



resapol[®]



Solutions for
Airports

Edition 1

Our Solutions

Terminal Buildings
Runways, Taxi-ways, Aprons & Lighting
Baggage Handling, Cargo & Hangers

Foundations for Flight

ESSENTIAL CONSTRUCTION SOLUTIONS FOR MODERN AIRPORTS

As global air travel continues to grow, airports are evolving into more than just transit hubs - they are becoming sophisticated spaces that demand the highest standards in safety, efficiency, and passenger comfort. The construction of airports, from terminal structures and runways to runway lighting and cargo areas, requires specialised products that can meet stringent regulatory standards while withstanding heavy use and diverse environmental conditions.

This brochure showcases the unique needs of airport environments, all of which Resapol has products to suit. From high-performance concrete mixes for resilient runways to advanced thermal and acoustic insulation for passenger terminals, each product is engineered to contribute to safe, efficient, and sustainable airport infrastructure. Whether you're involved in building new facilities or upgrading existing ones, our products help create spaces that streamline operations, enhance passenger experience, and support long-term growth.

Discover how our solutions can be seamlessly integrated into various areas of airport construction to help you build the airports of tomorrow, today.

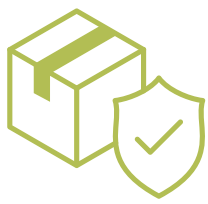


WHY WORK WITH RESAPOL?



CUSTOMER CARE

Our team are available for all sales, quotation, stock and technical queries



PRODUCT RANGE

Specialist products from all the leading industry manufacturers available



DELIVERY

Same/next day delivery or collection available on most products



Cert No. 27494-QMS-001





Terminal Buildings

As travel demand has grown, so too has the role of terminal buildings in the passenger journey. Today, terminals have evolved into comprehensive hubs, offering a wide range of services, facilities, lounges, and amenities designed to meet the diverse needs of travellers.

FLOORING

High quality flooring systems are required throughout terminal buildings, whether front or back of house. In airport terminal buildings, floor smoothing compounds, decorative flooring coatings, and sealers provide a level, aesthetically appealing, and durable surface that withstands heavy foot traffic while enhancing safety and ease of maintenance.

Durable floor sealants are also important to manage the joint movement and heavy foot traffic.

ROOF SYSTEMS

It is important to ensure that roofs are structurally sound and reinforced, and where necessary to be able to be strong enough to carry solar panels. Resapol stocks a range of roofing systems including those manufactured by **Sika** and **Mapei**, all designed to offer a watertight solution. This includes the **Sika RoofPro System** and the **Mapei Purtop Easy System** which are both ideal for flat roofs.

CONCRETE REPAIR

Concrete repair in airport terminal buildings often involves hand-placed and flowable materials to efficiently restore damaged concrete substrates without disrupting operations. These, along with curing and agents such as **rbs Bluecure R90**, provide durable, quick-setting solutions ideal for high-traffic areas requiring minimal downtime.



ARDITEX NA

A self-smoothing, protein free, latex levelling compound with improved flow and excellent adhesion, flexibility and moisture resistance. These unique properties ensure that ARDITEX NA can be used with confidence over almost all subfloors without priming, including ceramic tiles, bitumen and flooring grade plywood. Resilient floor coverings can be installed after just 4 hours and ceramic tiles in as little as 3 hours.



MAPEI PURTOP EASY

A one component coloured ready-to-use waterproof polyurethane resin system designed for roofs terraces and balconies. A highly elastic and durable finish that guarantees substrates are completely waterproof even at low temperatures. Easy to apply by roller or spray on both horizontal and vertical surfaces. CE Marked and BBA Approved.



rbs BLUECURE R90

A resin based dispersion that forms a film that retains an optimum amount of water in freshly placed concrete to allow a full hydration of the cement. Gives films with excellent water retention efficiency in excess of 90%, complying with ASTM C309.66, tested in accordance with BS 7542,1992.

FAÇADE SEALANTS

Movement flexibility, UV resistance and weather resistance are all factors to consider when selecting the correct products in facade applications.

The correct sealants will also prevent water, air and dust infiltration into the building envelope, maintaining energy efficiency and the protection of structural components. They can also enhance the aesthetic appeal and weather resistance of buildings. **Illbruck SP525** is formulated to provide long term resistance to weathering, aging and UV.

WATERPROOFING

Waterproofing of tunnels and basements around terminals and airports is vital, creating a watertight structure to stop future problems. When repairing damage to tunnels, defective surface finishes should be removed and a product such as **Flexcrete Monolevel 844SP** used to provide an even substrate for subsequent coating.

RIW Waterproofing products like **Toughseal**, **Sheetseal 226**, and **LAC** provide reliable protection for structural waterproofing, basements, and below-ground structures. These high-performance products are specifically designed

to withstand challenging conditions, ensuring long-lasting defence against water ingress and preserving the integrity of the structure over time.

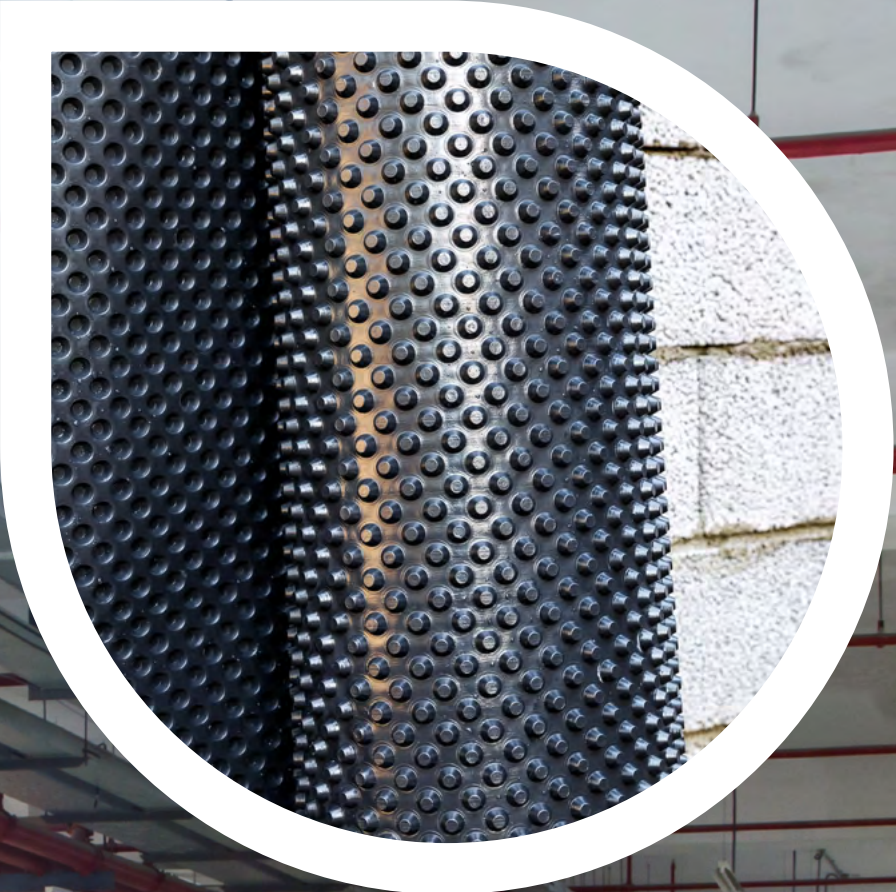
Effective drainage systems are also important to manage rainwater, wastewater and runoff to prevent flooding, structural damage and water accumulation.

FIRE PROTECTION

This product type is critical for ensuring the safety of passengers, staff and infrastructure. Fire rated coatings and sealants help control the spread of fire, such as **Fosroc Flamex Fire Protection** joint sealants which confine smoke and fire, giving people extra time to escape from a fire.

URBAN LANDSCAPING

As airport terminal buildings become more architecturally impressive, they also now incorporate biophilic design, indoor gardens and greenery. This creates a more pleasant and relaxing environment for travellers. Resapol works closely with manufacturers such as **Steintec** and **Larsen** to ensure a wide range of landscaping products are available to our customers, no matter the application area.



RIW SHEETSEAL 226

A cold applied, BBA Approved, high density polyethylene film, coated with a bitumen/ rubber self-adhesive layer with a removable reinforced silicone paper. The product generally requires Sheetseal primer for vertical or sloping surfaces. Sheetseal 226 is typically used as a basement tanking system, or as a ground floor damp proof membrane.

VANDEX BB 75

A cementitious, BBA approved, ready mixed surface waterproofer. It is also suitable as corrosion protection for reinforcing steel. It can be employed against active and passive water pressures. It is suitable to be applied to horizontal as well as vertical surfaces. It is durable, resistant to frost and heat after setting, but all the same permeable to vapour. Tested for use in contact with drinking water.

FOSROC FLAMEX TWO

A high performance sealant forms a tough, flexible rubber-like seal with a movement accommodation factor of 25% for high movement situations. Suitable for expansion joints in building superstructures and may be used in both internal and external joints. Extensively fire tested in accordance with BS 476 Pt:20: 1987.





Runways, Taxi-ways, Aprons & Lighting

The number of flights taking off and landing in the UK have grown steadily every year with 5,290, on average per day, in 2023. Each aircraft has its place to stand, usually adjacent to the terminal building with either a bridge or steps for passengers. There is also usually open hard standing space suitable for more aircraft.

CONCRETE ADMIXTURES AND CURING AGENTS

Resapol stocks an extensive range of admixtures and curing agents to improve the properties, performance and durability of concrete. From the comprehensive **rbs range**, to products from our supply partners you can ensure we have the right product selection for optimum performance.

CONCRETE REPAIR

Due to the fast paced nature of airports, a fast return to service with minimal disruption is essential. Rapid concrete repair products are therefore imperative to ensure a fast return to service. **Flexcrete Fastfill** is one such product.

Concrete surfaces that are particularly liable to abrasion and frost damage, such as aprons and concrete runways, will benefit greatly from an application of hydrophobic sealer's such as **rbs Hardseal** and **rbs Hardseal XS**.

JOINT SEALANTS

Concrete sealant joints are critical in maintaining structural integrity and operational safety. The sealant must be able to cope with the unique stresses of heavy aircraft, weather conditions, jet fuel and de-icing chemicals, such as **Fosroc Thioflex 555** and **Fosroc Colpor 200 PF**.



THIOFLEX 555

A 2-component polysulfide sealant for the sealing and maintenance of joints in concrete roads, concrete runways and hard standings. Particularly suitable for sealing areas where fuel spillage might occur such as aircraft fuelling areas, oil terminals, garage forecourts, parking and cargo areas.

It is available in machine grade (ultra fast setting) and hand grade (fast setting).



COLPOR 200 PF

A cold applied, high performance, pavement joint sealant, conforming to the requirements of BS EN 14188-2:2004 and BS5212 Part1:1990. Ideal for the sealing and maintenance of joints in concrete roads, concrete runways and hard standings. Particularly suitable where fuel and oil spillage might occur such as aircraft hard standing areas, oil terminals and cargo bays.



FLEXCRETE FASTFILL

A rapid setting, Portland cement-based structural mortar for the durable repair of concrete which cannot be taken out of service for long periods, or in areas subjected to heavy wear such as roads, runways, bridges, decks, floors and footpaths. Fastfill is a single component, polymer modified, fibre-reinforced, Portland cement based concrete repair compound. It produces a rapid curing mortar with enhanced polymeric properties and reliable strength development which is not significantly affected by low temperature use.

AIRSIDE BUILDINGS

From below ground waterproofing, roofing, facade, flooring, concrete and steel protection - structures such as Air Traffic Control buildings, Maintenance and Fire & Rescue facilities require a myriad of products.

These include products such as **webercem Pyrapatch** which is ideal for spalled concrete repairs in and around runways, taxiways, hard standings and parking aprons.

LIGHTING

Lighting is used at airports to ensure the safe passage of aircraft, guiding them during take-off, landing and ground movement, especially in low visibility conditions. These lights provide pilots with clear visual cues for runway alignment, directional guidance and obstacle avoidance. Properly maintained lights contribute to seamless air traffic operations.

Embedded lighting is commonly installed in concrete runways by coring a shallow opening in the existing pavement and then bonding the fixture to the pavement with an epoxy or polyester adhesive.

The bedding and grouting of the light bases should be done with rapid setting products, especially on runways or taxiways, such as **webertecl bedding mortar** and **webertecl grout FG**. Using rapid setting products such as these ensures there is minimum disruption to service.

The fixing of the lighting cables requires the use of a rapid flowable grout, such as **webertecl cable grout**.



WEBERCEM PYRAPATCH

A prepacked product based on hydraulic cements with specially graded non-reactive aggregates. The product is polymer modified which, when mixed with clean water, produces a fast setting repair concrete, suitable for patch or full-depth repairs up to 2 m². Typical patch repairs up to 100 mm depth and extended with aggregate for full depth repairs. Ideal for filling redundant landing light cores.



WEBERTEC GROUT FG

A three-component polyester grout for anchoring and fixing. Fast-setting for rapid installation and can be used down to 0°C. Flowing grout to fill gaps of between 5mm up to 90mm dependent upon bulking out with aggregate.



WEBERTEC BEDDING MORTAR

A three-component, polyester-based mortar for the bedding and fixing of manhole frames, airport landing lights, duct frames and precast concrete units. It has been formulated for easy mixing and placement, even at low temperatures and, when cured, provides a durable, chemically resistant bedding and fixing material with good bond strength.



Baggage Handling, Cargo and Hangers

Airport operations require robust and reliable products to support high traffic and heavy duty use in areas such as baggage handling, cargo facilities and hanger areas. Often these areas are exposed to the elements, meaning durable weatherproof products are also required.

WATERPROOFING

Effective protection from water ingress is essential as this can lead to structural damage, corrosion and in the case of aviation; damage to planes, cargo, baggage and other potentially sensitive equipment. Products already mentioned in the Terminal Buildings section can all also be applied in these situations, as well as additional products available from Resapol.

FLOOR COATINGS

Floor durability is a high priority, not just because these are high trafficked areas but also due to heavy loads and potential for chemical spills. Epoxy coatings are highly durable in these situations and resistant to heavy traffic. Resapol carries a vast range of epoxy floor coatings including anti-slip products which are important where improvement to safety is required in foot trafficked areas.

FLOOR JOINT SEALANTS

Sealing joints in concrete surfaces with the correct sealants prevents moisture absorption and reduces cracking and erosion, while accommodating structural movement. **Sikaflex® Floor Joint Sealants** offer a selection of suitable products that can withstand the typically demanding conditions.

FIRE PROTECTION

Mitigating fire hazards is a huge priority to ensure the safety of passengers, personnel and expensive assets such as aircraft and cargo. All products should meet the relevant fire safety standards required. Intumescent paints that expand under heat to insulate steel beams and prevent collapse for example, **Nullifire SC802 Fire Proof Steel Paint** can be utilised in this sector.

Fire resistant sealants should be used in joint sealing to block fire penetration through walls or floors such as **FSI Promat Pyrocoustic Sealant**. Fireproof boards and panels can also be installed in walls, ceilings and duct systems for passive fire protection.



SIKAFLEX® PRO-3 PURFORM

A 1-part, moisture curing, elastic polyurethane sealant. It seals many kinds of joint configurations in floors and civil engineering structures in both horizontal and vertical applications. The elasticity is maintained over a wide temperature range and high mechanical and chemical resistance provides good durability.



PREPRUFE 300R PLUS

Preprufe Plus waterproof membranes are composite sheets comprising a robust virgin HDPE backing, a pressure sensitive adhesive and a traffickable weather resistant coating with dual adhesive Preprufe ZipLap™ for increased security and practicability at overlap. For waterproofing and protection of slabs and confined walls below ground.



PYROCOUSTIC FIRE RESISTANT SEALANT

An acrylic based sealant used to reinstate the fire resistance performance of wall and floor constructions where they have been provided with apertures for the penetrations of multiple services, also to form linear gap seals where gaps are present within the wall and floor constructions and linear joints where wall and floor constructions abutt. Pyrocoustic Sealant has slight intumescent properties that cause it to swell upon heating.

Case Study

MOD Carlisle

Project Start Date	April 2024
Project Completion Date	September 2024
Contractor	Concrete Sealing Ltd



This project involved the construction of a storage facility, including new offices, service yards, loading bays, car parking, a fire track, and a platform connecting to an existing private rail line. To ensure the longevity and integrity of the newly constructed infrastructure, precision concrete joint sealing was a critical component of the project.

The sealing work was executed by a skilled six-person team using advanced techniques and modern equipment. The primary objectives were to seal new PQ (Pavement Quality) concrete joints and other key structural elements to prevent water intrusion, protect sub-bases, and enhance durability.

Key activities included:

Saw Cut and Sealing: Approximately 10,500 linear meters (lm) of new PQ concrete joints were saw cut and sealed using Fosroc Thioflex 555, an industry-leading sealant.

Hand Sealing Around Columns and Pre-cast Walls: An additional 2,775 lm around columns and along pre-cast walls were sealed by hand using Fosroc NitoSeal 600.

Phased Execution: The sealing process was conducted in three phases, ensuring that the concrete slab was sealed at the earliest opportunity. This proactive approach prevented water ingress and mitigated potential water damage to the newly constructed sub-bases.

The automated sealant extruding machine played a pivotal role in ensuring consistency, precision, and efficiency throughout the project.

Fosroc Thioflex 555 was chosen as the primary sealant due to its superior performance characteristics. Its resistance to fuels and greases makes it an ideal choice for environments where plant and machinery operate regularly. Additionally, Fosroc NitoSeal was utilized for hand sealing in critical areas, ensuring a robust and long-lasting seal.

Key Benefits of Concrete Joint Sealing: The successful completion of this project highlights the significant benefits of sealing concrete joints and cracks:

- **Preventing Water Intrusion:** Sealing concrete joints effectively prevents water from seeping into the structure. This eliminates risks of concrete deterioration, erosion, and potential structural damage over time.
- **Maintaining Structural Integrity:** Unsealed joints and cracks can expand, leading to weakened structural components. Sealing preserves the concrete's strength and durability, ensuring long-term performance.
- **Limiting Air and Moisture Infiltration:** Properly sealed joints prevent air and moisture penetration, which can otherwise cause mould growth, corrosion of reinforcing materials, and reduced insulation efficiency.
- **Improving Appearance:** Sealing maintains a clean, uniform surface appearance, enhancing the overall aesthetics of the facility.
- **Extending the Lifespan of the Concrete:** Timely and effective joint sealing significantly extends the lifespan of the concrete, reducing the need for costly repairs or replacements in the future.

By addressing concrete joints and cracks in a systematic and timely manner, the project team ensured that the newly constructed storage facility and associated infrastructure remain protected from water damage and other environmental factors. This not only safeguarded the investment but also provided a robust foundation for the facility's long-term use.

The successful sealing of over 13,000 lm of concrete joints using high-performance materials such as Fosroc Thioflex 555 and NitoSeal 600 highlights the project's efficiency, quality, and attention to detail. By utilising advanced techniques and equipment, the team delivered a durable and resilient solution that will serve the facility for years to come.

Case Study

Cardiff Air Ambulance

Project Start Date	October 2024
Project Completion Date	Within 7 Shifts (weather dependent)
Contractor	Concrete Sealing Ltd

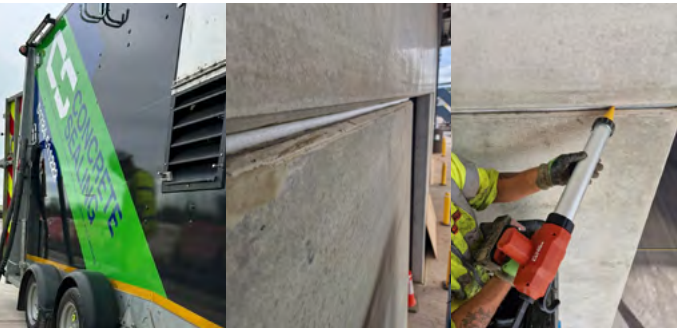
The project involved critical maintenance and repair works to ensure the durability and safety of the pavement quality (PQ) slabs at the heliport. The scope of works included:

- **Removal and Replacement of Defective Joint Sealant:** Approximately 1,600 linear meters of existing defective PQ joint sealant were removed and resealed using Thioflex 555, a high-performance joint sealant.
- **Pavement Crack Sealing:** Hand sawing and sealing of approximately 400 linear meters of pavement cracking were carried out to prevent further degradation.
- **Concrete Repairs:** Minor concrete repairs were performed to eliminate the risk of Foreign Object Debris (FOD) that could impact aircraft operations.

To maximize the efficiency and quality of the works, a strict operational window was implemented. Aircraft operating from the heliport had to vacate the site by 08:00 AM and were restricted from returning until after 18:00 PM. This allowed the project team to carry out the works without disruption and ensure a high-quality finish when installing the new sealant.

By resealing all joints and cracks within the PQ slabs, the surface was rendered watertight. This measure is crucial for preserving the overall integrity and performance of the system, as it mitigates the risk of water infiltration that can lead to structural damage.

Furthermore, the project underscores the importance of regular maintenance and proactive inspections. Addressing potential issues early helps prevent escalation, extends the lifespan of PQ sealed joints, and reduces the need for frequent replacements and associated costs. This approach not only enhances the long-term performance of the pavement but also ensures operational reliability for heliport users.



Case Study

Edinburgh Airport

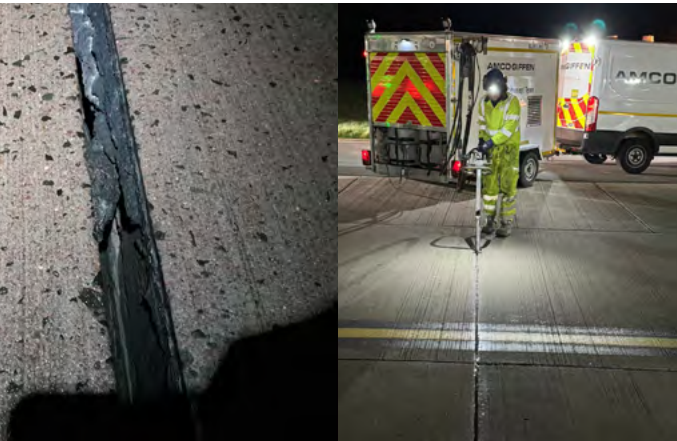
Project Start Date	March 2024
Project Completion Date	April 2024
Contractor	AmcoGiffen

Edinburgh Airport is Scotland's busiest airport, handling 14.4 million passengers per year (2023). There has been an ongoing project to invest in the airport, supporting passenger growth.

A critical component of this project involved the comprehensive renovation of the taxiways to enhance their functionality and safety. The scope of work required the removal of approximately 10,500 meters of deteriorated joint sealants. To ensure the taxiway pavements met the required performance standards, they were resealed with Fosroc Thioflex 555, a high-performance sealant specifically designed for demanding environments like airports.

This sealant was selected based on the contractor's extensive experience and proven success with the product in similar airport maintenance projects across the UK. Its reliability and durability have consistently delivered excellent results in high-traffic aviation

settings. All the work was carried out overnight between 11pm and 5am to minimise disruption.





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