route

Hazard: An unsound substrate, incompatible spray system or unavailable chemical information can cause roof failure, high-pressure release and uncontrolled worker or occupant exposure.

Control: Roof lead accepts documented substrate condition, adhesion/primer disposition and the actual renewal specification. Match S4200, GH933 16U281, rated HP 273334 gun and complete compatible hose/tip route to current instructions. Obtain actual current coating and cleaner SDS and the task exposure assessment before opening materials. Resolve conflicting editions or missing criteria; this example supplies no chemical-use release.

Verification: Lead records substrate, paired equipment and supplied-SDS acceptance.

Reasoning: The coating and delivery system need separate acceptance.

2 Protect work positions and the affected air path

Hazard: Mist, cleaner vapor, gas-engine exhaust or uncontrolled foot access can reach workers, occupants and ventilation intakes outside the spray area.

Control: Release roof loads, access, independent fall protection and rescue. Locate the gas-powered rig outdoors at its accepted ground station, clear of occupied intakes and exhaust recirculation. Coordinate ventilation shutdown/protection with its owner, assess drift and separate the entire affected area. Provide assessed chemical/respiratory protection and washing; hold use when exposure or ignition controls are unresolved.

Verification: Assigned leads verify access, airflow and exposure controls.

Reasoning: Outdoor spraying can still expose building occupants.

3 Inspect and prepare the grounded pressure system

Hazard: An underrated connection, damaged hose or missing guard can inject fluid, release a hose or generate an ignition source during startup.

Control: With the system isolated and pressure relieved, complete required pump/gun/hose checks and verify every component's rating and compatibility. Route and retain the approved hose against abrasion, movement and trip exposure. Establish required grounding, sound connections, trigger lock and both tip/trigger guards. Maintain pump guarding; defects are referred for authorized service rather than concealed by pressure adjustment.

Verification: Operator records ratings, condition, grounding and protective features.

Reasoning: Every pressure-path component must be suitable.

Complete the work and hand over

4 Prime and establish the accepted spray pattern

Hazard: Unexpected pressure, an uncontrolled leak or a poor pattern can injure workers and create overspray or a film that misses required coverage.

Control: Follow the actual GH933 priming/startup method and compatible material instructions from protected positions. Keep the discharge controlled and observe connections without hands, gloves or rags searching for leaks. Fit and use the accepted tip/guard route after prescribed pressure relief. Establish a controlled trial pattern and actual wet-film/coverage checks; use only accepted adjustments within the component limits.

Verification: Applicator records safe startup and accepted trial findings.

Reasoning: A trial checks delivery under today's conditions.

5 Apply the film and hold changed conditions

Hazard: Recoil, hose movement, mist drift or changing surface conditions can expose people and leave thin spots, runs or uncured coating.

Control: Spray from stable protected positions under the accepted technique, sequence and weather/substrate criteria. Monitor film coverage with the specified safe check method and keep hose movement controlled. Stop for drift, exposure-control loss, leakage or unacceptable pattern. Engage the trigger lock when not spraying; follow pressure relief before checking, changing or removing tips. Suspected injection requires immediate emergency medical response.

Verification: Lead records coverage/conditions; operator verifies safely controlled interventions.

Reasoning: Film quality and safe pressure control must continue together.

6 Relieve pressure clean and transfer cure restrictions

Hazard: Trapped pressure, incompatible cleaning fluid or premature traffic can injure the crew and damage a coating that only looks dry.

Control: Follow the actual pump/gun pressure-relief and isolation sequence, then use the accepted Gaco T5135 cleaning method with its supplied SDS, grounding and ignition controls. Do not substitute water or reclaimed solvent. Collect controlled waste and secure equipment. Keep access and affected ventilation restrictions through actual accepted cure conditions; transfer defects, coverage evidence and required reinspection before release.

Verification: Receiving lead accepts closeout, findings and cure restrictions.

Reasoning: Cleaning and accepted cure complete the renewal cycle.

Pause and reassess

- Substrate/adhesion/primer evidence, current SDS, evaluated equipment pairing or complete-system compatibility is missing or changed.
- Drift, weather, occupied-space airflow, ignition/exposure controls, independent fall protection or safe hose handling cannot be maintained.
- Leakage, static shock, failed guard/lock, abnormal pattern or unacceptable coverage requires controlled shutdown and the applicable technical disposition.

Improve the controls

Needs improvement: The coating is solvent-free, so outdoor spraying needs no exposure review.

More useful: Lead accepts actual coating and cleaner SDS plus the spray-mist, ventilation and occupied-area controls before chemical use; the inaccessible SDS is not assumed reviewed.

Needs improvement: A clogged tip can be wiped clear while the pump is running.

More useful: Operator uses the actual guarded fault procedure and prescribed pressure relief before checking or removing a tip; no body part or rag searches for leaks.

Decisions that change the analysis

What if current SDS or a compatible pressure component is unavailable?

Hold chemical use or the affected setup. Obtain the actual coating and cleaner SDS and resolve component suitability with the responsible suppliers. The current PDS and evaluated pump list do not supply missing exposure or first-aid information, and a lower-rated gun cannot be protected by an informal promise to reduce pressure. Do not substitute a chemical or assembly to keep production moving.

What must the crew record for actual use?

Record roof/preparation and adhesion/primer acceptance, coating batch, actual current SDS, exposure/airflow controls, paired equipment/ratings and component checks. Add grounding, trial, weather/coverage, pressure interventions, cleaning/waste and cure restrictions. Identify actual checkers and dispositions; this example supplies no chemical-use or reopening release.

Training needs

- Model-specific GH933 and rated Silver Plus HP instruction, including grounded system setup, guards/trigger lock, safe priming, prescribed pressure relief and urgent response to suspected fluid injection.
- Coating-specific applicator instruction using the actual supplied SDS, exposure assessment, overspray/ventilation arrangements, accepted coverage checks and cure restrictions, with no dilution or improvised substrate repair.

Confirm applicable qualifications and actual training evidence for the people assigned. Related toolbox talks support discussion; they do not establish competence.

References and adaptation

GacoFlex S42 Product Data Sheet, Rev 07/2026, product and application limits

https://gaco.com/wp-content/uploads/2024/04/PDS_-_GACOFLEX_S42_SERIES_-_HIGH_ADHESION_100_SILICONE_ROOF_COATING.pdf

Gaco GW-6-5 silicone coating spray guide, Rev 03/2021; evaluated GH933 route

<https://gaco.com/wp-content/uploads/2023/04/GW-6-5-GACOFLEX%E2%84%A2-SILICONE-COATING-SPRAY-GUIDE.pdf>

Graco 332156E, GH-series Big Rig operation, includes GH933 16U281

https://www.graco.com/content/dam/graco/tech_documents/manuals/332/332156/332156EN-E.pdf

Graco 311254P, Silver Plus HP gun instructions; includes rated 273334

https://www.graco.com/content/dam/graco/tech_documents/manuals/311/311254/311254EN-P.pdf

Gaco current SDS access notice; actual coating/cleaner SDS must be supplied

<https://gaco.com/wp-content/uploads/2024/04/Gaco-Safety-Data-Sheet-SDS-Alternate-Access.docx.pdf>

OSHA 1926.59, hazard communication requirements for actual materials

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.59>

References reviewed October 13, 2026. Use actual equipment and product instructions, project design and site requirements. This original draft supplies no fabricated inspection, signature or approval.