SPECIALIZED
COATING SYSTEMS

WATERPROOFING

Flat Concrete Waterproofing Systems

Liquid membranes, cool roofs, green roofs, under-tile, trafficable and torch-on systems for concrete flat roofs, new and old, from primer to topcoat.





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Primers and Liquid Membranes

Product	What it is	Colours	Pack	VS %	Typical thickness per coat (µm)	Spreading rate (m²/L)
PRIMERS						
Epoxy WB Concrete Primer Clear	Two-component, water-based epoxy primer that penetrates, seals and primes concrete	Clear	5 L	32	**35–50**	6.3–9.1
Deep Penetrating Primer WB	One-component waterborne acrylic primer that binds dense, porous or dusty mineral surfaces	Clear	5, 20 and 200 L	18	**18–20**	4.6 on concrete
All Surface Primer & Sealer SB	Solvent-based sealer for porous and bituminous surfaces	Transparent blue	5 and 20 L	20	**25**	3.7–8.4 by surface
Bitumen Primer SB	Solvent-based black bitumen primer under torch-on membranes	Black	5 and 20 L	43	**30–50**	8.6–14.3
SpecFloor MMA Concrete Primer MV	MMA primer under the PUMMA pedestrian trafficable roof system	–	▢	–	**500–800**	2.0 m²/kg at 500 µm
LIQUID MEMBRANES						
LEAKSEAL® Polyurethane 250 FR	Water-based, fire-retardant hybrid polyurethane membrane; with the fleece, a seamless bonded roof membrane	White · Cool Grey · Cool Ivory	5 and 20 L	52	**250–500**	1.0 at 500 µm
LEAKSEAL® UMBRELLA Plastic	Water-based pure acrylic membrane: tough, elastic, low sheen	White · *RAL Classic colours on request*	5 and 20 L	50	**300–400**	1.2–1.6
SpecShield Solar	Water-based pure acrylic that cross-links under UV: the solar-reflective cool-roof membrane	White · RAL 7045 Telegrey 1 · RAL 1014 Ivory	5 and 20 L	52	**260**	2.0
LEAKSEAL® CemLastic	Two-component, polymer-modified flexible cementitious waterproofing	Grey	30 kg kit	73.1	**1–2 mm**	2.1 kg/m² per mm
PlastiSeal PUMMA EWM SL	Self-levelling PUMMA membrane	–	▢	–	**1 mm minimum**	1.15 kg/m² per mm
PlastiSeal PUMMA WC HD	PUMMA wearing course, broadcast with quartz	–	▢	–	**500 minimum**	1.45 kg/m² per mm
PlastiSeal PUMMA Topcoat	PUMMA topcoat in colour	*Colours ▢*	▢	–	**400–800**	2.5 m²/kg at 400 µm

Detailing, Torch-On and Reflective Coatings

Product	What it is	Colours	Pack	VS %	Typical thickness per coat (µm)	Spreading rate (m²/L)
DETAILING AND REPAIR						
LEAKSEAL® FibreSeal BLUE Waterproofing	Fibre-reinforced hybrid polyurethane for details, cracks and penetrations	RAL 230 70 30 Fitness Blue	5 and 20 L	53	**210–425**	1.33 at 400 µm
LEAKSEAL® FibreSeal BLUE CAULK	Brushable fibre-reinforced sealant for gaps of 2 to 6 mm	Blue	5 and 20 L	53	**2–6 mm**	–
LEAKSEAL® BituLastic	Water-based rubberised bitumen emulsion for repairs and laps on old bitumen	Black	5 and 20 L	51	**Up to 1 mm**	1.0 at 500 µm
SurfaceReady Cement Mortar Flexi Kit	Flexible repair mortar for defects and coves, laid to the depth of the repair	–	20 kg powder and 10 kg modifier data sheet says 25 kg	–	**–**	–
TORCH-ON MEMBRANES						
LEAKSEAL® Torch-On Insufort APP 3mm PES140/R Sand Finish	APP polymer-modified bitumen membrane on a polyester carrier, sand finish: the underlayer	–	1 m × 10 m roll	–	**3 mm sheet**	–
LEAKSEAL® Torch-On Insufort APP 4mm PES140/R Sand Finish	The same membrane at 4 mm: cap sheet, or a single new layer over an old roof	–	1 m × 10 m roll	–	**4 mm sheet**	–
LEAKSEAL® Torch-On Insufort APP 4.5kg PES140/R Mineral Finish	Cap sheet with a mineral (slate) finish, 4.5 kg/m², no topcoat needed	–	1 m × 10 m roll	–	**–**	–
REFLECTIVE AND RESTORATION COATINGS						
AluShield Reflective Bitumen Aluminium Paint SB	Solvent-based bitumen aluminium paint over tar and bitumen surfaces	Brilliant Aluminium	5, 20 and 200 L	34	**20**	17
AluShield WB Reflective Paint Aluminium	Water-based acrylic aluminium paint in one coat	Brilliant Aluminium	5 and 20 L	40	**40**	10
AluShield Fibred Aluminium Flake Roof Coating	Heavy-build, fibre-reinforced elastomeric aluminium roof coating	Bright silver metallic	5 and 20 L	50	**200–560**	2.0 at 250 µm

Reinforcement, Protection and Drainage

Product	What it is	Colours	Pack	VS %	Typical thickness per coat (µm)	Spreading rate (m²/L)
REINFORCEMENT, PROTECTION AND DRAINAGE						
LEAKSEAL® PES Reinforcing Fabric 120 GSM Needle-Punched	Polyester fleece rolled into the wet polyurethane coat	–	1 m × 50 m roll; 200 mm × 10 m roll; inside and outside corners, packs of 5	–	–	–
SurfaceReady® Glass Fibre Mesh 156 g/m²	Glass fibre mesh laid in the first CemLastic coat at joints, upstands and junctions	White	1.5 m × 50 m roll	–	–	–
LEAKSEAL® SEALING MEMBRANE ROLL	Three-ply membrane bedded in CemLastic under tiles	Grey	1 m × 30 m roll	–	0.5 mm sheet	–
BIDIM A4	Polyester geotextile: protection layer on green roofs	–	150 m roll, width ▢	–	1.8 mm sheet	–
DIMPLEDRAIN®	Drainage sheet with a filter fabric, under the growing medium	–	Roll ▢	–	–	–
Silica quartz SQ2	Quartz broadcast into the PUMMA wearing course, to refusal	–	▢	–	–	–



BEFORE YOU CHOOSE

Roof Types and Conditions

Start from the roof you have. The next pages say how each surface is prepared and with which products.



01 · NEW CONCRETE ROOF
A bare, cured concrete slab or screed with nothing on it yet. It is cleaned, ground, primed and waterproofed from the start.



02 · OLD CONCRETE ROOF
Bare concrete that has weathered: stains, patches, moss and hairline cracks. Repairs and grinding come before any system.



03 · TORCH-ON ROOF, STILL SOUND
A bitumen membrane still bonded to the slab, its surface faded or crazed. It can be coated or restored without stripping it.



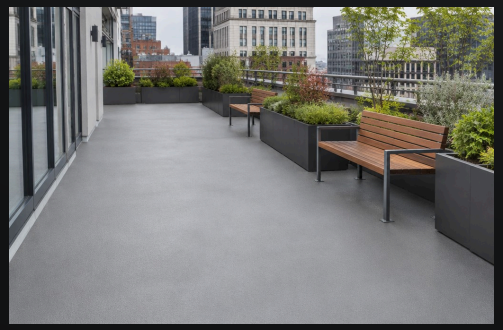
04 · WEATHERED TORCH-ON ROOF
Splits, blisters, open laps, ponding or a saturated membrane. It is repaired and renewed, or covered with a reinforced membrane.



05 · OLD LIQUID-APPLIED COATING
An acrylic or polyurethane roof coating that has chalked, cracked or lifted. Loose coating comes off; what stays must be bonded.



06 · TILED TERRACES AND BALCONIES
Tiles over a slab, with water getting through the grout and showing below. The waterproofing goes under the tiles, never on them.



07 · PEDESTRIAN TRAFFICABLE ROOFS
Walkways, terraces and rooftop spaces that people use: the membrane needs a wearing course and a hard-wearing topcoat.



08 · GREEN ROOFS
Planted roofs and roof gardens: the membrane is buried under soil, with a root barrier, protection and drainage over it.

Concrete Surfaces






New Concrete

Roof slabs, screeds, terraces and balconies. The under-tile, trafficable and green roof systems also go onto concrete prepared this way.

1. **Inspect** Sound, cured and dry, with falls to the outlets.
2. **Clean** Wash off dirt, oil and loose material.
3. **Grind** Take the laitance off and open the surface.
4. **Falls** Form falls where water ponds.
5. **Repair and cove** Fill defects and cove every internal corner.
6. **Dry through** No membrane over a wet slab or trapped water.
7. **Prime** The primer the system names, on the prepared slab.

PRODUCTS

- **SurfaceReady Cement Mortar Flexi Kit**: repairs and coves
- **Epoxy WB Concrete Primer Clear**: under the polyurethane, acrylic and cool-roof systems
- **Bitumen Primer SB**: under torch-on
- **SpecFloor MMA Concrete Primer MV**: under PUMMA
- **LEAKSEAL® CemLastic**: goes onto the prepared slab with no primer

Old Concrete

Bare concrete that has weathered, been patched or cracked. It is brought back to sound concrete, then treated as new.

1. **Inspect** Find cracks, hollow patches, failed repairs and ponding.
2. **Clean** High-pressure water: moss, dirt and loose material off.
3. **Remove** Break out hollow patches and failed repairs.
4. **Grind** Take the laitance and weathered skin off.
5. **Repair and cove** Fill cracks and defects; cove internal corners.
6. **Falls and dry** Water drains to the outlets; the slab is dry through.
7. **Prime** The primer the system names.

PRODUCTS

- **SurfaceReady Cement Mortar Flexi Kit**: cracks, defects and coves
- **Epoxy WB Concrete Primer Clear**: under the polyurethane, acrylic and cool-roof systems
- **Bitumen Primer SB**: under torch-on

Torch-On and Coated Surfaces






Torch-On Membranes

An old bitumen membrane that is still bonded. Split all over, blistered across the roof or saturated: it is renewed, not coated.

1. **Inspect** Bonded? Find blisters, splits and open laps.
2. **Clean** High-pressure water: dirt, moss and loose material off.
3. **Mineral chippings** On a mineral finish to be coated, take the loose chippings off with a flap disc.
4. **Repair** Cut back blisters and splits; seal open laps and gaps.
5. **Dry through** No coating over trapped water.
6. **Prime** All Surface Primer & Sealer SB under a liquid membrane; Bitumen Primer SB under a new torch-on layer. The AluShield coatings take no primer.

PRODUCTS

- **LEAKSEAL® BituLastic**: blisters, splits and laps
- **LEAKSEAL® FibreSeal BLUE CAULK**: gaps of 2 to 6 mm
- **All Surface Primer & Sealer SB**: under SpecShield Solar, LEAKSEAL® Polyurethane 250 FR and LEAKSEAL® UMBRELLA Plastic
- **Bitumen Primer SB**: under a new torch-on layer

Old Liquid-Applied Coatings

An acrylic or polyurethane roof coating that has aged. Only what is sound and bonded stays.

1. **Inspect** Find what has chalked, cracked or lifted.
2. **Degrease and wash** Hydrosolve Degreaser, then high-pressure water.
3. **Remove** Scrape off loose and flaking coating; feather the edges.
4. **Repair** Bare concrete that shows is repaired as old concrete.
5. **Dry through** No coating over trapped water.
6. **Prime and coat** The primer and system for an old coating: Technical to name

PRODUCTS

- **Hydrosolve Degreaser**: degreasing the aged coating
- **SurfaceReady Cement Mortar Flexi Kit**: bare concrete repairs

WEATHER: FOR EVERY SYSTEM

Never apply in rain, when rain is expected before the coat can take it, on a wet or damp surface, or when dew can form on it. Each product's data sheet gives its own temperature and drying limits; work inside them.



01

SECTION 01

Liquid Membrane Roofing Systems

Seamless liquid membranes for concrete flat roofs, new and refurbished, chosen by binder: a water-based polyurethane, with or without fleece reinforcement; an elastic pure acrylic; or a flexible cementitious membrane under an acrylic topcoat.

IN THIS SECTION

POLYURETHANE

01 LEAKSEAL® Polyurethane 250 FR, Two Coats ---- **10**

02 LEAKSEAL® Polyurethane 250 FR, Fleece Reinforced ---- **11**

ACRYLIC

03 LEAKSEAL® UMBRELLA Plastic, Two Coats ---- **12**

CEMENTITIOUS

04 LEAKSEAL® CemLastic, Reinforced, with an Acrylic Topcoat ---- **13**

Polyurethane

01 POLYURETHANE
LEAKSEAL® Polyurethane 250 FR, Two Coats

WP-R-CF-02 — FLAT ROOF, PU, TWO COATS

Sound concrete flat roofs with no live cracks: a water-based polyurethane membrane in two coats, without the fleece

DURABILITY ▢
years to confirm

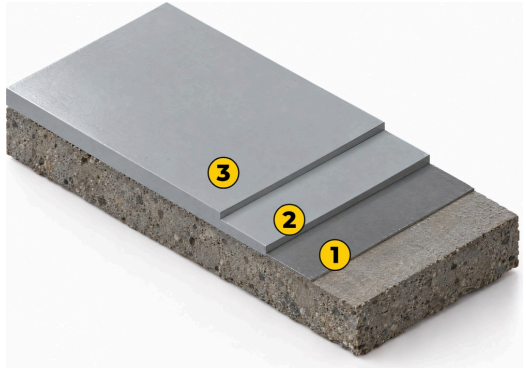
DESCRIPTION

A seamless, water-based polyurethane membrane for concrete flat roofs that are sound, with no live cracks. The primer seals and binds the concrete, then two full coats of LEAKSEAL® Polyurethane 250 FR build a continuous elastic membrane. Where cracks are live (they open and close with heat and load), use the fleece-reinforced build, WP-R-CF-03. LEAKSEAL® Polyurethane 250 FR is fire retardant.

WHERE IT IS USED

- Sound concrete roofs, new or refurbished
- Roofs with only fine hairline cracks that do not open and close
- Gutters and parapets

#	Layer	Product	VS %	Dry film	Coverage	How
1	Primer	**Epoxy WB Concrete Primer Clear**	32	**35 to 50 µm**	0.11 to 0.16 L/m²	**Brush, roller or airless. Sand the primer, then overcoat after 16 h and within 48 h at 20 °C**
2	Coat 1	**LEAKSEAL® Polyurethane 250 FR**	52	**500 µm**	1.00 L/m²	**Roller, brush or airless. Details first, then the flat surface. Dry for 24 h at 25 °C**
3	Coat 2	**LEAKSEAL® Polyurethane 250 FR**	52	**500 µm**	1.00 L/m²	**Roller, brush or airless over the whole area once coat 1 is dry, within 28 days, on a clean, dry surface**



STRESSED AREAS

At cracks, joints, upstands and junctions, bed LEAKSEAL® PES Reinforcing Fabric 120 GSM Needle-Punched between coat 1 and coat 2, lapped 75 mm each side. Only at these points: the rest of the roof is not reinforced.

TOTAL MEMBRANE -------- **1 mm**

FINISH ⚪ White ⚪ Cool Grey ⚪ Cool Ivory

Polyurethane

02 POLYURETHANE
LEAKSEAL® Polyurethane 250 FR, Fleece Reinforced

WP-R-CF-03 — FLAT ROOF, PU, REINFORCED

Concrete flat roofs: a fleece-reinforced, water-based polyurethane membrane, classified W3 to ETAG 005

DURABILITY ▢
years to confirm

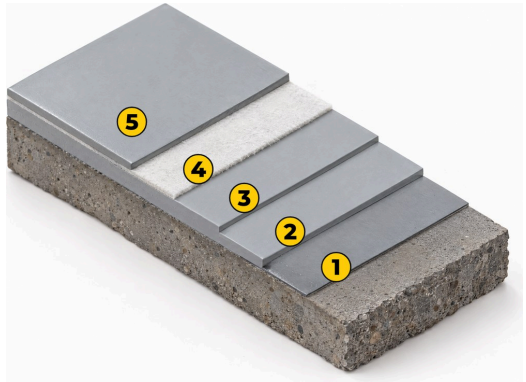
DESCRIPTION

The reinforced build the LEAKSEAL® Polyurethane 250 FR data sheet is tested on. The primer seals the concrete; the first coat goes on the details and the flat; the fleece is rolled into the wet second coat; two more coats cover it fully. The fleece carries the membrane over cracks and movement. LEAKSEAL® Polyurethane 250 FR is fire retardant.

WHERE IT IS USED

- Concrete flat roofs, new build and refurbishment
- Roofs with live cracks that open and close with heat and load
- Gutters, parapets and details

#	Layer	Product	VS %	Dry film	Coverage	How
1	Primer	**Epoxy WB Concrete Primer Clear**	32	**35 to 50 µm**	0.11 to 0.16 L/m²	**Brush, roller or airless**
2	Coat 1	**LEAKSEAL® Polyurethane 250 FR**	52	**500 µm**	1.00 L/m²	**Roller, brush or airless**
3	Coat 2, wet in wet	**LEAKSEAL® Polyurethane 250 FR**	52	**400 µm**	0.77 L/m²	**Roller**
4	Fleece, 5 cm laps	**LEAKSEAL® PES Reinforcing Fabric 120 GSM Needle-Punched**	–	**In the wet coat**		**Unroll into the wet coat and roll flat**
5	Coats 3 and 4	**LEAKSEAL® Polyurethane 250 FR**	52	**500 µm**	1.00 L/m²	**Roller**



TOTAL MEMBRANE ------ 1.4 mm

FINISH ⚪ White ⚪ Cool Grey ⚪ Cool Ivory

Acrylic

03 ACRYLIC
LEAKSEAL® UMBRELLA Plastic, Two Coats

WP-R-CF-01 — FLAT ROOF, ACRYLIC

Concrete flat roofs, new and refurbished: a tough, elastic, trafficable pure acrylic membrane in two coats

DURABILITY ▢
years to confirm

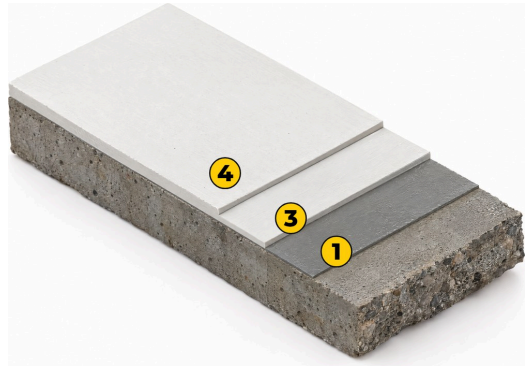
DESCRIPTION

A seamless, water-based pure acrylic membrane for concrete flat roofs. The primer seals and binds the concrete; LEAKSEAL® FibreSeal BLUE Waterproofing goes over curbs, penetrations, flashings and hairline cracks first; then two coats of LEAKSEAL® UMBRELLA Plastic build an elastic, low-sheen membrane that takes foot traffic.

WHERE IT IS USED

- Concrete flat roofs, new and refurbished
- Parapets and gutters
- Roofs that take foot traffic for maintenance

#	Layer	Product	VS %	Dry film	Coverage	How
1	Primer	**Epoxy WB Concrete Primer Clear**	32	**35 to 50 µm**	0.11 to 0.16 L/m²	**Brush, roller or airless. Sand the primer, then overcoat after 16 h and within 48 h at 20 °C**
2	Details	**LEAKSEAL® FibreSeal BLUE Waterproofing**	53	**400 µm, details only**	0.75 L/m² of treated area	**Brush or roller over curbs, penetrations, flashings and hairline cracks, a band 100 mm each side. Dry for 24 h at 23 °C**
3	Coat 1	**LEAKSEAL® UMBRELLA Plastic**	50	**400 µm**	0.80 L/m²	**Airless spray, brush or roller, 800 µm wet. Details first, then the flat surface. Overcoat after 8 h at 23 °C**
4	Coat 2	**LEAKSEAL® UMBRELLA Plastic**	50	**400 µm**	0.80 L/m²	**Roller, brush or airless spray, 800 µm wet, within 28 days, on a clean, dry surface**



STRESSED AREAS

At cracks, joints, upstands and junctions, bed LEAKSEAL® PES Reinforcing Fabric 120 GSM Needle-Punched between coat 1 and coat 2, lapped 75 mm each side. Only at these points: the rest of the roof is not reinforced.

TOTAL MEMBRANE ----- 800 µm

FINISH ⚪ White

RAL Classic colours on request

Cementitious

CEMENTITIOUS

04 LEAKSEAL® CemLastic, Reinforced, with an Acrylic Topcoat

WP-R-CF-04 — FLAT ROOF, CEMENTITIOUS

Concrete flat roofs: a flexible cementitious membrane with glass fibre mesh, finished with an elastic acrylic topcoat

DURABILITY ▢
years to confirm

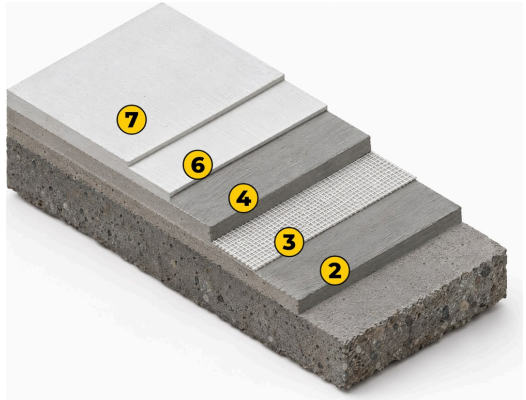
DESCRIPTION

A flexible, polymer-modified cementitious membrane for concrete flat roofs, finished in pure acrylic. Defects are repaired and coves formed; two coats of LEAKSEAL® CemLastic are laid with glass fibre mesh in the first at the stressed areas; once cured, two coats of LEAKSEAL® UMBRELLA Plastic protect it.

WHERE IT IS USED

- Concrete flat roofs and gutters
- Exposed concrete that needs a flexible, breathable membrane
- Roofs with fine hairline cracks

#	Layer	Product	VS %	Dry film	Coverage	How
1	Repair and cove	SurfaceReady Cement Mortar Flexi Kit	–	As needed		Repair defects and cove every internal corner with a fillet (tanks, pools, ponds, roofs)
2	Coat 1	LEAKSEAL® CemLastic	73.1	1 mm	2.1 kg/m² per mm	Trowel, block brush, roller or spray with firm, even pressure
3	Glass fibre mesh	SurfaceReady® Glass Fibre Mesh 156 g/m²	–	In the wet coat		Joints, upstands and junctions, in the wet coat
4	Coat 2	LEAKSEAL® CemLastic	73.1	1 mm	2.1 kg/m² per mm	As soon as coat 1 has hardened, one uniform, continuous layer that fully covers it
5	*Primer, after one week only*	*Deep Penetrating Primer WB*	*18*	*18 to 20 µm*	*0.10 L/m²*	***Only where topcoat 1 goes on more than one week after the CemLastic: one coat by brush, roller or airless spray, no ponding; overcoat after at least 2 h at 20 °C***
6	Topcoat 1	LEAKSEAL® UMBRELLA Plastic	50	400 µm	0.80 L/m²	After the CemLastic has cured at least 48 h: within one week straight onto it, after one week over the primer
7	Topcoat 2	LEAKSEAL® UMBRELLA Plastic	50	400 µm	0.80 L/m²	Roller, brush or airless spray, 800 µm wet, within 28 days, on a clean, dry surface



TOTAL MEMBRANE ----- **2.8 mm**

FINISH ⚪ White

RAL Classic colours on request



02

SECTION 02

Cool Roofs

A solar-reflective membrane for concrete flat roofs that cross-links under UV and toughens as it weathers, reflecting the sun off the roof. For an old torch-on roof, the cool-roof restoration is in section 06.

IN THIS SECTION

UV CROSS-LINKING ACRYLIC

05 SpecShield Solar Cool Roof ---------- **15**

Cool Roof

05 UV CROSS-LINKING ACRYLIC
SpecShield Solar Cool Roof

WP-R-CF-CR-01 — FLAT ROOF, COOL ROOF

Concrete flat roofs in high sun: a solar-reflective, UV cross-linking elastic membrane in two coats

DURABILITY ▢
years to confirm

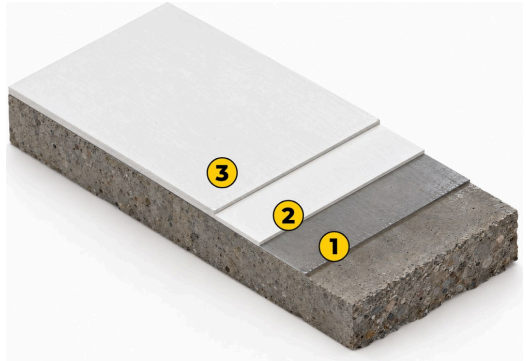
DESCRIPTION

A seamless, solar-reflective cool-roof membrane for concrete flat roofs. The primer seals and binds the concrete; two coats of SpecShield Solar build an elastic film that cross-links under UV and toughens as it weathers, reflecting the sun off the roof.

WHERE IT IS USED

- Concrete flat roofs in high sun
- Cool roofs on new and refurbished buildings
- Coastal and humid sites

#	Layer	Product	VS %	Dry film	Coverage	How
1	Primer	**Epoxy WB Concrete Primer Clear**	32	**35 to 50 µm**	0.11 to 0.16 L/m²	**Brush, roller or airless. Sand the primer, then overcoat after 16 h and within 48 h at 20 °C**
2	Coat 1	**SpecShield Solar**	52	**260 µm**	0.50 L/m²	**Brush, roller or airless spray, 500 µm wet. Dust dry in 45 min; overcoat after at least 6 h at 25 °C**
3	Coat 2	**SpecShield Solar**	52	**260 µm**	0.50 L/m²	**Brush, roller or airless spray, 500 µm wet, within 28 days, on a clean, dry surface**



STRESSED AREAS

At cracks, joints, upstands and junctions, bed LEAKSEAL® PES Reinforcing Fabric 120 GSM Needle-Punched between coat 1 and coat 2, lapped 75 mm each side. Only at these points: the rest of the roof is not reinforced.

TOTAL MEMBRANE ------ 520 µm

FINISH ○ White ○ RAL 7045 Telegrey 1 ○ RAL 1014 Ivory



03

SECTION 03

Green Roofs

The fleece-reinforced polyurethane membrane under a planted roof, with a certified root barrier, a protection layer and a drainage sheet laid over it. The membrane carries no root claim: the root barrier does.

IN THIS SECTION

POLYURETHANE, REINFORCED

06 Reinforced Polyurethane under a Green Roof ---------- **17**

Green Roof

06 POLYURETHANE, REINFORCED
Reinforced Polyurethane under a Green Roof

WP-R-CR-G-01 — GREEN ROOF

Green and planted roofs: the fleece-reinforced polyurethane membrane, with a certified root barrier, protection and drainage over it

DESCRIPTION

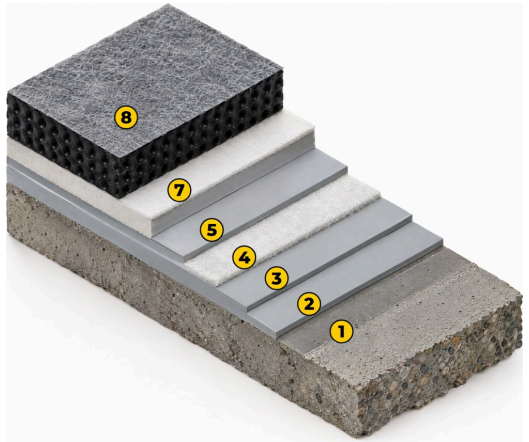
The reinforced LEAKSEAL® Polyurethane 250 FR build under a planted roof. The membrane carries no root claim: a certified root barrier goes over it, then a protection geotextile and a drainage sheet, and the growing medium on top. LEAKSEAL® Polyurethane 250 FR is fire retardant.

WHERE IT IS USED

- Green roofs
- Planted roof gardens
- Planters on roofs and podiums

#	Layer	Product	VS %	Dry film	Coverage	How
1	Primer	Epoxy WB Concrete Primer Clear	32	35 to 50 µm	0.11 to 0.16 L/m²	Brush, roller or airless
2	Coat 1	LEAKSEAL® Polyurethane 250 FR	52	500 µm	1.00 L/m²	Roller, brush or airless
3	Coat 2, wet in wet	LEAKSEAL® Polyurethane 250 FR	52	400 µm	0.77 L/m²	Roller
4	Fleece, 5 cm laps	LEAKSEAL® PES Reinforcing Fabric 120 GSM Needle-Punched	–	In the wet coat		Unroll into the wet coat and roll flat
5	Coats 3 and 4	LEAKSEAL® Polyurethane 250 FR	52	500 µm	1.00 L/m²	Roller
6	Root barrier	Certified root-barrier sheet (FLL / EN 13948) (supplied by others)	–	–		Laid loose over the cured membrane, lapped and sealed as its maker requires
7	Protection	BIDIM A4	–	1.8 mm		Laid over the root barrier, lapped
8	Drainage	DIMPLEDRAIN®	–	Sheet		Laid over the protection layer, filter fabric up
9	Growing medium	Growing medium and planting (supplied by others)	–	–		

DURABILITY ▢
years to confirm



TOTAL MEMBRANE ------ 1.4 mm

FINISH ○ White ○ Cool Grey ○ Cool Ivory



04

SECTION 04

Under Tile and Balconies

A flexible cementitious membrane with the sealing membrane bedded in, laid under the tiles of roof terraces and balconies so the tiles and grout are not the waterproofing.

IN THIS SECTION

CEMENTITIOUS

07 LEAKSEAL® CemLastic under Tile ---------- **19**

Under Tile

07 CEMENTITIOUS
LEAKSEAL® CemLastic under Tile

WP-R-CF-05 — FLAT ROOF, UNDER TILE

Tiled roof terraces and balconies: a flexible cementitious membrane with the sealing membrane bedded in, under the tiles

DESCRIPTION

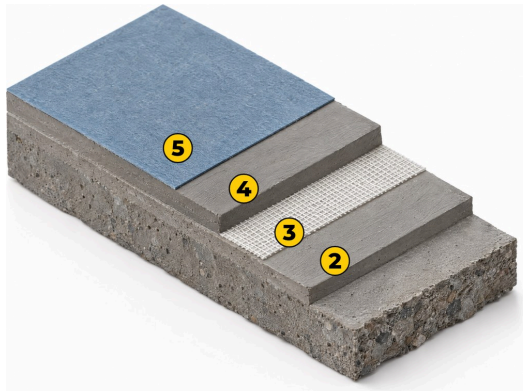
A flexible cementitious membrane under tiles on roof terraces and balconies. Defects are repaired and coves formed; two coats of LEAKSEAL® CemLastic are laid, with glass fibre mesh at the stressed areas, and LEAKSEAL® SEALING MEMBRANE ROLL is bedded into the wet second coat before tiling.

WHERE IT IS USED

- Tiled roof terraces
- Tiled balconies
- Under ceramic, mosaic and natural stone tile

#	Layer	Product	VS %	Dry film	Coverage	How
1	Repair and cove	SurfaceReady Cement Mortar Flexi Kit	–	As needed		Repair defects and cove every internal corner with a fillet (tanks, pools, ponds, roofs)
2	Coat 1	LEAKSEAL® CemLastic	73.1	1 mm	2.1 kg/m² per mm	Trowel, block brush, roller or spray with firm, even pressure
3	Glass fibre mesh	SurfaceReady® Glass Fibre Mesh 156 g/m²	–	In the wet coat		Joints, upstands and junctions, in the wet coat
4	Coat 2	LEAKSEAL® CemLastic	73.1	1 mm	2.1 kg/m² per mm	As soon as coat 1 has hardened, one uniform, continuous layer that fully covers it
5	Sealing membrane	LEAKSEAL® SEALING MEMBRANE ROLL	–	Bedded in		Bedded into the wet second coat before tiling
6	Tiles	Tile adhesive, tiles and grout (supplied by others)	–	–		Once the membrane has cured: before tiling 5 days, 24 h on dry substrates in favourable weather

DURABILITY ▢
years to confirm



TOTAL MEMBRANE -------- **2 mm**

FINISH ● Grey



05

SECTION 05

Pedestrian Trafficable Roofs

A PUMMA membrane with a wearing course and a coloured topcoat, for walkways, balconies, terraces and roofs that take foot traffic.

IN THIS SECTION

PUMMA

08 PUMMA Pedestrian Trafficable Roof in a Solid Colour ---------- **21**

Pedestrian Trafficable Roof

08 PUMMA
PUMMA Pedestrian Trafficable Roof in a Solid Colour

WP-R-CF-07 — PUMMA PEDESTRIAN, SOLID COLOUR

Walkways, balconies, terraces, pool decks and rooftop venues, in a solid colour

DESCRIPTION

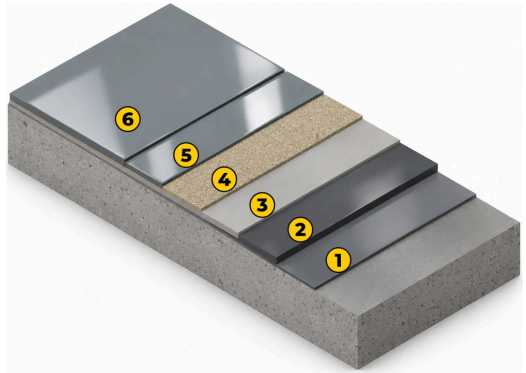
Seamless, non-slip waterproofing of pedestrian areas in a solid colour. A 1.6 mm self-levelling membrane under a 0.5 mm wearing course, silica quartz SQ2 broadcast to refusal for grip, then two coats of topcoat in colour. Every coat hardens in under an hour.

WHERE IT IS USED

- Walkways and balconies
- Terraces and pool decks
- Rooftop venues

#	Layer	Product	VS %	Dry film	Coverage	How
1	Primer	SpecFloor MMA Concrete Primer MV	–	0.5 mm	0.50 kg/m²	Quartz SQ2 into the wet primer, 200 g/m²
2	Membrane	PlastiSeal PUMMA EWM SL	–	1.6 mm	1.84 kg/m²	Toothed rake 4 mm, spike roller
3	Wearing course	PlastiSeal PUMMA WC HD	–	0.5 mm	0.73 kg/m²	Toothed rake 1.2 mm; back-roll if needed
4	Broadcast	Silica quartz SQ2	–	To refusal		To refusal; let it cure
5	Topcoat, in colour	PlastiSeal PUMMA Topcoat	–	0.4 mm	0.40 kg/m²	Squeegee or roller
6	Topcoat, in colour	PlastiSeal PUMMA Topcoat	–	0.4 mm	0.40 kg/m²	Squeegee or roller; 60 min before traffic

DURABILITY ☐
years to confirm



TOTAL MEMBRANE ---------- ☐

FINISH *Colours* ☐



06

SECTION 06

Bituminous Membrane Systems

APP torch-on membranes for new roofs, a new layer over a worn one, and coatings that restore an old torch-on roof that is still sound: reflective aluminium coatings, or a liquid membrane over the old one.

IN THIS SECTION

FULL SYSTEMS

09 Two-Layer Torch-On with a Reflective Topcoat ---- **23**

10 Two-Layer Torch-On with a Mineral Cap Sheet ---- **24**

RENEWAL

11 New 4 mm Torch-On over the Old Membrane ---- **25**

RESTORATION: REFLECTIVE COATINGS

12 AluShield Reflective Bitumen Aluminium Paint SB ---- **26**

13 AluShield WB Reflective Paint ---- **27**

14 AluShield Fibred Aluminium Flake Roof Coating ---- **28**

RESTORATION: LIQUID MEMBRANES

15 SpecShield Solar over the Old Membrane ---- **29**

16 Reinforced Polyurethane over the Old Membrane ---- **30**

17 LEAKSEAL® UMBRELLA Plastic ---- **31**

Full Systems

FULL SYSTEMS

09 Two-Layer Torch-On with a Reflective Topcoat

WP-R-CF-08 — TORCH-ON, TWO LAYERS

Concrete flat roofs, new build: two torch-on bitumen membranes, fully bonded, with an aluminium reflective topcoat

DESCRIPTION

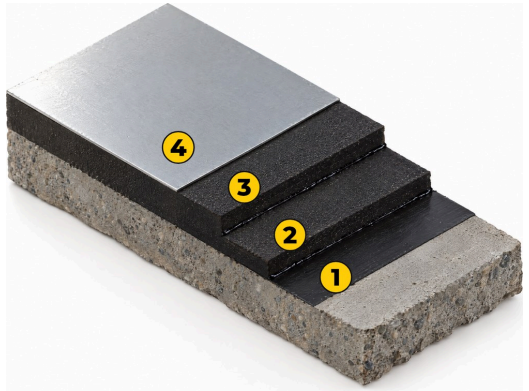
A two-layer torch-on roof. The bitumen primer goes over the whole area; a 3 mm membrane is torched on fully bonded; a 4 mm membrane is torched over it with the laps staggered; an aluminium reflective paint protects the sand finish from the sun.

WHERE IT IS USED

- New concrete flat roofs
- Roofs that need a two-layer bitumen membrane
- Exposed roofs in high sun

#	Layer	Product	VS %	Dry film	Coverage	How
1	Primer	Bitumen Primer SB	43	30 to 50 µm	Whole area	Brush, roller or spray an even coat over the whole surface; let it dry to touch before torching
2	Underlayer	LEAKSEAL® Torch-On Insufort APP 3mm PES140/R Sand Finish	–	3 mm	1 m × 10 m roll	Torch applied, fully bonded; side laps 8 to 10 cm, end laps 10 to 15 cm, staggered
3	Cap sheet	LEAKSEAL® Torch-On Insufort APP 4mm PES140/R Sand Finish	–	4 mm	1 m × 10 m roll	Torch applied over the underlayer, fully bonded; side laps 8 to 10 cm, end laps 10 to 15 cm, staggered from the underlayer
4	Topcoat	AluShield Reflective Bitumen Aluminium Paint SB	34	20 µm	Exposed sand finish	Brush or roller over the clean, dry, cool membrane; it protects the bitumen from the sun

10 YEAR DURABILITY
bituminous brochure figure · to confirm



TOTAL ---------- **7 mm of membrane**

FINISH Brilliant Aluminium

Full Systems

10 FULL SYSTEMS
Two-Layer Torch-On with a Mineral Cap Sheet

WP-R-CF-09 — TORCH-ON, MINERAL

Concrete flat roofs, new build: a 3 mm torch-on underlayer and a mineral-finished cap sheet, fully bonded

10 YEAR DURABILITY
bituminous brochure figure · to confirm

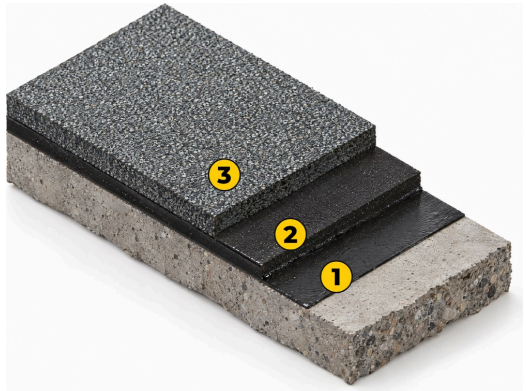
DESCRIPTION

A two-layer torch-on roof with a mineral finish. The bitumen primer goes over the whole area; a 3 mm membrane is torched on fully bonded; a 4.5 kg/m² mineral-finished cap sheet is torched over it with the laps staggered. The mineral chips protect the bitumen from the sun, so no topcoat is needed.

WHERE IT IS USED

- New concrete flat roofs
- Exposed roofs where no topcoat is wanted
- Roofs in high sun

#	Layer	Product	VS %	Dry film	Coverage	How
1	Primer	**Bitumen Primer SB**	43	**30 to 50 µm**	Whole area	**Brush, roller or spray an even coat over the whole surface; let it dry to touch before torching**
2	Underlayer	**LEAKSEAL® Torch-On Insufort APP 3mm PES140/R Sand Finish**	–	**3 mm**	1 m × 10 m roll	**Torch applied, fully bonded; side laps 8 to 10 cm, end laps 10 to 15 cm, staggered**
3	Cap sheet	**LEAKSEAL® Torch-On Insufort APP 4.5kg PES140/R Mineral Finish**	–	**4.5 kg/m²**	1 m × 10 m roll	**Torch applied over the underlayer, fully bonded; side laps 8 to 10 cm, end laps 10 to 15 cm, staggered from the underlayer**



TOTAL ------ **3 mm and the cap sheet**

FINISH ○ Black

Renewal

11

RENEWAL

New 4 mm Torch-On over the Old Membrane

WP-R-CF-10 — RENEWAL, TORCH-ON

Worn torch-on roofs: a new 4 mm sand-finish membrane torched over the old one, with an aluminium reflective topcoat

DESCRIPTION

Re-roofing over a worn torch-on membrane that is still sound and well bonded. The roof is cleaned and blisters, splits and open laps are repaired with LEAKSEAL® BituLastic; the bitumen primer goes over the whole area; a new 4 mm sand-finish membrane is torched on fully bonded; an aluminium reflective paint protects the sand finish from the sun.

WHERE IT IS USED

- Worn torch-on roofs that are still sound
- Re-roofing without stripping the old membrane
- Exposed roofs in high sun

#	Layer	Product	VS %	Dry film	Coverage	How
1	Repairs	**LEAKSEAL® BituLastic**	51	**500 µm, repairs only**	0.98 L/m² of treated area	**Over blisters, splits and open laps, cut back and cleaned. Dry for about 24 h at 25 °C**
2	Primer	**Bitumen Primer SB**	43	**30 to 50 µm**	Whole area	**Brush, roller or spray an even coat over the whole surface; let it dry to touch before torching**
3	New membrane	**LEAKSEAL® Torch-On Insufort APP 4mm PES140/R Sand Finish**	–	**4 mm**	1 m × 10 m roll	**Torch applied over the primed old membrane, fully bonded; side laps 8 to 10 cm, end laps 10 to 15 cm, staggered from the old laps**
4	Topcoat	**AluShield Reflective Bitumen Aluminium Paint SB**	34	**20 µm**	Exposed sand finish	**Brush or roller over the clean, dry, cool membrane; it protects the bitumen from the sun**

DURABILITY ▢
years to confirm



TOTAL ----- **4 mm of new membrane**

FINISH ⬤ Brilliant Aluminium

Restoration with Reflective Coatings

12

RESTORATION: REFLECTIVE COATINGS · SOLVENT-BASED ALUMINIUM

AluShield Reflective Bitumen Aluminium Paint SB

WP-R-CF-11 — RESTORATION, ALUMINIUM SB

Weathered torch-on roofs: defects repaired, a fresh solvent-based aluminium reflective coat over the old one

3 YEAR DURABILITY
bituminous brochure figure · to confirm

DESCRIPTION

Maintenance of a sound torch-on roof. The roof is cleaned; blisters, splits and open laps are repaired with LEAKSEAL® BituLastic; a fresh coat of AluShield Reflective Bitumen Aluminium Paint SB goes over the weathered reflective coat.

WHERE IT IS USED

- Maintenance of sound torch-on roofs
- Recoating weathered aluminium paint
- Roofs that need their reflectivity back

#	Layer	Product	VS %	Dry film	Coverage	How
1	Repairs	**LEAKSEAL® BituLastic**	51	**500 µm, repairs only**	0.98 L/m² of treated area	**Over blisters, splits and open laps, cut back and cleaned. Dry for about 24 h at 25 °C**
2	Reflective coat	**AluShield Reflective Bitumen Aluminium Paint SB**	34	**20 µm**	0.06 L/m²	**Brush or roller over the clean, dry, cool membrane**



TOTAL MEMBRANE -------- 20 µm

FINISH ● Brilliant Aluminium

Restoration with Reflective Coatings

13

RESTORATION: REFLECTIVE COATINGS · WATER-BASED ALUMINIUM

AluShield WB Reflective Paint

WP-R-CF-12 — RESTORATION, ALUMINIUM WB

Weathered torch-on roofs: defects repaired, a water-based aluminium reflective coat over the old one

DESCRIPTION

Maintenance of a sound torch-on roof in a water-based reflective finish. The roof is cleaned; blisters, splits and open laps are repaired with LEAKSEAL® BituLastic; one coat of AluShield WB Reflective Paint goes over the weathered reflective coat.

WHERE IT IS USED

- Maintenance of sound torch-on roofs
- Recoating where a water-based finish is wanted
- Roofs that need their reflectivity back

#	Layer	Product	VS %	Dry film	Coverage	How
1	Repairs	**LEAKSEAL® BituLastic**	51	**500 µm, repairs only**	0.98 L/m² of treated area	**Over blisters, splits and open laps, cut back and cleaned. Dry for about 24 h at 25 °C**
2	Reflective coat	**AluShield WB Reflective Paint Aluminium**	40	**40 µm**	0.10 L/m²	**Brush, roller or spray, one coat, over the clean, dry membrane**

5 YEAR DURABILITY
bituminous brochure figure · to confirm



TOTAL MEMBRANE ------- 40 µm

FINISH Brilliant Aluminium

Restoration with Reflective Coatings

14 AluShield Fibred Aluminium Flake Roof Coating

RESTORATION: REFLECTIVE COATINGS · FIBRED ALUMINIUM

WP-R-CF-13 — RESTORATION, FIBRED ALUMINIUM

Weathered torch-on roofs: defects repaired, two heavy coats of fibred aluminium flake roof coating

10 YEAR DURABILITY
bituminous brochure figure · to confirm

DESCRIPTION

The heavier restoration of a torch-on roof. The roof is cleaned; blisters, splits and open laps are repaired with LEAKSEAL® BituLastic; two coats of AluShield Fibred Aluminium Flake Roof Coating rebuild a thick, reflective, fibre-reinforced coat over the old membrane.

WHERE IT IS USED

- Restoring weathered torch-on roofs
- Roofs with surface crazing
- Roofs that need a thick reflective coat

#	Layer	Product	VS %	Dry film	Coverage	How
1	Repairs	**LEAKSEAL® BituLastic**	51	**500 µm, repairs only**	0.98 L/m² of treated area	**Over blisters, splits and open laps, cut back and cleaned. Dry for about 24 h at 25 °C**
2	Coat 1	**AluShield Fibred Aluminium Flake Roof Coating**	50	**250 µm**	0.50 L/m²	**Brush or roller over the clean, dry membrane**
3	Coat 2	**AluShield Fibred Aluminium Flake Roof Coating**	50	**250 µm**	0.50 L/m²	**Brush or roller once coat 1 is dry**



TOTAL MEMBRANE ----- 500 µm

FINISH Bright silver metallic

Restoration with Liquid Membranes

15

RESTORATION: LIQUID MEMBRANES · UV CROSS-LINKING ACRYLIC

SpecShield Solar over the Old Membrane

WP-R-CF-14 — RESTORATION, COOL ROOF

Aged torch-on roofs: primed, laps sealed, two solar-reflective coats of elastic acrylic over the old bitumen

12 YEAR DURABILITY
bituminous brochure figure · to confirm

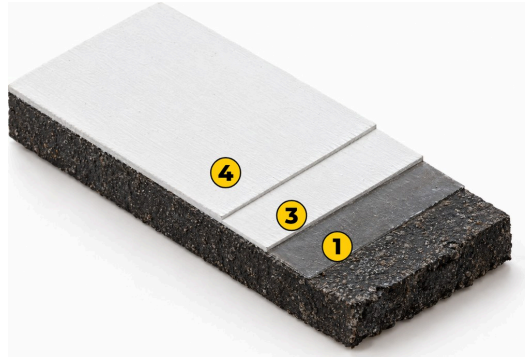
DESCRIPTION

A cool-roof restoration over an aged torch-on membrane. The roof is cleaned and blisters repaired; All Surface Primer & Sealer SB seals and binds the aged bitumen; LEAKSEAL® BituLastic seals the laps; two coats of SpecShield Solar finish the roof.

WHERE IT IS USED

- Aged bitumen and felt roofs
- Cool-roof refurbishment of torch-on roofs
- Roofs in high sun

#	Layer	Product	VS %	Dry film	Coverage	How
1	Primer	**All Surface Primer & Sealer SB**	20	**25 µm**	8.4 m²/L on smooth felt; 4.6 m²/L on mineral felt	**One coat by brush or roller over the clean, dry membrane; overcoat after 4 hours at 20 °C**
2	Laps	**LEAKSEAL® BituLastic**	51	**500 µm, laps only**	0.98 L/m² of treated area	**A band over every lap and open seam. Dry for about 24 h at 25 °C**
3	Coat 1	**SpecShield Solar**	52	**260 µm**	0.50 L/m²	**Brush, roller or airless spray, 500 µm wet. Dust dry in 45 min; overcoat after at least 6 h at 25 °C**
4	Coat 2	**SpecShield Solar**	52	**260 µm**	0.50 L/m²	**Brush, roller or airless spray, 500 µm wet, within 28 days, on a clean, dry surface**



STRESSED AREAS

At cracks, joints, upstands and junctions, bed LEAKSEAL® PES Reinforcing Fabric 120 GSM Needle-Punched between coat 1 and coat 2, lapped 75 mm each side. Only at these points: the rest of the roof is not reinforced.

TOTAL MEMBRANE ------ 520 µm

FINISH White · RAL 7045 Telegrey 1 · RAL 1014 Ivory

Restoration with Liquid Membranes

16

RESTORATION: LIQUID MEMBRANES · POLYURETHANE, REINFORCED

Reinforced Polyurethane over the Old Membrane

WP-R-CF-15 — RESTORATION, PU

Failing torch-on roofs: a fleece-reinforced, water-based polyurethane membrane over the old bitumen

15 YEAR DURABILITY
bituminous brochure figure · to confirm

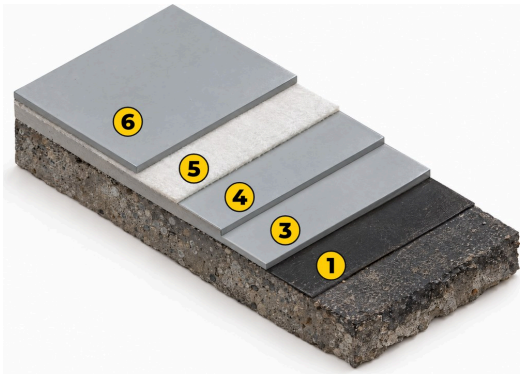
DESCRIPTION

Refurbishment of a failing bituminous roof with the reinforced LEAKSEAL® Polyurethane 250 FR build. Laps and open seams are sealed; the first coat goes on the details and the flat; the fleece is rolled into the wet second coat; two more coats cover it fully. LEAKSEAL® Polyurethane 250 FR is fire retardant.

WHERE IT IS USED

- Refurbishing failing bituminous roofs
- Roofs with open laps and splits
- Roofs with live cracks that open and close with heat and load

#	Layer	Product	VS %	Dry film	Coverage	How
1	Primer	**All Surface Primer & Sealer SB**	20	**25 µm**	8.4 m²/L on smooth felt; 4.6 m²/L on mineral felt	**One coat by brush or roller over the clean, dry membrane; overcoat after 4 hours at 20 °C**
2	Laps	**LEAKSEAL® BituLastic**	51	**500 µm, laps only**	0.98 L/m² of treated area	**A band over every lap and open seam**
3	Coat 1	**LEAKSEAL® Polyurethane 250 FR**	52	**500 µm**	1.00 L/m²	**Roller, brush or airless**
4	Coat 2, wet in wet	**LEAKSEAL® Polyurethane 250 FR**	52	**400 µm**	0.77 L/m²	**Roller**
5	Fleece, 5 cm laps	**LEAKSEAL® PES Reinforcing Fabric 120 GSM Needle-Punched**	–	**In the wet coat**		**Unroll into the wet coat and roll flat**
6	Coats 3 and 4	**LEAKSEAL® Polyurethane 250 FR**	52	**500 µm**	1.00 L/m²	**Roller**



TOTAL MEMBRANE ------ 1.4 mm

FINISH White · Cool Grey · Cool Ivory

Liquid Restoration

17

RESTORATION: LIQUID MEMBRANES · PURE ACRYLIC

LEAKSEAL® UMBRELLA Plastic

WP-R-CF-MR-LA-01 — RESTORATION, ACRYLIC

Aged torch-on roofs: primed, gaps and joins sealed, a fibre-reinforced base on the joins and two coats of elastic pure acrylic

DESCRIPTION

The bituminous brochure's acrylic restoration over an aged torch-on membrane that is sound and fully bonded. The roof is cleaned and primed, gaps are filled, LEAKSEAL® FibreSeal BLUE Waterproofing goes over the joins and two coats of LEAKSEAL® UMBRELLA Plastic finish the roof.

WHERE IT IS USED

- Aged torch-on roofs that are still sound and bonded
- Refurbishment with a white acrylic finish

#	Layer	Product	VS %	Dry film	Coverage	How
1	Cleaning	**Hydrosolve Degreaser**	–	–	0.10 L/m²	**Scrub the surface and clean with a high-pressure water cleaner**
2	Primer	**All Surface Primer & Sealer SB**	20	**25 µm**	0.13 L/m²	**Brush, roller or spray**
3	Repairs	**LEAKSEAL® FibreSeal BLUE CAULK or LEAKSEAL® BituLastic**	53	**1 mm, gaps only**	1.89 L/m² of treated area	**Only for gaps over 6 mm**
4	Joins	**LEAKSEAL® FibreSeal BLUE Waterproofing**	53	**400 µm**	0.75 L/m²	**On the join, 75 mm each side**
5	Topcoat 1	**LEAKSEAL® UMBRELLA Plastic**	50	**250 µm**	0.50 L/m²	**Brush, roller or spray**
6	Topcoat 2	**LEAKSEAL® UMBRELLA Plastic**	50	**250 µm**	0.50 L/m²	**Brush, roller or spray**

10 YEAR DURABILITY
bituminous brochure figure · to confirm

BUILD DRAWING MADE WHEN TECHNICAL CONFIRMS THE SYSTEM

TOTAL MEMBRANE ----- 900 µm

FINISH White

RAL Classic colours on request

Choosing a Restoration



START FROM THE OLD MEMBRANE

- Sound and bonded, only the surface worn: a reflective coat, WP-R-CF-11, WP-R-CF-12, WP-R-CF-13 (pages 26, 27, 28).
- Sound, and a cool roof wanted: WP-R-CF-14 (page 29).
- Sound, with a white acrylic finish: WP-R-CF-MR-LA-01 (page 31).
- Laps lifting, cracks or movement: the reinforced polyurethane restoration, WP-R-CF-15 (page 30).
- Split, blistered or saturated: renew it with a new torch-on layer, WP-R-CF-10 (page 25).

Laps, Outlets and Upstands

Most flat roofs leak at a detail, not across the field. Each system is finished at its edges, outlets and penetrations with its own products. In the liquid systems the details go on first, before the coats on the open roof; torch-on laps are sealed as each roll is laid; flashings close the upstands at the end.



Upstand and Parapet
Membrane carried up the upstand onto a cove and closed under a flashing



Drain Outlet
Membrane dressed into the outlet, reinforced at the throat



Torch-On Lap
Side and end laps welded and sealed



Pipe and Penetration
Collar of FibreSeal BLUE Waterproofing around the pipe, a band 100 mm each side

Photographs for now (Higgsfield); section drawings of each detail can follow if wanted to decide.

FOR OWNERS AND FACILITY MANAGERS

Looking After a Flat Roof

A coated roof stays sealed when it is kept clear, inspected and repaired before water gets in.

01 · CLEAN
Keep outlets, gutters and downpipes clear of leaves and silt.

02 · INSPECT
Walk the roof after storms and each season: laps, upstands, outlets and flashings.

03 · REPAIR
Patch small damage with the system's own products before water gets in.

04 · RE-COAT
When the topcoat wears, clean it and re-coat with the same topcoat.



NOTES



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