



TECHNICAL SPECIFICATIONS GUIDELINE



DACFILL PU

Liquid waterproofing polyurethane system for pitched or flat roofs

CHARACTERISTICS

- Outstanding durability
- Compatible avec roofing membranes
- Easy application
- Low solvent content
- Resists ponding water
- Permanent elasticity
- High dirt pick-up resistance
- Can be reinforced with a matt glass fiber fleece

ACCEPTABLE SUBSTRATES

MINERAL SUBSTRATES

Surface condition

Mineral substrates, such like concrete, fibro-cement etc, will be in good condition and of solid structure; roof should be isolated in order to prevent humidity rising. In compliance with usual standard, mass humidity should not exceed 6%. This will be checked by use of a humidity tester, or with a taped plastic sheet under which no formation of condensation should be observed overnight. Surface must be clean and dry during application.

METALLIC SUBSTRATES

Surface condition

Steel substrates must be properly supported to avoid warping, which could cause the coating to work and lead to cleavage.

A: Steel substrate extensively covered with adhered mill scale but with few or no rust at all.

B: Steel substrate that has started to rust and whose mill scale has started to delaminate.

C: Steel substrate from which mill scale has disappeared under action of rust, or that can be removed by scrapping, but showing some rust cankers visible by naked eye.

D: Steel substrate from which mill scale has disappeared under action of rust, or that can be removed by scrapping, but showing a lot of rust cankers visible by naked eye.

BITUMINOUS SUBSTRATES

Surface condition

Bituminous substrates will be aged of at least one year, and perfectly adhered to their supporting structure. All kinds of bituminous substrates, including modified ones, are compatible, and do not require specific primer.

MEMBRANES

Following membranes are acceptable :

- PVC
- APP
- EPDM
- ECB (ethylene-bitume copolymer)

OLD WATERPROOFING COATINGS

Surface condition

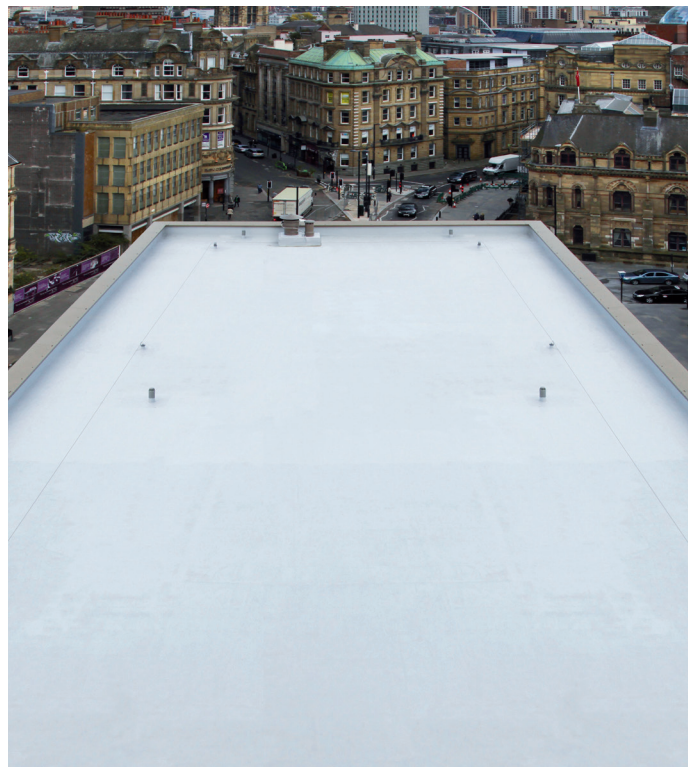
Old paints and coatings should be perfectly adherent and compatible with a high solids polyurethane system. In case of doubt, carry out a test on a small control-surface. Compatible glossy coatings will be sanded mechanically.

Following old waterproofing coatings are compatible:

- Acrylic
- Poly-urea
- Polyurethane
- PMMA

NON-COMPATIBLE SUBSTRATE

- TPO Membranes
- Silicone- based paints and coatings



SURFACE PREPARATION

GENERAL

Remove any dust, debris etc ; degrease and eliminate any contamination by alkaline cleaning with Cleaner-Degreaser RUST-OLEUM ND14 or high pressure cleaning combines with appropriate detergent, followed by thorough rinsing and full drying. In case of presence of mould (moss, lichens etc), decontaminate concerned surfaces with AMW Concentrate, followed by thorough rinsing and full drying. For severely contaminated areas, it is recommended to double the fungicidal treatment.

STEEL

See General.

Remove rust, rust scales, mill scale and old paints in bad condition, either manually or mechanically, according to the surface* :

Grades A and B : abrasive blasting SA 2 ½ (ISO 8501-01), max. rugosity 50 µm.

Grades C and D : pitting, grinding or scrapping-wire brushing to degree of care St 2/3 (ISO 8501-01), abrasive blasting SA 2 ½ (ISO 8501-01), max. rugosity 50 µm.

* Large surfaces will be preferably treated by abrasive blasting, or high/very high pressure cleaning, minimum 400 bars.

GALVANIZED STEEL

See General.

New galvanized steel will be degreased and etched with acidic etching solution RUST-OLEUM SURFA-ETCH 108 followed by thorough rinsing with fresh water.

Zinc oxides, « white rust » will be eliminated with acidic etching solution RUST-OLEUM SURFA-ETCH 108 followed by thorough rinsing with fresh water. Abrasive blasting to SA1 or higher is an alternative, as purpose is to remove those soluble salts.

NON-FERROUS METALS

See General.

New aluminum will be degreased and etched with acidic etching solution RUST-OLEUM SURFA-ETCH 108 followed by thorough rinsing with fresh water.

Salts and oxides will be eliminated with acidic etching solution RUST-OLEUM SURFA-ETCH 108 followed by thorough rinsing with fresh water. Abrasive blasting to SA1 or higher is an alternative, as purpose is to remove those soluble salts.

RECOMMENDED WORKING PROCEDURES

PRECAUTIONS

During application and first phase of drying (± 4 hours), coating is sensitive to low temperatures and high humidity and/or condensation, which can delay the evaporation and drying process, and possibly cause formation of a wet film on surface of the paint, which can result in alteration of the intercoat adhesion, and that can only be removed in a mechanical way (abrading). Do not apply if rain is imminent or expected.

PREPARATION

It is recommended to define with tape the surface to be treated per packaging . This will allow to better control product consumption and respect less recommended quantities, making possible necessary adjustments on the job.

For an optimal organization, it is advised to start with the details and difficult areas as those are more time consuming, since they require reinforcement, either with installation of a fleece or with a special fibers-containing coating.

REPAIRS (CONCRETE)

Surface imperfections, holes, cracks etc in the concrete will be repaired with appropriate RUST-OLEUM repair products: Pegacrete mortar, Elastofill sealant, Noxyde Tape. ... following depth of repair to be carried out.

SYSTEM COMPOSITION

DACFILL PU system consists in a basecoat reference 401.BC, and a topcoat reference 402.1 et 402.2 (depending on color), based on a moisture activated single pack polyurethane, drying with air humidity. System will be reinforced with the installation of a glass fibers matting SDGF 100, laid on the substrate prior to application of Basecoat, applied with roller, then embedded into the matting with a special glass fiber roller. After application of the topcoat, the structure of the fleece must be totally invisible. If not, apply more product.

Reinforcement with matting fleece is mandatory for roofs with slope below 5%. Furthermore, connexions and upstands with details and accessories

will be carried out with the fleece, or with Dacfill PU Fibres. In case of this second option, Dacfill Fibres will receive the full system, which is : Dacfill PU Basecoat and Dacfill PU Topcoat.

PRIMERS

Porous mineral substrates will be primed with RUST-OLEUM polyurethane Stabilizing Primer 3377.

Metallic substrates will be primed with RUST-OLEUM Epoxy anticorrosion primer 3388, Noxyde Plus ou Pegarust.

Roofs coated with Derbigum will receive a primer coat of Fillcoat diluted with 20-30% Thinner 22. A test of direct application of Dacfill PU Basecoat can be carried out on site.

Details and connexions that cannot be treated with a reinforcement fleece for practical reasons will be treated with DACFILL PU FIBRES, reference 403.1.

APPLICATION CONDITIONS

Temperature of air, substrate and product should be between 3 and 35°C, and relative humidity below 85%. Substrate temperature will be 3°C superior to dew point.

Product mixing: mix base material with a slow speed electric mixing machine, maximum 300 rounds/minutes, until homogeneous result is obtained. Consult technical data sheets for details on drying times, induction times, pot-life, dilution and recommended application methods. Consult safety data sheets for any information related to safety during use of products.

SURFACE MAINTENANCE

It is owner's or occupant's responsibility to carry out regular inspections of the roof and do required maintenance in order to preserve the coating in best conditions possible. A RUST-OLEUM DACFILL PU system can be maintained by cleaning with alkaline detergent RUST-OLEUM ND14 concentrated at 3 to 10% in water, depending on how dirt is the surface.

SYSTEMS OVERVIEW

WATERPROOFING SYSTEMS FOR ROOFS

SUBSTRATE	CONCRETE/MINERAL	BITUMEN	METAL
Slope > 5%	System : 3377	System : -	System : 3388(1)
Primer	D.F.S. : 30 µm	D.F.S. : -	D.F.S. : 100 µm
1st coat	Dacfill PU Base 900 µm	Dacfill PU Base 900 µm	Dacfill PU Base 900 µm
2nd coat	Dacfill PU Topc. 450 µm	Dacfill PU Topc. 450 µm	Dacfill PU Topc. 450 µm
Total film thickness	1380 µm	1350 µm	1450 µm
Slope < 5%	System : 3377	System : -	System : 3388(1)
Primer	D.F.S. : 30 µm	D.F.S. : -	D.F.S. : 100 µm
Reinforcement	Fleece SDGF 100	Fleece SDGF 100	Fleece SDGF 100
1st coat	Dacfill PU Base 1100 µm	Dacfill PU Base 1100 µm	Dacfill PU Base 1100 µm
2nd coat	Dacfill PU Topc. 700 µm	Dacfill PU Topc. 700 µm	Dacfill PU Topc. 700 µm
Total film thickness	1830 µm	1800 µm	1900 µm
Remarks :			
(1) Can be replaced by Noxyde Plus or Pagarust, at respective recommended film thickness.			

DECORATIVE PROTECTION SYSTEMS

SUBSTRATE (2)	CONCRETE/MINERAL	BITUMEN	METAL
Primer	System : 3377	System : -	System : 3388(1)
1st coat	D.F.S. : 30 µm	D.F.S. : -	D.F.S. : 100 µm
2nd coat	Dacfill PU Base 220 µm	Dacfill PU Base 220 µm	Dacfill PU Base 220 µm
	Dacfill PU Topc. 220 µm	Dacfill PU Topc. 220 µm	Dacfill PU Topc. 220 µm
Total film thickness	480 µm	440 µm	540 µm
Remarks :			
(1) Can be replaced by Noxyde Plus or Pagarust, at respective recommended film thickness.			
(2) On compatible and well-adhered old paint, apply same system than for bitumen.			

GUARANTEES

DACFILL PU Waterproofing system can be backed with a ten years guarantee, depending on countries : factory guarantee on product for BENELUX, GERMANY and SCANDINAVIA. For France, in accordance with legal and regulatory requirements, the system is covered for Garantie Décennale Responsabilité Civile Professionnelle under contract ALLIANZ n° ZL14989198.

PROCEDURE

For every guarantes, it is mandatory to respect following procedure :

- Site visit and diagnostic by RUST-OLEUM representative
- Set-up of a specification approved by RUST-OLEUM Technical Service, including Project Declaration Form to be filled by Contractor, in two copies.
- Return of Project Declaration Form duly filled, minimum 3 weeks before actual start of the job.
- For France : projects more than 1000 m² will be controlled by Cabinet ESEC, under mandate from RUST-OLEUM and its insurance companies.
- Projects les than 1000 m² will be controlled once finished by RUST-OLEUM concerned representative or by RUST-OLEUM Technical Service.
- Upon reception of compliance approval from Cabinet ESEC or from RUST-OLEUM representative, certificate of guarantee will be sent to Contractor.

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Available colours and pack sizes: See the relevant product page at www.rust-oleum.eu for actual available colours and pack sizes.

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