

System Overview:

Alumanation 301 is a premium grade metallic pigmented, industrial maintenance coating formulated from specially processed asphaltic liquids, non-drying oils, a proprietary blend of short non-asbestos fibres natural and synthetic fibres, and aluminium pigment. Its high metal content provides more durability, greater reflectivity, and a longer life span.

Legal requirements

CDM Regulations:

The Construction (Design and Management) Regulations 2015 came into force on 6th April 2015 and governs the appropriate health and safety measures of duty holders to ensure the safe operation of construction sites. The client and/or contract administrator must appoint competent personnel to oversee adherence to all necessary regulations under CDM and that relevant duty holders have the appropriate information. Tremco CPG UK Ltd are not considered the Principal Designer and works should only commence once all relevant authorities concur that the requirements of CDM have been fulfilled.

Further information can be obtained from the [HSE](#).

Diisocyanates Training:

REACH Regulations now state that products containing more than 0.1% of diisocyanates, including polyurethane products such as adhesives, sealants, or coatings, require mandatory Level 1 training for staff who directly handle these substances for professional use. We recommend you discuss any training requirements with your employer before application of product.

Further details and online training at [Safe Use Diisocyanates](#)

Personal Protective Equipment

For basic application of the Alumanation 301 liquid applied products within an exposed environment that provides limit-less ventilation, the following basic levels of personal protective equipment (PPE) must always be worn. Safety glasses with suitable side-shields.

- Safety glasses with suitable side-shields.
- Chemical-resistant gloves. Glove thickness > 0.7 mm. Wear gloves tested to EN 374. Gloves should be replaced if there is any sign of material damage.
- Antistatic protective clothing. Remove and wash contaminated clothing before re-use.
- Application within confined spaces will require adherence to appropriate workplace exposure limits or potentially include suitable respirators. Please refer to Tremco product specific safety data sheets for further guidance.

Tooling and Cleaning

To achieve efficient application and suitable finish, the following tooling should be considered.

- Medium pile sheepskin rollers, typical 12inch or 9inch width with a telescopic pole for field area application. Use smaller 4inch rollers for tight detailing or areas of limited access.
- Heavy duty scissors.
- Twin-paddle mixer or suitable mechanical stirrer e.g cordless drill.
- Fire extinguishers. Use water spray, fog, Carbon dioxide (CO 2), foam or dry chemical.
- Solvent Cleaner (tool cleaning of semi-cured product).
- Infrared thermometer.
- Thermo-hygrometer.
- Wet film comb.

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Compatibility consideration

- Alumanation 301 waterproofing is versatile and generally compatible with common building materials. However, care should be taken when exposing any Tremco products to solvent based liquids such as acetone or white spirit. Surface spills should be cleaned immediately with soap and water.
- Aggressive acid cleaners, naked flames, hot swarf, surface temperature exceeding 100° c, or abrasive tooling should not be placed in contact with Alumanation 301 waterproofing products.
- Should a material type present a compatibility concern, seek advice from Tremco Technical Services before application.

Application standards

Tremco CPG UK Ltd are members of the [Liquid Roofing & Waterproofing Association](#) (LRWA), consequently we recommend their best practise are followed from an application, health and safety, and design perspective.

The design, construction, and installation aspects of BS 6229:2025 'Flat roofs with continuously supported flexible waterproof coverings' should be considered during application. The Tremco project specific specification can assist with many design considerations during construction and provide clarity regarding suitable detail installation.

Training recommendations

For competent installation of any liquid applied membrane system, Tremco CPG UK Ltd recommends that relative qualifications are obtained by at least one experienced operative on site. These qualifications can relate to a skilled labour CSCS card (blue) NVQ level 2, LRWA Specialist Applied-Skills Program (SAP) or Tremco in-house training.

Product information

The below is a list of the basic waterproofing range of Alumanation 301 system components.

Product name	Product code	Coverage	Unit size	Product use
Illbruck OT015	OT015304225	6 Lm	600 ml sausage	Seam sealer or bolt head reinforcement
Alumanation 301	30105XBA	0.8L/m2	18.9 Litre drum	Primary waterproofing
AlphaGuard PUMA 165g Reinforcement Fabric	RW592606715	100m2	1m x 100m	Localised waterproofing reinforcement

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Sequence of works

General working conditions:

Atmospheric conditions should be free of precipitation, severe wind, or frost.

Application Parameters:

The below parameters set out a basic guide to the varying temperatures that can impact curing, adhesion, and product stability. Applying product outside of these limits can result in uncontrolled drying times and potential product failure. We recommend measurements are taken with an infrared thermometer when temperature parameters are at risk.

Ambient Temperature	4°C to 30°C
Substrate Temperature	5°C and rising
Material Temperature	5°C to 30°C

Dewpoint parameters:

Dewpoint monitoring is essential for a controlled application and effective curing. The substrate temperature must be 3 °C above dewpoint temperature to avoid condensation or moisture related issues during application. We recommend constant monitoring is undertaken with thermo-hygrometer that is referenced to the below table.

rH / Substrate Temperature	-5 °c	0 °c	5 °c	10 °c	15 °c	20 °c	25 °c	30 °c
90 rH	-6.4	-1.4	3.5	8.4	13.4	18.3	23.2	28.2
85 rH	-7.1	-2.2	2.7	7.6	12.5	17.4	22.3	27.2
80 rH	-7.9	-3.0	1.8	6.7	11.6	16.4	21.3	26.2
75 rH	-8.7	-3.9	0.9	5.8	10.6	15.4	20.3	25.1
70 rH	-9.6	-4.8	0.0	4.8	9.6	14.4	19.1	23.9
65 rH	-10.5	-5.8	-1.0	3.7	8.5	13.2	18.0	22.7
60 rH	-11.5	-6.8	-2.1	2.6	7.3	12.0	16.7	21.4
55 rH	-12.6	-8.0	-3.3	1.4	6.0	10.7	15.3	20.0
50 rH	-13.8	-9.2	-4.6	0.1	4.7	9.3	13.8	18.4

Substrate requirements:

All substrates must be clean, dry, free of oil, flaky coatings or rust, loose debris, foreign materials such as moss, algae and any other substance that could be detrimental to adhesion. Some surfaces may require jet washing, focused abrasion with wire wheel, or grinding to achieve a suitable substrate.

Metal substrate preparation:

All substrates must be relatively smooth and consistent. Where necessary, carry out remedial repairs to minor surface cracks, splits, or holes that may provide an improper finish. Full like-for-like sheet replacement may be required in severe situations.

Metal sheet securement and preparation:

All sheet laps must be checked for excessive movement and additional mechanical fixings applied where necessary. If the gap between the sheets is greater than 5mm a stitcher screw or rivet should be used to pull the sheets together. Where there are small perforations or redundant screw holes in areas to be treated, apply Illbruck OT015 directly into the hole and tool over flush.

Adhesion test:

Before direct application of liquid applied membrane to existing field or detail substrates, preliminary adhesion tests must be undertaken to confirm satisfactory adhesion or identify any additional preparation requirements. Alumanation 301 waterproofing is generally self-priming and can adhere to most common metal roof substrates.

Note: Should adhesion failure occur, please contact Tremco Technical Services for further advice and support.

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Product Agitation:

Before application, prepare Alumanation 301 waterproofing by robust mechanical agitation using a twin paddle stirrer to achieve a homogenous state. The Alumanation 301 waterproofing will vary in viscosity and colour during the agitation process and will go through notable states of change before suitable application can begin.

The below images will provide a visual reference during agitation as the product changes from black, to gold, to silver.

Stage 1 Agitation – Initial State (Black and High Viscosity)



Stage 2 – Colour Transition (Black to Gold)



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Stage 3 – Medium State (Gold and Lower Viscosity)



Stage 4 – Colour Transition (Gold to Silver)



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Stage 5 – Final State (Silver and Optimal Viscosity)



Seam Sealing to Fastener Heads:

Apply Illbruck OT015 seam sealer by brush over fastener penetrations to strengthen these junctions against movement or foot traffic.

Seam Sealing to Metal Roof Sheet Laps <3mm:

Apply Illbruck OT015 seam sealer by sausage gun nozzle along all metal roof sheet laps that have gaps less than 3mm to reinforce these joints that could be prone to movement.

Reinforcement to Localised Areas & Metal Roof Sheet Laps >3mm

Cut AlphaGuard PUMA 165g Reinforcement Fabric into 150mm wide strips and strap all metal roof sheet laps and end laps with gaps greater than 3mm. Bed AlphaGuard PUMA 165g Reinforcement Fabric with Illbruck OT015 seam sealer, ensure the fabric is suitably adhered, laid flat without creases, air pockets or prominent fibres and allowed to dry.

Waterproofing – Field Area and Details

Once the roof has been suitably prepared, apply Alumanation 301 in a single coat by sheep skin roller or pressurised spray application at a rate of 0.8L/m² fully coating the metal roof sheets and applicable upstand details.

Waterproofing Cure - Inspect:

Whilst the waterproofing layer is still curing, assess the material for obvious signs of trapped air or minor bubbling. Where necessary, use a spiked roller to alleviate any residual air that may create an inconsistent surface finish.

Temporary Seals – Day/Night Joints:

At the end of each working period, partially completed works must be temporarily sealed with night joints to avoid damaging water ingress. Contractor to make all necessary provisions to isolate the membrane system and protect the roof structure.

Delayed Works – Preparation:

Delayed works that exceed 48 hours must utilise an appropriate cleaner to prepare all subsequent laps before further application begins.

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Warranty requirements

Upstand and Skirtings Details:

All upstand and skirting details should terminate a minimum of 150 mm above the finished roof level to comply with BS 6229:2025 and our warranty requirements. Any detail failing to achieve this height must be discussed with Tremco Technical Services prior to installation.

Standard Detail Drawings:

To ensure warranty compliance and to achieve the most robust details possible, Tremco standard or bespoke detail drawings are available upon request from the technical services team.

Continuity Testing:

During membrane application to ensure continuity of the waterproofing thickness, periodic measurements should be taken using a wet film comb to verify that a minimum 2000-micron (2 mm) film thickness has been achieved throughout the roof area.

Final Inspection:

The Tremco CPG UK Ltd warranty is subject to a final inspection before any certification will be issued. Once all system components have been installed to an approved standard, Tremco Technical Services will attend site to undertake a final inspection and sign off works. The client or contractor must ensure that suitable and safe access is available upon final inspection.

Maintenance Plan:

To ensure the long-term performance of our systems, a structured maintenance plan should be organised to demonstrate good husbandry of the roof. At the minimum, we recommend an annual inspection is undertaken to review all details, perishable items such as mastic, clear drainage points, remove roof debris or identify any issue that may present immediate risk to waterproofing integrity.

Important Note: Only the original Tremco CPG UK Ltd approved contractor should undertake invasive maintenance work to ensure our system warranty remains intact. If in doubt, please contact Tremco Technical Services for assistance.