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## Intercrete 4820 Application Guidelines

Prepared by: M&PC Technical Operations

International Paint Ltd.  
[www.international-pc.com](http://www.international-pc.com)

**These guidance notes are intended to assist applicators and are for guidance only; Akzo Nobel accepts no liability for the acts or omissions of any applicators.**

**Applicators must make direct contact with International Protective Coatings to discuss any training requirements for the application of the Intercrete product range PRIOR to any commencement of a project.**

*The information in this guideline is not intended to be exhaustive; any person using the product for any purpose other than that specifically recommended in this guideline without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at their own risk. All advice given or statements made about the product (whether in this guideline or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. THEREFORE, UNLESS WE SPECIFICALLY AGREE IN WRITING TO DO SO, WE DO NOT ACCEPT ANY LIABILITY AT ALL FOR THE PERFORMANCE OF THE PRODUCT OR FOR (SUBJECT TO THE MAXIMUM EXTENT PERMITTED BY LAW) ANY LOSS OR DAMAGE ARISING OUT OF THE USE OF THE PRODUCT. WE HEREBY DISCLAIM ANY WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. All products supplied and technical advice given are subject to our Conditions of Sale. You should request a copy of this document and review it carefully. The information contained in this guideline is liable to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to check with their local International Paint representative that this guideline is current prior to using the product.*

### Protective Coatings

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## SCOPE AND PURPOSE

The International Paint Application Guidelines have been produced and revised in line with the Worldwide Protective Coatings Product Range. The purpose of the guidelines is to ensure that a coating system, as applied, provides adequate protection.

Successful in-service performance of a lining system depends upon both the correct choice of coating and the adoption of the correct guidelines for surface preparation and product application.

The responsibilities for achieving the specific standards outlined, and for carrying out surface preparation and product application, rest with the Contracting Company. Under no circumstances do these responsibilities rest with International Paint. We will generally provide for the presence of a Technical Service Representative at key stages during the performance of the contract. The role of the International Paint Technical Service Representative is advisory only unless otherwise specified in the terms and conditions of the contract. The information contained herein presents guidelines for the application of Intercrete 4820 to both new and existing concrete substrates.

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## 1. Specification

This document provides general guidance on the use of Intercrete 4820. Specific project requirements will be dependent upon the substrate type, substrate condition, service end use and environmental conditions. Always consult International Protective Coatings to confirm that Intercrete 4820 is suitable for the intended end use.

The detailed project specification provided by International Protective Coatings must be followed at all times.

Intercrete 4820 is typically specified upto a maximum of 6mm thickness in a single layer.

## 2. Surface Preparation

In common with most cementitious coatings schemes, the performance level of Intercrete 4820 is ultimately determined by degree of surface preparation. The higher the degree of surface preparation achieved, the greater the long-term performance.

### 2.1 Concrete

All surfaces should be clean and free from laitance, curing compounds, release agents, efflorescence, grease, oil, dirt, old coatings and loose or disintegrating concrete. The preferred methods of surface preparation are wet grit or water blasting techniques. All smooth surfaces must be roughened.

Any defects such as large voids etc. revealed by the surface preparation process must be treated using the appropriate Intercrete products. Examples are given below.

- Stop any water infiltration using **Intercrete 4802** repair mortar. Ensure the concrete substrate is free from water back pressure.
- Fill any larger voids with a suitable Intercrete mortar such as **Intercrete 4802** or **Intercrete 4801**

Any steel reinforcement should be cleaned and treated using **Intercrete 4871**

Thoroughly soak the substrate with clean water until fully saturated. Remove excess water prior to application of Intercrete 4820.

The strength of the concrete substrate should be a minimum of 20MPa.

A primer is not normally required unless the substrate is highly porous. Consult International Protective Coatings for further information,

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### 3. Environmental conditions

#### 3.1 Low Temperature (<10°C (50°F))

The following are general guidelines for the usage of Intercrete products in low temperature environments

- **DO NOT** store or subject Intercrete products to temperatures below 5°C (41°F).
- Application of cement based mortars or coatings should **NOT** be carried out when the air temperature is 5°C (41°F) or less on a falling thermometer.
- Cement based mortars or coatings **MAY** be applied at an air temperature above 2°C (36°F) on a rising thermometer, providing the following precautions are taken:
  - The temperature of the materials at the time of placing is at least 5°C (41°F).
  - The substrate concrete must be free from snow, ice and frost and be at a temperature of at least 5°C (41°F). Concrete temperatures are to be measured at the surface at the most unfavourable position.
  - Cementitious materials will have set and have started to gain strength and before being subjected to freezing temperatures.
- Use insulation materials where appropriate. Bubble wrap, polystyrene sheet, etc, are suitable and should be placed immediately after the repair has been completed for maximum protection.
- Saturate the concrete substrate with warm water
- Drying times and overcoating times are extended at low temperatures

#### 3.2 High Temperature (>35°C (95°F))

The following are general guidelines for the usage of Intercrete products in high temperature environments

- Thoroughly soak concrete substrates with clean cold water until fully saturated. Remove excess water.
- In extreme conditions continuous rewetting of the surface may be required to stop absorption.
- On floor areas flood the surface with clean water the night before application.
- Avoid working in direct sunlight. Construct temporary shelter or work during the cooler parts of the day (early morning, evening or overnight under flood lights).
- Store the products at a cool temperature well in advance of use, to extend working life when mixed.
- Keep mixing and application equipment in shade, away from heat.
- Use mixed materials without delay. Mix only sufficient material that can be placed within the working life of the material. Avoid mixing large quantities. High application temperatures can greatly reduce the working life of cementitious products.
- Where applicable apply **Intercrete 4870 curing membrane** liberally to the surface immediately after the application of the cement based mortar or cementitious coating. In extreme conditions apply a second coat.

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#### 4. Mixing

Intercrete 4820 is supplied as a single component powder. Pour 2.8 to 3.2 litres of clean water into a mixing vessel then add one 25kg bag of Intercrete 4820. Mix using a slow speed drill and paddle with a maximum speed of 750rpm. Mix for 2-3 minutes to an even consistency. **DO NOT USE A CONCRETE MIXER.**

For part mixing, use 6.5 parts Intercrete 4820 powder to 1 part clean water by volume.

Working pot life is approximately 30 minutes at 20°C

During early mixing, Intercrete 4820 may appear dry. This is normal. Do not add extra water at this stage. Full mixing produces a smooth consistency.

#### 5. Application

**Localised minor voids and surface defects** - Apply Intercrete 4820 with a palette knife or trowel ensuring an initial layer makes good contact with the prepared substrate prior to building up to 6mm thickness as required.


**Pore Filling** – Apply using a bag rubbing technique using a sponge or rag on small areas. On larger areas, use a sponge or wooden float.

**Thin Screed** – Work an initial thin layer into the surface using a steel float to fill blow holes and minor defects. Build thickness up to a maximum of 6mm as required. Where a multi-layer application is required, finish the first layers using a wooden or plastic float. Allow to stabilise, but do not leave to fully cure prior to applying subsequent layers. A smooth finish can be achieved using a steel float. Where a roughened finish (e.g. like sand paper) is required for subsequent application of coatings, this can be achieved using a wooden float or damp sponge

It is important that the surface of Intercrete 4820 is protected from strong sunlight and drying winds via the immediate application of **Intercrete 4870** curing membrane. Note: two coats of Intercrete 4870 may be required in extreme high temperature environmental conditions – see section 3.2

Notes:

- Do not over trowel when applied as a thin screed. Blisters may form and will need to be removed.
- If the Intercrete 4820 starts to thicken, remix, but do not add extra water.

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