

# New build construction

Defects not only affect older buildings and structures. New build construction schemes can also experience problems, caused by a variety of factors such as design complexity, variations to specification or simply poor workmanship.



The structural challenges facing new build projects are an important consideration for designers, engineers and contractors alike. Grout loss and damage when removing formwork can result in unacceptable blemishes and poor compaction causes honeycombing.

Concrete, often considered as an aesthetic finish in its own right, must meet the required standards if durability is to be assured. The Intercrete® range therefore includes all of the necessary reinstatement and finishing materials needed in new construction.

## Repairing the defects

Defects to concrete structures need to be rectified using materials that are visually and structurally compatible. We offer a range of materials to suit all applications from structural mortars for reinstating large areas of honeycombing to colour-matched, fine grade mortars for producing a fair-faced finish.

The **Intercrete** range also includes waterproof tie hole fillers and a range of high performance coatings to ensure that a watertight seal is achieved in basements and other water retaining structures.

## Reinstatement of cover

Inadequate concrete cover adversely affects the durability of reinforced concrete. Careless fixing of the formwork or incorrect use of spacers can lead to low cover. This undermines the protection of the steel reinforcement, ultimately leading to spalling of the concrete and expensive maintenance.

**Intercrete** cementitious coatings are engineered so that just a 2mm application provides equivalent protection to a minimum of 100mm of additional good quality concrete cover. Rapidly and easily applied by brush or spray, these high performance coatings offer unparalleled resistance to water, carbon dioxide and chlorides and never need replacing during the design life of the structure.

## Trusted Intercrete protection

There are many reasons why **Intercrete** products have become the preferred choice on new build construction:

- High quality repair and protection solutions for the entire building envelope
- CE marked in accordance with BS EN 1504
- Environmentally friendly formulations
- Proven technology with a 30 year international track record
- Manufactured in the UK in accordance with BS EN 9001 and BS EN 14001 standards



Intercrete products protect many of the world's most iconic new build projects

# Typical problems and challenges in new construction



Whether it's waterproofing, reinstating inadequate cover or simply to fast-track the construction cycle, Intercrete has the ideal solution.

## Reinstating surface defects

**Problem:** Areas of honeycombing, blow-holes and surface voids caused by poor compaction or defects in the formwork placing resulting in grout loss. The surface requires filling to achieve the specified quality of finish.



Intercrete 4822 colours can be blended to match the shade of concrete

**Solution:** A fine, formed finish can be achieved with **Intercrete 4822**, applied using a simple bag-rubbing technique. Available in white and grey formulations, the shades can be blended to match the colour of the parent concrete, resulting in a uniform finish. If any areas need to be cut out, reinstatement can be easily achieved using **Intercrete 4800**, and minor surface defects can be filled using **Intercrete 4825** to give a super-fine finish.

## Low concrete cover

**Problem:** Incorrect positioning of shutters or reinforcement and spacers, as well as problems with compaction often results in low cover to the steel, which can compromise long-term durability and design life of the structure.



Intercrete 4841 exhibits excellent adhesion to both concrete and steel

**Solution:** **Intercrete 4822** or **Intercrete 4800** can be used to reinstate the profile of the concrete, whilst applying two 1mm coats of **Intercrete 4841** by brush or spray provides the equivalent protection to 100mm of good quality concrete cover. **Intercrete 4841** is also an effective barrier to chloride ions and is impermeable to water under 10 bar hydrostatic pressure, making it ideal for demanding applications.

## Waterproofing of tie holes

**Problem:** Tie holes left on removal of formwork in new construction must be filled to provide an integral, even finish. In water retaining structures the tie hole must also be made waterproof to prevent leakage.



Intercrete 4807 is a fast curing, high strength waterproofing solution

**Solution:** Voids can be filled with **Intercrete 4807**, a rapid setting, non-shrink repair mortar. The product has WRAS Approval and is totally waterproof, enabling it to be used in water tanks, even those containing potable water. **Intercrete 4807** can also be used to seal grout holes and voids around fixings in pre-cast elements. It is supplied as a single component system requiring only the addition of clean water to give a durable high strength mortar.

## Waterproofing concrete decks

**Problem:** New build projects need to waterproof and protect freshly cast, green concrete with environmentally friendly products in order to fast track the construction process and achieve significant cost and time savings.



Intercrete water-based coatings for concrete decks are engineered to last

**Solution:** The **Intercrete** range of water based cementitious coatings can be applied to green concrete and are totally waterproof even under a 100m head of water. Incorporating unique epoxy and polymer technology, the **Intercrete 4851** and **Intercrete 4840** systems hydrate rapidly to form highly durable coatings with outstanding abrasion and chemical resistance that are designed to last the life of the structure.