

SPECIFICATION & APPLICATION GUIDE

GacoFlex S42

Flat Roof Application Guide

Felt, Asphalt, Torch-On, Single-Ply & EPDM Substrates. A single-coat liquid silicone waterproofing system delivering UV-stable, ponding-resistant performance and warranty-grade life-extension for refurbishment of existing flat roofs.

SOLIDS

96.5%

SYSTEM

Single-
coat

WARRANTY

10 / 20 yr

SUBSTRATES

Felt · Asphalt · Single-Ply ·
EPDM

EDITION

2026
Edition

SECTION ONE

1

Purpose & Scope

This guide details the application of **GacoFlex S42** as a liquid-applied waterproofing system over **aged bitumen-based** (felt, BUR, asphalt, torch-on), single-ply and EPDM flat roofs. The system delivers a high-performance, UV-stable, ponding-resistant waterproof membrane for refurbishment and life-extension of existing roofing systems. GacoFlex S42 is a **single-coat system** — film thickness alone determines whether the roof qualifies for the 10-year or 20-year warranty.

STEP 1 · CLEAN

Sollac Hipolava

Biocidal clean — kills moss, algae & lichen; removes dirt, oxidation & biological growth.

STEP 2 · DETAIL

SF42 SeamSeal

Bridge seams, penetrations & upstands.

STEP 3 · REPAIR

GacoPatch

Cracks > 6 mm & deep voids (as required).

STEP 4 · PRIME

A4271 Bleed Trap

Recommended on aged felt & bitumen.

STEP 5 · COAT

GacoFlex S42

Single coat — 0.50 mm / 20 mil (10-yr) or 0.86 mm / 34 mil (20-yr).

SECTION TWO

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The GacoFlex S42 Roof System — Five Products

A complete warranty-compliant installation is built from five Gaco silicone-chemistry products. Each performs a distinct role — **clean, detail, repair, prime, coat**. Used together they form a fully bonded, monolithic, single-coat silicone membrane.



STEP 1 · CLEANER

Sollac Hipolava

Biocidal dilute-in-water cleaner

Removes dirt, biological growth, oxidation & loose surface contaminants from aged bitumen, asphalt, metal & concrete.

DILUTE STATUS

20:1

REQUIRED



STEP 2 · DETAILING

SF42 SeamSeal

Fibre-reinforced — no fabric

High-build silicone mastic with embedded fibres. Detail at **seams, upstands, parapets, penetrations & fixings**.

CURE STATUS

2-4 hr

MANDATORY



STEP 3 · REPAIR

GacoPatch

Trowel-grade silicone patch

Single-component fast-set silicone for cracks > 6 mm, voids & punctures. Bonds without reinforcement fabric.

CURE STATUS

4-8 hr

AS REQUIRED



STEP 4 · PRIMER

A4271 Bleed Trap

Barrier & adhesion promoter

Blocks volatile compounds & plasticisers from aged bitumen / felt and promotes silicone adhesion. **Recommended, not mandatory** — specify on aged or hot-exposed substrates as a belt-and-braces measure.

RATE CURE STATUS

0.5 L/m²

2-6 hr

RECOMMENDED



STEP 5 · THE MEMBRANE

GacoFlex S42

96.5% solids silicone topcoat

The single-coat waterproof silicone membrane. Applied by airless spray. **Single-coat system** — total film thickness alone determines warranty: 0.50 mm (20 mil) DFT for 10 yr, 0.86 mm (34 mil) DFT for 20 yr.

SOLIDS COATS STATUS

96.5%

Single

REQUIRED

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Why aged substrates need a primer barrier

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Live pricing & materials calculator at duratite.co.uk/shop

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Hipolava biocidal clean + SF42 SeamSeal at all weak points

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GacoPatch for defects + A4271 application

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Single-coat GacoFlex S42 + thickness verification

SECTION THREE

3 Understanding Bleed-Through & the Function of A4271

3.1 What is bleed-through?

Bleed-through is the upward migration of oils, tars or plasticisers from aged roofing membranes into a newly applied coating.

Symptoms include:

- Discolouration — yellow / brown staining
- Compromised adhesion at the substrate interface
- Blistering & long-term membrane instability

Common with built-up roofing (BUR), torch-on bitumen, and aged membranes containing residual plasticisers. Accelerated by UV, solar gain & high temperatures which mobilise hydrocarbons.



A4271 is recommended, not mandatory. Specify it on felt, aged bitumen, asphalt, torch-on or aged EPDM substrates — particularly hot-exposed roofs or any surface showing breakdown. On factory-fresh substrates the primer can be omitted, subject to a substrate adhesion test.



Fig 1. Oil & tar bleed-through where no Bleed Trap primer was used over aged asphalt — extreme reaction in hot weather. A clear case for specifying A4271 as a belt-and-braces measure.

3.2 Function of A4271 Bleed Trap

- **Barrier:** blocks volatile compounds & plasticisers
- **Adhesion promoter:** bonds silicone to aged substrate

A4271 is not a waterproofing layer — when used, it sits strictly beneath GacoFlex S42 within the same working sequence.

SYSTEM BUILD-UP · CROSS SECTION

	GacoFlex S42 Silicone Topcoat 0.50 mm / 20 mil (10-yr) · 0.86 mm / 34 mil (20-yr) DFT — single coat, applied by airless spray over the full roof area	REQUIRED
	SF42 SeamSeal — at details only Seams, upstands, parapets, penetrations, fixings — fibre-reinforced, no fabric required	MANDATORY
	A4271 Bleed Trap Primer Bleed-trap barrier & adhesion promoter — apply across the full substrate at 0.5 L/m ²	RECOMMENDED
	Existing Substrate Cleaned aged felt / bitumen / asphalt / torch-on / single-ply / EPDM — repaired with GacoPatch where required	IN SITU

WITHOUT A4271 — RISK

- Plasticisers & oils migrate into the silicone
- Yellow / brown discolouration of topcoat
- Adhesion failure on hot-exposed areas
- Warranty position weakened on aged substrates

WITH A4271 — MITIGATION

- Sealed barrier — no plasticiser migration
- Topcoat colour stable through the warranty
- Stable bond at 60°C+ surface temperatures
- Belt-and-braces protection of warranty position

SECTION FOUR

4 Surface Preparation

4.1 General requirements

All substrates must be cleaned to remove dirt, organic growth, oxidation, oil, grease & contaminants prior to priming or coating. Mechanical preparation should be employed where appropriate, avoiding damage to the substrate.

4.2 Biocidal cleaning with Sollac Hipolava

- Dilute Hipolava 20:1 (water : concentrate)
- Distribute via low-pressure spray or soft broom
- Allow 10–15 minutes dwell time
- Agitate & thoroughly rinse with clean water
- Allow surface to dry fully before proceeding

Caution: Do not power-wash if the roof is structurally fragile or contains asbestos cement elements.



STEP 1 · HIPOLAVA BIOCIDAL CLEAN

Fig 2. Biocidal cleaner applied diluted 20:1 and agitated to lift contaminants prior to detailing — the foundation of every warranty-compliant GacoFlex S42 installation.

SECTION FIVE

5 Detailing — SF42 SeamSeal

Prior to the final GacoFlex S42 coat, all detail work must be completed using **SF42 SeamSeal** — a fibre-reinforced silicone mastic engineered to bridge weak areas with added tensile strength. **SF42 is fibre-reinforced** — its embedded fibres bridge minor gaps and resist movement stresses without any additional fabric or scrim.

5.1 Areas to detail

- Seams & overlaps in felt / bitumen / single-ply sheets
- Roof penetrations — turrets, skylights, pipes, vents
- Parapet junctions & upstands
- Fixings, bolt heads, surface-mounted hardware

5.2 Application procedure

- Apply by brush or trowel
- Min coverage width: 25 mm beyond joint each side
- Uniform film build with full coverage
- Cure 2–4 hours before applying GacoFlex S42



BOURNEMOUTH · UK

Fig 3. SF42 SeamSeal applied to seams, upstands & penetrations on a Duratite Bournemouth installation prior to the GacoFlex S42 top coat.

5.3 Common detail areas — at a glance

PENETRATIONS

Pipes · Vents · Skylights

Bridge a minimum 25 mm onto the substrate & up the penetration with SF42.

UPSTANDS

Parapets · Walls · Kerbs

SF42 detail bead at the kicker, lapped 100 mm onto vertical & horizontal faces.

FIXINGS

Bolts · Screws · Brackets

Encapsulate every fixing head — feathered SF42 patch covering at least 25 mm beyond.

SEAMS

Laps · Joints · Transitions

Run SF42 along every lap & field-applied joint — no fabric or scrim required.

SECTION SIX

6

Larger Defects — GacoPatch

GacoPatch is a single-component, fast-setting silicone repair compound for severe defects where SF42 SeamSeal does not provide sufficient build or flexibility:

- Larger cracks (wider than 6 mm)
- Deep voids & punctures
- Joint gaps with pronounced movement
- Damp-condition emergency repairs

High viscosity, strong adhesion to EPDM, bitumen, metal and concrete. Applied without reinforcement fabric. Long-term flexibility, UV stable, accommodates substrate movement.

6.1 Application procedure

- Clean & dry the repair area thoroughly
- Apply by trowel or gloved hand directly into the defect
- Spread evenly — smooth, thick patch with feathered edges
- Build up to fully bridge the defect without sagging
- Cure 4–8 hours before applying GacoFlex S42 over the repair

SECTION SEVEN

7

Priming with A4271 Bleed Trap

- ★ **Recommended, not mandatory.** A4271 Bleed Trap is strongly recommended on aged felt, bitumen, asphalt, torch-on and aged EPDM substrates — particularly on hot-exposed roofs or where surface breakdown is visible. It is also prudent on newer asphalt roofs as a belt-and-braces measure.

7.1 Application conditions

- Apply only to clean, dry & stable substrates
- Ambient & substrate temperature 5°C – 40°C
- Do not apply if rain is expected within 4 hours

7.2 Application procedure

- Stir thoroughly before application
- Apply by brush, roller or airless sprayer
- Recommended rate: **0.5 L/m²** per coat (porosity dependent)
- Cure 2–6 hours until dry & tack-free
- Do not leave A4271 exposed to elements beyond 24 hours before top-coating

7.3 Substrate Decision Matrix

SUBSTRATE	BLEED RISK	ADHESION RISK	A4271 RECOMMENDATION
Aged BUR / torch-on bitumen	High	High	Strongly recommended
Aged / weathered asphalt	High	Medium	Strongly recommended
Hot-exposed roofs (any aged substrate)	Elevated	Elevated	Strongly recommended
Aged EPDM — chalking / plasticised	High	Medium	Strongly recommended
Single-ply (TPO / PVC)	Low	High	Adhesion test mandatory — some membranes need a specialist primer; call before ordering
GRP / asbestos / metal / plasticcoat	None	Low	Not required

- i **Adhesion test:** on factory-fresh or unfamiliar substrates the primer can be omitted, but only after a successful pull-off / rub-test confirming silicone bonds directly to the cleaned substrate.

SECTION EIGHT

8 GacoFlex S42 Silicone Application — A Single-Coat System

i GacoFlex S42 is applied as a single coat. Total dry film thickness determines warranty period — there is no second coat. The same silicone is laid down in one application, with WFT verified throughout to hit the target build for the chosen warranty.

10-yr

Standard Warranty

FILM THICKNESS

0.50 mm · 20 mil DFT

WFT COVERAGE COATS
~0.51 mm 30–33 m²/pail Single

20-yr

Extended Warranty

FILM THICKNESS

0.86 mm · 34 mil DFT

WFT COVERAGE COATS
~0.91 mm 19–21 m²/pail Single

Due to GacoFlex S42's 96.5% solids content, WFT and DFT are almost identical. Use calibrated **WFT comb gauges** to verify thickness every 20 m² as the coat is laid down — under-build is corrected immediately, before the silicone tacks.

8.1 Application method

- Mix thoroughly before spraying
- Apply with Graco X70 70:1 airless sprayer (or equivalent)
- 521 / 631 tip for narrow detail; 725 tip for open areas
- Remove inline gun filters to prevent clogging
- Apply evenly — avoid excessive build-up & thin spots
- Avoid wind >10 mph or high humidity

8.2 Drying & recoat times

- Touch dry: 2–4 hours
- Rain resistance: minimum 2 hours @ 20°C
- Recoat / re-spray window (if needed): 6–12 hours
- Full cure: 24–48 hours (ambient dependent)

SECTION NINE

9 Quality Control

A QA process must document ambient conditions, substrate temperature, WFT every 20 m², primer/seam confirmation, batch numbers & expiry, photographic detailing records, and sign-off of penetrations before the silicone is laid. **Areas failing minimum thickness must be corrected immediately, in-coat.** After 20 years the system is recoated with GacoFlex S42 alone — no re-detailing or re-priming required.

SECTION TEN

10 Materials & Where to Buy

Every product in this guide is supplied direct by Duratite Building Products — **live pricing, stock and next-day delivery at duratite.co.uk/shop**. Use the on-page materials calculator to convert your roof's plan area, pitch and profile into exact pail counts for the 10-year or 20-year build, or call **01208 832 602** and we'll spec the job with you — free, before you order.

PRODUCT	ROLE ON A FLAT ROOF	COVERAGE GUIDE
Sollac Hipolava	Biocidal clean — 20:1 dilution, 10–15 min dwell, rinse, dry	approx. 100 m ² per drum
GacoPatch	Fill holes, cracked laps & defects; detail repairs — bonds even to damp surfaces	detail use — 1 tub minimum
A4271 Bleed Trap	Locks in asphalt oils that stain silicone; required for warranted SBS work	approx. 46 m ² per pail
SF42 SeamSeal	Fibre-reinforced seam & detail grade — no fabric needed	quantity from lap metres
GacoFlex S42	The topcoat — single coat at 0.50 mm / 20 mil (10-yr) or 0.86 mm / 34 mil (20-yr)	33 m ² /pail · 21 m ² /pail

Bleed-trap primer: recommended on all aged felt / bitumen (not mandatory).

Matting: only at high-risk junctions — SF42 fibres replace fabric.

Coverage: 33 m²/pail (10-yr) · 21 m²/pail (20-yr).

Pail: 18.9 L · **Rain window:** 2 hr @ 20°C.

SECTION ELEVEN

11 Health, Safety, Warranty & Materials

11.1 H&S Controls

- Fall protection in place for all roof works
- Compliant scaffolding, edge protection or mobile towers
- Do not apply in high wind or rain forecast within 2 hours
- Full-face respiratory protection in confined / poorly ventilated areas
- Mechanical ventilation when spraying in confined spaces
- Cordon off the area below to prevent overspray injuries
- Maintain clear emergency egress routes throughout
- PPE: nitrile gloves, safety glasses, suitable footwear
- Material storage: 5–35°C, away from direct sunlight
- Eye contact: flush with clean water for 15 minutes & seek medical advice

11.2 Warranty compliance

REQUIREMENT	10-YR	20-YR
Hipolava biocidal clean	Required	Required
SF42 SeamSeal	Mandatory	Mandatory
A4271 Bleed Trap	Recommended	Recommended
GacoFlex S42 DFT	0.50 mm (20 mil)	0.86 mm (34 mil)
QA records	Required	Required

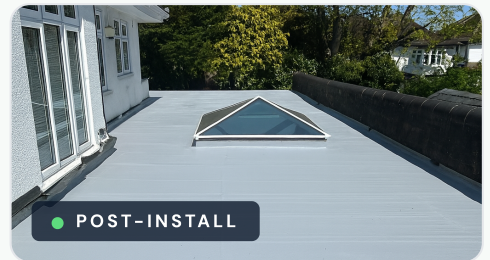
11.3 Duratite UK Projects — GacoFlex S42 in service



TORQUAY



BOURNEMOUTH



POST-INSTALL

Fig 4. Recent UK installations of the GacoFlex S42 system on the South Coast — seamless, monolithic, single-coat silicone membrane covering existing flat roofs.

11.4 Why specify the GacoFlex S42 system?

96.5%

SOLIDS CONTENT

Almost no shrinkage on cure — DFT and WFT are functionally identical.

1 coat

SINGLE APPLICATION

No second coat. Faster installation & lower labour cost than acrylic or PU systems.

20 yr

MANUFACTURER WARRANTY

Recoatable indefinitely with GacoFlex S42 alone — no re-detailing or re-priming.

2 hr

RAIN RESISTANCE

Touch-dry to rain-resistant in 2 hours @ 20°C — minimises weather-related delays.

TECHNICAL SUPPORT

Need a project-specific specification or a site visit?

Our technical team will produce a fully detailed system specification, condensation analysis & warranty documentation tailored to your roof.

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