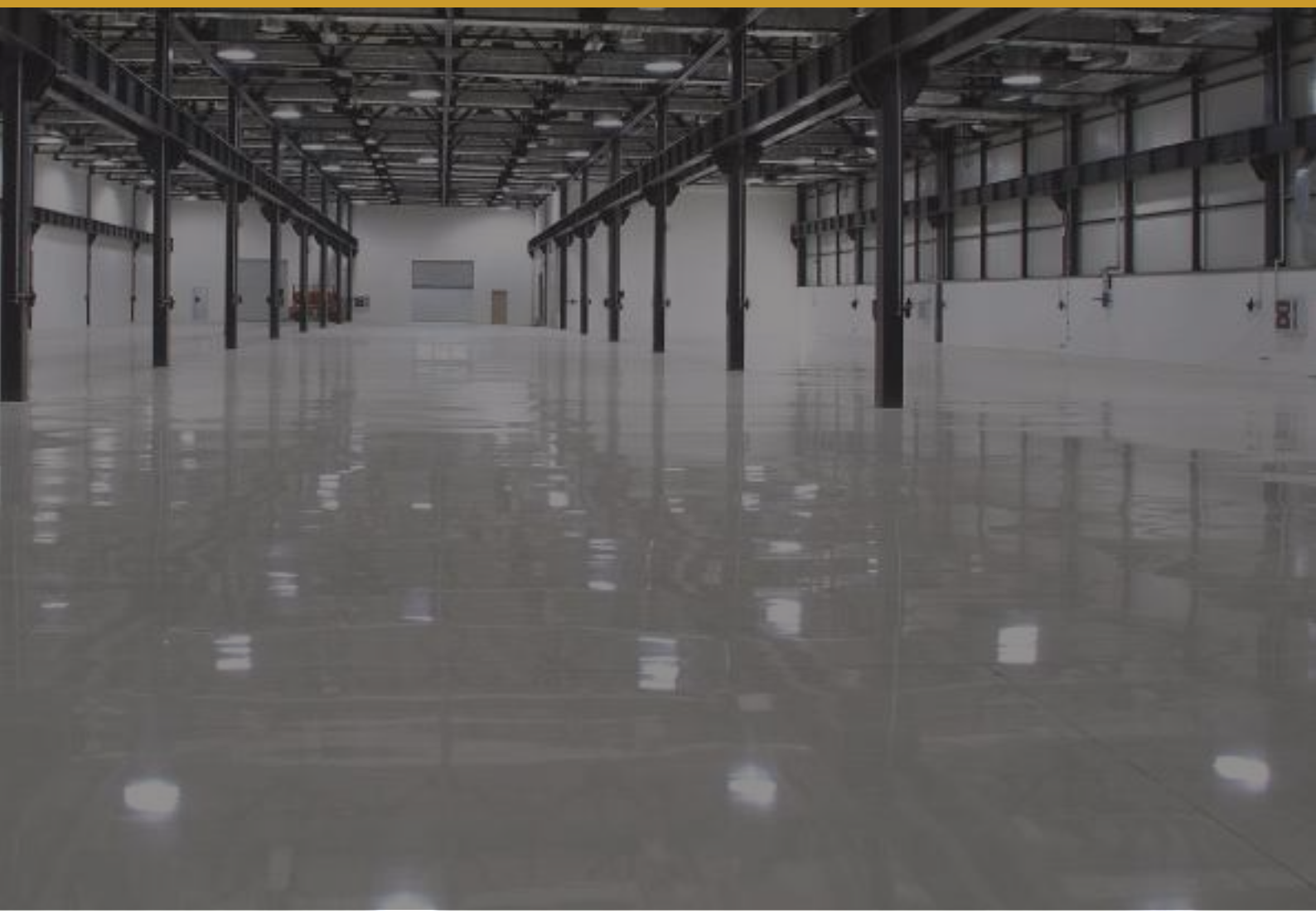
Carbolink's Solutions for :

Industrial Flooring



Industrial Flooring Product Specifications & Technical Data Sheets(TDS)

India's Most Preferred
Construction Chemical Manufacturing Brand

Carbolink India Pvt. Ltd.

WWW.CARBOLINKINDIA.COM

Carbolink India Pvt. Ltd.
COMPANY PROFILE

For years, Carbolink India has been the Quality Leader in offering excellent Construction Chemical Products with Supreme Quality and Reliability.

Carbolink India Manufactures Industrial Flooring(Epoxy & PU Flooring), Decorative Flooring, 3D Flooring, Waterproofing Systems, corrosion protection, wood coatings, etc. which cater specifically to the Indian climate.With manufacturing facility in India, Carbolink India manufactures and supply Materials all through the country. Carbolink's commitment to customer service and technical support is the best. We work closely with architects, structural engineers, contractors and owners to best understand their requirements. Together we develop a best solution for a construction project, adding value and becoming more than just a materials supplier, but a solution provider.

With the support of our multinational manufacturing group, Carbolink India today has support centers across the country, strategically placed to provide consistent high standards of product and service.

Our Product Range:

- Anti Corrosive Coatings
- Car Park Flooring
- Curing Coumpounds
- Decorative Flooring
- Floor Hardner
- Grounts & Anchors

- Industrial Flooring
- Reparing Compunds
- Sealants
- Sports Flooring
- Tiling Products
- Wood Coatings

Industrial Flooring

Specialist applied, polyurethane resin floor finishes, combining outstanding wearing properties with high chemical resistance and pleasing decorative properties. Ideally suited in aggressive areas where a seamless, joint free finish is required and maximum cleanliness is essential. Factories and general heavy duty plant and traffic areas are just some of the environments that can benefit from the tough chemically resistant system.

Carbolink manufactures a full range of world class Industrial Flooring systems providing the most up-to-date technologies. Carbolink India is a leader in tailored Industrial Flooring Solutions.

Here is our Industrial Flooring Products range:

CLICRETE

Medium Duty Polyurethane Screed

HIGH PERFORMANCE, POLYURETHANE RESIN FLOORING SYSTEM, SUPPLIED AS FOUR PARTS IN PRE-MEASURED PACKS FOR EASE OF ON SITE MIXING AND USE. THE CURED SYSTEM FORMS A TOUGH, EASILY CLEANED PIGMENTED LAYER FROM 2mm UP TO 5mm THICK.

FEATURES
Hard wearing - extremely durable and abrasion resistant with low maintenance costs
Resistant to a wide range of chemicals and liquids
Seamless - easily cleaned to maintain high standards of hygiene

STANDARD COLORS
Available to any standard RAL Card upon request

DESCRIPTION
Specialist applied, polyurethane resin floor finishes, combining outstanding wearing properties with high chemical resistance and pleasing decorative properties. Ideally suited in aggressive areas where a seamless, joint free finish is required and maximum cleanliness is essential. Factories and general heavy duty plant and traffic areas are just some of the environments that can benefit from the tough chemically resistant system.

SURFACE PREPARATION
The concrete or screed substrate must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues etc., that will inhibit adhesion to the substrate.

Use a suitable Degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated concrete surfaces should be mechanically prepared, either by scabbling, grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to applying CLICRETE. Overwatered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.
NOTE : Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface and suitably sealed. New concrete slabs must be allowed to cure for at least 14 days.

To ensure maximum bond, grooves must be cut into the perimeter of the sub-floor, typically 8 mm deep by 8 mm wide. These should be inset approximately 100mm from and running parallel with the walls and adjacent to doorways and plinths etc., including any finishing edges and day joints. The grooves must have clean, square edges and the product laid into the full depth of the groove forming a perimeter anchorage. Grooves should surround areas not exceeding 20 m².

STEEL PLATES
Steel decking must be cleaned, sound and properly supported to prevent flexing. Deck plate of less than 4 mm thick is not recommended. Surface should be short blasted to SA2.5 and primed using IF N18 Solvent Free Epoxy Primer.

PRIMING
All appropriate substrates to receive CLICRETE must first be primed with IF N18 Solvent Free Epoxy Primer.One or more coats of primer may be required depending upon the condition and porosity of the concrete substrate. The final coat of IF 1 E Solvent Free Epoxy Primer may be seeded with Fine Aggregate to aid application.

MIXING
The contents of Part A and Part B of CLICRETE must first be mixed together for 1 minute, using forced action, in a suitably sized mixing vessel. The contents of Part C the powder component and Part D pigment sachet should then be introduced into the mixed resin and mixed together for a further 2 minutes to create one homogeneous mix. One or more packs may be mixed at the same time in order to maintain a quick rate of installation.

APPLICATION
For flooring applications, the mixed material should be applied to the prepared and primed surface between 8 and 24 hours after priming, using a trowel to achieve the desired thickness. As soon as the product has been laid and as work progresses, the surface should be gently rolled with a spiked roller in order to provide an even surface appearance. Do not re-roll later. The work area should be protected during the installation process and during the initial curing time to ensure that no airborne debris can contaminate the surface of the wet resin as this will lead to unwanted blemishes in the hardened, cured surface.

All movement joints in the sub-floor must be carried through the topping and properly sealed. Construction joints and cracks not subject to movement may be overlaid but should the floor move in any way, these defects will reflect through the system. Isolation joints will need to be allowed for in areas where high thermal movement is anticipated, e.g. around ovens and freezers.

LIMITATIONS
CLICRETE should only be applied at temperatures above 5°C and where the atmospheric relative humidity (RH) is 90% or below. Floors should have a RH of 75% or less. For floors with an RH of more than 75%, the entire floor area should be treated with CLI DPM Surface Damp Proof Membrane applied and seeded with Fine Aggregate, in accordance with the current product data sheet, in place of if 1 eSolvent Free Epoxy Primer. The substrate should have a surface tensile strength of at least 1.5 N/mm². CLICRETE and primer/ CLI DPM Surface Damp Proof Membrane may be applied to substrates of a lower strength, but long-term performance may be impaired. Once the mixed material has exceeded its pot life, the viscosity and the characteristics of the product will change and any unused product should be discarded at this time.

CLEANING
CLICRETE can be removed from tools and equipment by using CLI RTC 100 immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of results obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

CLICRETE	@ 27 ± 1ºC
Pot life	20 mins
Light traffic	24 hours
Full traffic	48 hours
Full cure	7 days
Bond strength	> 1.5 N/mm²
Compressive strength DIN EN ISO 604	51 N/mm²
Flexural strength DIN EN ISO 178	18 N/mm²
Tensile strength DIN EN ISO 527	7 N/mm²
Shore D Hardness	75
Abrasion resistance	Classified 'Special Duty' under BS 8204:Part 2:2002(9)
Slip resistance	Classified 'Satisfactory' under BS 8204: Part 2: 2002(9), wet and dry
Impact resistance	Classified 'High Impact Resistance' under BS 8204: Part 1: 1999

COVERAGE ESTIMATES

Pack size	Coverage
16.50kg Part A 2.32kg Part B 2.94kg Part C 10.84kg Part D 400g	Approximately 3.30 m² when applied at a thickness of @ 2 mm thick

NOTE: These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE
CLICRETE has a shelf life of 6 months if kept in a dry store between 5ºC and 30ºC in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

COLOURS
CLICRETE is available in six standard colours: green, grey, orange, red, cream and yellow. Other colours may be available to special order, subject to quantity and technical requirements.
CLI polyurethane floor systems are formulated to maximise the mechanical and chemical resistance properties, as a result of this, these types of systems are discoloured by ultraviolet light leading to a “yellowing effect”. This yellowing effect is dependent upon the amount of UV exposure, both in terms of intensity and time, and is more noticeable with lighter colours.

PRECAUTIONS
During mixing and application the following precautions should be observed: ensure adequate ventilation and avoid contact of the material with the eyes, nasal passages, mouth and unprotected skin. Avoid contact with the hands by wearing protective gloves and by using, if necessary, a suitable barrier cream. In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to resin-based materials. Always wear gloves and eye/face protection as necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL/SPILLAGE
Spillage of any of the component products should be absorbed onto sand or other inert material and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

CONDITION OF SALE
Sold subject to the Company's conditions of sale which are available on request.

NOTE
The information supplied in this datasheet is based upon extensive experience and is given in good faith in order to help you. Our Company policy is one of continuous Research and Development; we therefore reserve the right to update this information at any time without prior notice. We also guarantee the consistent high quality of our products; however as we have no control over site conditions or the execution of the work, we accept no liability for any loss or damage which may arise as a result thereof.

CLICRETE HD

Rake and Trowel Grade High Polyurethane Screed

HIGH PERFORMANCE, POLYURETHANE RAKE AND TROWEL RESIN FLOORING SYSTEM, SUPPLIED AS FOUR PARTS IN PRE-MEASURED PACKS FOR EASE OF ON SITE MIXING AND USE. THE CURED SYSTEM FORMS A TOUGH, EASILY CLEANED, PIGMENTED LAYER FROM 4mm UP TO 9mm THICK

FEATURES
Easily applied by rake and trowel
Hard wearing - extremely durable and abrasion resistant with low maintenance cost
Facilitates rapid application
Resistant to a wide range of chemicals and liquids
Independently tested - suitable for use in food and drinks production environments
Seamless - easily cleaned to maintain high standards of hygiene
Resistant to thermal shock - at 9 mm thick can withstand steam cleaning regimes

STANDARD COLORS
Available to any standard RAL Card upon request

DESCRIPTION
Specialist applied, polyurethane resin floor finish, combining outstanding wearing properties with high chemical resistance and decorative properties. Ideally suited to aggressive areas where a seamless, joint free finish is required and maximum cleanliness is essential. Food processing and storage, abattoir's, drinks production, dairies and general heavy duty plant and traffic areas are just some of the environments that can benefit from this slip resistant system. CLICRETE HD has been formulated to give an easily worked system that can be applied quickly and easily by using a pin rake, only requiring finishing with a trowel to give the required finish.

SURFACE PREPARATION
The concrete or screed substrate must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues etc, that will inhibit adhesion to the substrate.

Use suitable Degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated concrete surfaces should be mechanically prepared, either by scabbling, grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to applying CLICRETE HD. Overwatered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.
NOTE : Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface and suitably sealed. New concrete slabs must be allowed to cure for at least 14 days.

To ensure maximum bond, grooves must be cut into the perimeter of the sub-floor, typically 8 mm deep by 8 mm wide. These should be inset approximately 100mm from and running parallel with the walls and adjacent to doorways and plinths etc., including any finishing edges and day joints. The grooves must have clean, square edges and the product laid into the full depth of the groove forming a perimeter anchorage. Grooves should surround areas not exceeding 20 m².

STEEL PLATES
Steel decking must be clean, sound and properly supported to prevent flexing. Deck plate of less than 4mm thick is not recommended. Surfaces should be shot blasted to SA2.5 and primed using IF N18 Solvent Free Epoxy Primer.

PRIMING
All appropriate substrates to receive CLICRETE HD must first be primed with IF 1 E Solvent Free Epoxy Primer. One or more coats of primer may be required depending upon the condition and porosity of the concrete substrate. The final coat of IF N18 Solvent Free Epoxy Primer must be seeded with Fine Aggregate to provide a mechanical key.

MIXING
The contents of Part A and Part B of CLICRETE HD must first be mixed together for 1 minute, using forced action, in a suitably sized mixing vessel. The contents of Part C and Part D pigment sachet should then be introduced into the mixed resin and mixed together for a further 2 minutes to create one homogeneous mix. One or more packs may be mixed at the same time in order to maintain a quick rate of installation.

APPLICATION
The mixed material should be applied to the prepared and primed surface without delay using a pin rake to achieve the desired thickness and closed with a steel trowel.

NOTE : If a smoother texture is required, as soon as the product has been laid and as work progresses, the surface should be gently rolled with a short piled roller in order to provide an even surface appearance. Do not over roll the surface, as this will reduce the texture of the surface finish. Do not re-roll later.

The work area should be protected during the installation process and during the initial curing time to ensure that no airborne debris can contaminate the surface of the wet resin as this will lead to unwanted blemishes in the hardened, cured surface.

All movement joints in the sub-floor must be carried through the topping and properly sealed. Construction joints and cracks not subject to movement may be overlaid but should the floor move in anyway, these defects will reflect through the system. Isolation joints will need to be allowed for in areas where high thermal movement is anticipated, e.g. around ovens and freezers.

LIMITATIONS
CLICRETE HD should only be applied at temperatures above 5 degree C and where the atmospheric relative humidity (RH) is 90% or below. Floors should have an RH of 75% or less. For floors with an RH of more than 75%, the entire floor area should be treated with CLI DPM Surface Damp Proof Membrane applied and seeded with Fine Aggregate, in accordance with the current product data sheet, in place of IF 1 E Solvent Free Epoxy Primer. The substrate should have a surface tensile strength of at least 1.5 N/mm2 .

CLICRETE HD and primer / CLI DPM Surface Damp Proof Membrane may be applied to substrates of a lower strength but long term performance may be impaired. Once the mixed material has exceeded its pot life, the viscosity and the characteristics of the product will change and any unused product should be discarded at this time.

CLEANING
CLICRETE HD can be removed from tools and equipment by using CLI RTC 100 immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of results obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

CLICRETE HD	@ 27 ± 1ºC
Pot life	20 mins
Light traffic	24 hours
Full traffic	48hrs
Full cure	7 days
Bond strength	> 1.5 N/mm²
Compressive strength DIN EN ISO 604	53 N/mm²
Flexural strength DIN EN ISO 178	12 N/mm²
Tensile strength DIN EN ISO 527	7 N/mm²
Shore D hardness	75
Abrasion resistance	Classified 'Special Duty' under BS 8204:Part 2:2002(9)
Slip resistance	Classified 'Satisfactory under BS 8204: Part 2: 2002(9), wet and dry
Impact resistance	Classified 'High Impact Resistance' under BS 8204: Part 1: 1999

COVERAGE ESTIMATES

Pack size	Coverage
31.66kg Part A 2.32kg Part B 2.94kg Part C 26kg Part D 400g	Approximately 2.3 m² when applied at a thickness of @ 5 mm thick

NOTE: These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE
CLICRETE HD has a shelf life of 6 months if kept in a dry store between 5ºC and 30ºC in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

COLOURS
CLICRETE HD is available in six standard colours: green, grey, orange, red, cream and yellow. Other colours may be available to special order, subject to quantity and technical requirements.
CLI polyurethane floor systems are formulated to maximise the mechanical and chemical resistance properties, as a result of this, these types of systems are discoloured by ultraviolet light leading to a “yellowing effect”. This yellowing effect is dependent upon the amount of UV exposure, both in terms of intensity and time, and is more noticeable with lighter colours.

PRECAUTIONS
During mixing and application the following precautions should be observed: ensure adequate ventilation and avoid contact of the material with the eyes, nasal passages, mouth and unprotected skin. Avoid contact with the hands by wearing protective gloves and by using, if necessary, a suitable barrier cream.

In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to resin-based materials. Always wear gloves and eye/face protection as necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL/SPILLAGE
Spillage of any of the component products should be absorbed onto sand or other inert material and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

CONDITION OF SALE
Sold subject to the Company's conditions of sale which are available on request.

NOTE
The information supplied in this datasheet is based upon extensive experience and is given in good faith in order to help you. Our Company policy is one of continuous Research and Development; we therefore reserve the right to update this information at any time without prior notice. We also guarantee the consistent high quality of our products; however as we have no control over site conditions or the execution of the work, we accept no liability for any loss or damage which may arise as a result thereof.

IF 2 E

Solvent Based Epoxy Primer

TWO COMPONENT SOLVENT BASED EPOXY PRIMER FOR USE ON DRY CONCRETE / DRY SAND CEMENT SCREED SURFACE WITH SELF-LEVELLING EPOXY SCREED

FEATURES
Two component solvent based epoxy primer
For use on dry concrete / dry sand cement screed surface with self - levelling epoxy screed

DESCRIPTION
IF 2 E is a two component solvent based epoxy primer for use with CLI self - levelling epoxy screed. For internal use, where surfaces are very porous, more than one coat of primer may be required to achieve the desired bonding efficiency.
For applications on new concrete or where the relative humidity (RH) of the substrate is in excess of 75%, CLI DPM Surface Damp Proof Membrane should be used.

SURFACE PREPARATION
The concrete or screed substrate must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues etc., that will inhibit adhesion to the substrate.

Use a suitable Degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated concrete surfaces should be mechanically prepared, either by scabbling, grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to applying IF 2 E. Overwatered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.
NOTE: Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface and suitably sealed. New concrete slabs must be allowed to cure for at least 14 days.

MIXING
The individual contents of the IF 2 E should be thoroughly stirred before being mixed together. The entire contents of the PART B should be poured into the PART A and the two materials mixed thoroughly for at least 3 minutes using a heavy duty slow speed drill and spiral paddle. Some of the mixed components should be reintroduced back into the hardener container in order to activate any residue and then poured back into the larger mixing vessel and re-mixed for 30 seconds. Mixing in this way will ensure product consistency and that any resin that remains in the containers after application will cure to provide for easier waste disposal.

APPLICATION
Once mixed, the material should be spread over the floor as self-heating in the container will reduce working time. Apply using a brush or short/medium pile roller. One or more coats may be needed to ensure that a uniform coating is achieved and to compensate for differences in surface porosity.All movement joints in the sub-floor must be carried through the topping and properly sealed. Construction joints and cracks not subject to movement may be overlaid but should the floor move in anyway, these defects will reflect through the system. Isolation joints will need to be allowed f or in areas where high thermal movement is anticipated, e.g. around ovens and freezers.

CLEANING
IF 2 E can be removed from tools and equipment by using CLI Eco Sol 205 immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of result obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

IF 2 E	@ 27 ± 1ºC
Working time	2 hours
Walkability	24 hours
Over coating	After 24 hours
Bond Strength	> 2.0 N/mm2

7 days
IF 2 E should be allowed to cure prior to the installation of the final floor finish, typically 24 hours at 27 ± 1ºC.

COVERAGE ESTIMATES

Pack Size	Coverage
5kg	Approximately
Part A 3.33kg	24 m² per coat
Part B 1.67kg	

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE

IF 2 E has a shelf life of 12 months if kept in a dry, store between 5ºC and 30ºC in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

PRECAUTIONS

The hardener which contains Tris 2,4,6 dimethyl amino methyl phenol and amines classified as corrosive and the epoxy resin which contains bisphenol A/F–epichlorhydrin, can be irritating to the eyes and skin, and may cause sensitisation by contact. They are considered harmful in contact with the skin and if swallowed. During mixing and application the following precautions should be observed: ensure adequate ventilation and avoid contact of the material with the eyes, nasal passages, mouth and unprotected skin. Avoid contact with the hands by wearing protective gloves and by using, if necessary, a suitable barrier cream.

In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonge contact with the skin should be avoided, especially where the user has an allergic reaction to epoxide materials. Always wear gloves and eye / face protection as necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL/SPILLAGE

Spillage of any of the component products should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

CONDITIONS OF SALE

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NOTE

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IF 3 E

Solvent Free Epoxy Primer

TWO SOLVENT FREE EPOXY PRIMER FOR USE WITH CLI POLYURETHANE SCREEDS AND SELF-SMOOTHING EPOXY FLOOR COATINGS

FEATURES

Two component Solvent Free Epoxy Primer
Easy to apply
For internal or external use
Seals substrate and acts as an adhesive bridge
For use with CLI polyurethane, epoxy and cement-based systems

DESCRIPTION

IF 3E is a two component for use with CLI polyurethane screeds and self-smoothing epoxy floor coatings. Blind with Fine Aggregate and use as a primer prior to applying thick applications of the CLI Industrial Floor System, or other appropriate CLI cement-based products.
Where surfaces are very porous, more than one coat of IF 3E may be required to achieve the desired bonding efficiency.

For applications on new concrete or where the relative humidity (RH) of the substrate is in excess of 75%, CLI DPM Surface Damp Proof Membrane should be used. If the substrate is particularly smooth, the surface of the IF 3E should be seeded with Fine Aggregate immediately after application to give a mechanical key to facilitate installation of resin screeds and toppings.

SUBSTRATE PREPARATION

The concrete or screed substrate must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues etc., that will inhibit adhesion to the substrate.

Use Degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated concrete surfaces should be mechanically prepared, either by scabbling, grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to applying IF 3 E. Overwatered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.

NOTE : Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface and suitably sealed. New concrete slabs must be allowed to cure for at least 14 days.

MIXING

The individual contents of the IF 3E should be thoroughly stirred before being mixed together. The entire contents Part B should be poured into Part A andthe two materials mixed thoroughly for at least 3 minutes using a heavy duty slow speed drill and spiral paddle. Some of the mixed components should be reintroduced back into the hardener container in order to activate any residue and then poured back into the larger mixing vessel and re-mixed for 30 seconds. Mixing in this way will ensure product consistency and that any resin that remains in the containers after application will cure to provide for easier waste disposal.

APPLICATION

Once mixed, the material should be spread over the floor as self-heating in the container will reduce working time. Apply using a brush or short / medium pile roller. One or more coats may be needed to ensure that a uniform coating is achieved and to compensate for differences in surface porosity. All movement joints in the sub-floor must be carried through the topping and properly sealed. Construction joints and cracks not subject to movement may be overlaid but should the floor move in anyway, these defects will reflect through the system. Isolation joints will need to be allowed for in areas where high thermal movement is anticipated, e.g. around ovens and freezers.

PHYSICAL PORPERTIES

IF 3E	@27± 1ºC
Working Time	50 minutes
Walkability	24 hours
Curing Time	7 days
Bond Strength	> 2.5N/mm2

IF 3E should be allowed to cure prior to the installation of the final floor finish, typically 24 hours at 27± 1 C.

COVERAGE ESTIMATES

Pack Size	Coverage
5kg unit	Approximately
Part A 3.125kg	20 - 25 m² per coat
Part B 1.875kg	

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE

Store in dry conditions. IF 3E has a storage life of not less than 12 months in the original unopened containers.

PRECAUTIONS

The epoxy resin which contains bisphenol A/Fepichlorhydrin, can be irritating to the eyes and skin, and may cause sensitisation by contact. They are considered harmful in contact with the skin and if swallowed. During mixing and application the following precautions should be observed: ensure adequate ventilation and avoid contact of the material with the eyes, nasal passages, mouth and unprotected skin. Avoid contact with the hands by wearing protective gloves and by using, if necessary, a suitable barrier cream.

In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to epoxide materials. Always wear gloves and eye/face protection as necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

SURFACE PREPARATION

Thorough and appropriate surface preparation is essential for the long-term performance of the floor and is the foundation of any good flooring installation. The choice of technique to be used will be determined by the site conditions and sometimes will necessitate a combination of methods to ensure that a satisfactory substrate is achieved.
Suitable methods include contained shot blasting and surface planing or scabbling.
Very oily or grease contaminated floors need particular care and treatment such as hot compressed air which should be used in combination with degreasing and mechanical preparation.

Diamond grinders, along with scabbling machines, can also be used to remove high spots from the surface; some scabbling machines can remove up to 6mm of concrete in one pass and can therefore help to control levels.

Whichever technique is used, the edges of the floor and any other areas where the large surface preparation machines cannot reach must also be prepared, typically by edge grinding.

NOTE : Percussive scabbling is not normally recommended.

A visual examination of the concrete surface is essential but will only give an overview of surface condition and damage sustained. The physical condition of the concrete also needs to be assessed for strength, including pull-off strength, moisture content and presence of an effective damp proof membrane.

Surface strength should be tested after preparation, in accordance with BS 8204-6:2001, which recommends a rebound hammer strength of 25 N/mm^2 or a minimum surface tensile strength of 1.5 N/mm^2 .

The long-term performance of any system bonded to a substrate depends on the adhesion achieved, which itself depends upon the substrate having sufficient cohesive strength and being thoroughly prepared. New direct finished base slabs or fine concrete screeds should be designed in accordance with BS 8204-1: 1999, laid to falls as necessary and not contain a water repellent admixture.

Minor repairs to cracks or holes should be carried out using an appropriate product. Any joints or cracks subject to \ movement must be brought through to the final floor finish and a suitable movement joint profile and nosing joint detail used to avoid reflective cracking. Any resin based repairs which will be covered by CLI Industrial Products must be hard, sound and blinded with an appropriate aggregate. Once a new industrial floor has been installed it should be protected from other trades and contamination until the recommended curing period has elapsed.

MAINTENANCE OF RESIN FLOORINGS

The floor finish provides an aesthetic finish, a wearing surface and protects the substrate concrete from chemicals. To ensure that the appearance of the flooring is kept at its best, performs as it should and stays in the required hygienic condition, it is important to follow good housekeeping and identify an appropriate regular cleaning regime. Generally a mechanical scrubber fitted with appropriate brushes and clean water rinsing, incorporating wet vacuum, will be most

effective (using up to a maximum water temperature of 50 degree C for epoxy systems). The use of the traditional mop and bucket technique is not appropriate.
Heavily trafficked areas need to be cleaned more frequently. Only use cleaning liquids, such as neutral or low alkali detergents, which are recommended for use with resin flooring and ensure that the correct dilution is used. Beware of cleaning liquids / polishes that may leave an oily or otherwise slippery residue.

NOTE : Phosphoric acid based cleaners can damage epoxy resin based materials and hypochlorite based materials can cause bleaching. Undiluted cleaning chemicals can be very aggressive and can stain and even damage some resin flooring.In food preparation areas and other high hygiene areas, pressure washing with a bactericide at 60 degree C to 80 degree C or steam cleaning should be used (for floors suitable for steam cleaning, a 9mm thickness of CLI CRETE Heavy Duty Polyurethane Screed should be specified).

Any spillages of chemicals, particularly corrosive chemicals, should be cleaned off the surface as soon as possible to minimise the risk of damage or discolouration to the floor. Drip trays should be used if necessary. If spillages are allowed to dry, this results in higher concentrations of the materials which may lead to discolouration or even early failure; dried deposits of mineral based cleaners can be extremely difficult to remove.

Any mechanical damage to the floor surface should be repaired as soon as possible to minimise the risk of damage spreading and the possibility of liquids penetrating along the bond line. Thin coatings may need to be overcoated periodically to maintain performance, particularly in high traffic areas.

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IF - 5 P

Polyureythane Coving and Wall Render

HIGH PERFORMANCE, POLYURETHANE RESIN, WALL AND COVING SYSTEM, SUPPLIED AS FOUR PARTS IN PRE-MEASURED PACKS FOR EASE OF ON SITE MIXING AND USE. THE CURED SYSTEMS FORMS A TOUGH, EASILY CLEANED, PIGMENTED LAYER FROM A FEATEHR EDGE UP TO 12 mm

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FEATURES
Hard wearing - extremely durable and abrasion resistant with low maintenance costs
Resistant to a wide range of chemicals and liquids
Seamless - easily cleaned to maintain high standards of hygiene
Resistant to thermal shock - at 9 mm thick can withstand steam cleaning regimes

STANDARD COLOURS
Available to any standard RAL Card upon request.

DESCRIPTION
Specialist applied, polyurethane resin, wall and coving finish, combining outstanding wearing properties with high chemical resistance and decorative properties. Ideally suited for aggressive areas where a seamless, joint free finish is required and maximum cleanliness is essential. Food processing and storage, abattoir's, drinks production, dairies and general heavy duty plant and traffic areas are just some of the environments that can benefit from this system.

SURFACE PREPARATION
The substrate must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues etc., that will inhibit adhesion to the substrate. All vertical surfaces must be of a rigid construction to resist deflection during the application process.

Use suitable Degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated substrates should be mechanically prepared, either by grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to applying IF - 5 P.
NOTE : Any joints or cracks in the substrate where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface.

PRIMING
PRIMING
All substrates must first be primed with IF N18 Primer. One or more coats may be required depending upon the condition and porosity of the substrate.

MIXING
The contents of Part A and Part B of IF 5P must first be mixed together for 1 minute, using forced action, in a suitably sized mixing vessel. The contents of part C and Part D should then be introduced into the mixed resin and mixed together for a further 2 minutes to create one homogeneous mix.

APPLICATION
Once the tack coat has achieved the required tack, the mixed material should be applied to the prepared and primed substrate without delay using a trowel to achieve the desired thickness and coving profile.
NOTE : Do not overwork the surface and do not mix more than can be used within the working time.

The work area should be protected during the installation process and during the initial curing time to ensure that no airborne debris can contaminate the surface of the wet resin as this will lead to unwanted blemishes in the hardened, and cured surface.
All movement joints in the substrate must be carried through the wall and coving render and properly sealed. Construction joints and cracks not subject to movement may be overlaid but should the substrate move in anyway, these defects will reflect through the wall and coving render. Isolation joints will need to be allowed for in areas where high thermal movement is anticipated, e.g. around ovens and freezers.

LIMITATIONS
IF 5 P should only be applied at temperatures above 5°C. Substrates should be dry and not affected by rising damp. Concrete or other cementitious substrates should have a surface tensile strength of at least 1.5 N/mm². IF 5 P may be applied to substrates of a lower strength, but the long-term performance may be impaired. Once the mixed material has exceeded its pot life, the viscosity and the characteristics of the product will change and any unused product should be discarded at this time.

CLEANING
IF 5 P can be removed from tools and equipment by using CLI Eco Sol 205 immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of results obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

IF 5 P	@ 27 ± 1ºC
Pot life	10 mins
Light traffic	24 hrs
Full traffic	48 hrs
Full chemical cure	7 days
Bond strength	> 1.5 N/mm²
Compressive strength	45 N/mm²
Flexural strength	11 N/mm²
Tensile strength	5 N/mm²

COVERAGE ESTIMATES

Pack size	Coverage
13.934kg	Approximately 1.4 m² when applied
Part A 934g	at a thickness of
Part B 1kg	@ 5 mm thick
Part C 11.60kg	
Part D 400g	

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE
IF 5 P has a shelf life of 6 months if kept in a dry store between 5ºC and 30ºC in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

PRECAUTIONS
During mixing and application the following precautions should be observed: ensure adequate ventilation and avoid contact of the material with the eyes, nasal passages, mouth and unprotected skin. Avoid contact with the hands by wearing protective gloves and by using, if necessary, a suitable barrier cream. In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to resin-based materials. Always wear gloves and eye/face protection as necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL/SPILLAGE
Spillage of any of the component products should be absorbed onto sand or other inert material and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

CONDITIONS OF SALE
Sold subject to the Company's conditions of sale which are available on request.

NOTE
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IF 10 C

Low Viscosity Repair System And Renovation Coating for Application To Polyurethne Floors

HIGH PERFORMANCE, POLYURETHANE RESIN COATING, SUPPLIED AS FOUR PARTS IN PRE-MEASURED PACKS FOR EASE OF ON SITE MIXING AND USE. THE CURED SYSTEM FORMS A TOUGH, EASILY CLEANED PIGMENTED LAYER ON EXISTING POLYURETHANE TOPPINGS

FEATURES
Hard wearing
Resistant to a wide range of chemicals and liquids
Suitable for use in food and drinks production environments
Seamless - easily cleaned to maintain high standards of hygiene

STANDARD COLOURS
Available to any standard RAL Card upon request.

DESCRIPTION
IF 10 C is a solvent free, low viscosity repair material which may also be used as a coating for application to polyurethane floors, such as CLI CRETE Rake and Trowel Grade Heavy Duty Polyurethane Screed.

IF 10 C can be extensively used for applications where a thin coating is required to reduce texture or improve appearance and cleaning. IF 10 C is also suitable for application as a line marking paint on previously applied polyurethane floors, such as CLI Crete floor systems.

SURFACE PREPARATION
All substrates must be clean and free from dust and loose particles. All traces of contaminants, such as oils, fats, greases, paint residues, chemicals, algae and other barriers to adhesion should be removed.
Good surface preparation is vital to ensure the successful application and performance of IF 10 C.

As IF 10 C is used on previously applied polyurethane floors appropriate surface preparation techniques will depend on the condition of the floor. If the floor is less than 48 hours old the IF 10 C can be applied directly after any dust and contamination is removed. Older floors will require surface grinding or abrasion with a coarse nylon pad in combination with a strong alkali detergent.

PRIMING
Pour the contents of Part A and Part B into a small mixing bucket and mix using a small helical mixing paddle and electric drill for 30 seconds or until uniform. The contents of Part C and Part D should then be introduced into the mixed resin and mix together for further 2 minutes to create one homogenous mix.

APPLICATION
The mixed material should be applied without delay to the prepared substrate using a brush, roller or rubber squeegee, depending on thickness and finish required. Roll in a scatter of Fine Aggregate to give a slip resistant texture if required.
If used to reduce the texture of an existing floor surface, care should be taken to ensure the application is uniform and leaves the appropriate finish intended. For repairs pour into cracks, topping up as necessary, or apply with a spatula for cracks up to 5 mm, isolated areas up to 10 mm wide.

For larger cracks / repairs mix in up to half volume of Fine Aggregate. Once cured overcoat with an application of neat IF 10 C.

LIMITATIONS
Only apply IF 10 C at temperatures above 5°C and where the atmospheric relative humidity (RH) is 90% or below. Do not apply when atmospheric condensation may occur before the IF 10 C is fully cured. The working life is approx. 8 minutes. Multiple units may be mixed but do not mix more material than can be applied within the 8 minutes working time. Attempting to use the IF 10 C more than 10 minutes after mixing will result in a patchy, variable finish.

CLEANING
IF 10 C can be removed from tools and equipment by using CLI Eco Sol 205 immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of results obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

IF 10 C	@ 27 ± 1ºC
Pot life	8 mins
Light traffic	24 hrs
Full traffic	48 hrs
Full chemical cure	7 days
Bond strength	> 1.5 N/mm²
Water absorption	< 1%
Shear D Hardness	> 80

COVERAGE ESTIMATES

Pack size	Coverage
3.373kg	will yield 2.2 litres which will cover
Part A 934 g	10-20 m² dependent on the texture, applied and thickness and substrate
Part B 1 Kg	condition
Part C 1.212kg	
Part D 227g	

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE
IF 10 C has a shelf life of 6 months if kept in a dry, store between 5ºC and 30ºC in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

PRECAUTIONS
During mixing and application the following precautions should be observed: ensure adequate ventilation and avoid contact of the material with the eyes, nasal passages, mouth and unprotected skin. Avoid contact with the hands by wearing protective gloves and by using, if necessary, a suitable barrier cream. In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to resin-based materials. Always wear gloves and eye/face protection as necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL/SPILLAGE
Spillage of any of the component products should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

CONDITIONS OF SALE
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NOTE
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IF 10 CE

Two Component Water Based Polyurethane Floor And Wall Coating

HIGH PERFORMANCE, POLYURETHANE RESIN COATING, SUPPLIED AS TWO PARTS IN PRE-MEASURED PACKS FOR EASE OF ON SITE MIXING AND USE. THE CURED SYSTEM FORMS A TOUGH, EASILY CLEANED, LAYER ON CONCRETE, EPOXY AND POLYURETHANE TOPPINGS.

FEATURES
For floors and walls
Very high chemical resistance
Hard wearing
Hygiene
Easy cleaning
Anti-fungal, anti-bacterial

STANDARD COLORS
Available to any standard RAL Card upon request

DESCRIPTION
IF 10 CE is a two component water based polyurethane floor and wall coating. IF 10 CE can be extensively used for applications where a thin coating is required to reduce texture or improve appearance and cleaning. IF 10 CE is also suitable for application on previously applied epoxy, polyurethane floor and walls.

SURFACE PREPARATION
All substrates must be clean and free from dust and loose particles. All traces of contaminants, such as oils, fats, greases, paint residues, chemicals, algae and other barriers to adhesion should be removed.

Good surface preparation is vital to ensure the successful application and performance of IF 10 CE. As IF 10 CE is used on previously applied polyurethane floors appropriate surface preparation techniques will depend on the condition of the floor. If the floor is less than 48 hours old the IF 10 CE can be applied directly after any dust and contamination is removed. Older floors will require surface grinding or abrasion with a coarse nylon pad in combination with a strong alkali detergent.

MIXING
Pour the contents of Part A and Part B into a large mixing bucket and mix using a small helical mixing paddle and electric drill for 30 seconds. Add approximately 2 Litres of water mix all the three parts until uniform homogenous mix.

APPLICATION
The mixed material should be applied without delay to the prepared substrate using a brush, roller or rubber squeegee, depending on thickness and finish required.

LIMITATIONS
Only apply IF 10 CE at temperatures aboves above 5°C and where the atmospheric relative humidity (RH) is 90% or below. Do not apply when atmospheric condensation may occur before the IF 10 CEis fully cured.

The working time is approx. 30 - 45 minutes. Multiple units may be mixed but do not mix more material than can be applied within the 30 - 45 minutes working time. Attempting to use the IF 10 CE more than 30 - 45 minutes after mixing will result in a patchy, variable finish.

CLEANING
IF 10 CE can be removed from tools and equipment by washing in clean water immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of results obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

IF 10 CE	@ 27 ± 1ºC
Working time	30 - 45 mins
Mixed Density	1.15 - 1.25 g/cc
Light traffic	24 hrs
Full traffic	48 hrs
Full chemical cure	7 days

Bond strength at 24 hours	
Concrete	> 2 N/mm²
Epoxy	> 2 N/mm²
Polyurethane	> 2 N/mm²

Konig pendulum hardness DIN EN ISO 1522 after 7 days curing at 23°C and 50% RH 120um wet film thickness on glass	~ 92s

Pencil hardness (gouge) ISO 15184:1998 after 7 days curing at 23 degrees C and 50% RH 120 micron wet film thickness on glass	>= 2 H

Gloss (60 degrees/85 degrees)% ISO 2813:1978 after 7 days curing at 23 degrees C and 50% RH 120 micron wet film thickness on glass	4.5 / 8.9

Impact (kg.cm) ASTM2794 after 7 days curing at 23 degrees C and 50% RH 23 micron film thickness on tin-steel	>= 50

Bend (mm) ISO 1519 after 7 days curing at 23 degrees C and 50% RH 23 micron film thickness on tin-steel	<= 1

Abrasion ASTM D 4060, CS 10 abrading wheel / 10 N load, 1000 cycles Taber abrader after 7 days curing at 23 degrees C and 50% RH	~ 50 mg

Alchohol (100%) double rub, 350g load (cycles) 120um wet film thickness on glass, 7 days curing at 23°C and 50% RH	>200

MEK double rub, 350g load (cycles) 120um wet film thickness on glass, 7 days curing at 23°C and 50% RH	>200

COVERAGE ESTIMATES

Pack Size	Coverage
6kg	Approx. 40 m²
Part A 5kg	(After adding 2 litres of water)
Part B 1 kg	(70 - 80 microns)

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE

IF 10 CE has a shelf life of 6 months if kept in a dry, store between 5ºC and 30ºC in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

COLOURS

IF 10 CE is available to any standard RAL Card upon request.

PRECAUTIONS

During mixing and application the following precautions should be observed: ensure adequate ventilation and avoid contact of the material with the eyes, nasal passages, mouth and unprotected skin. Avoid contact with the hands by wearing protective gloves and by using, if necessary, a suitable barrier cream. In case of contact with the eyes, rinse imediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to resin-based materials. Always wear gloves and eye/face protection as necessary.

Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL/SPILLAGE

Spillage of any of the component products should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

CONDITIONS OF SALE

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NOTE

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IF 18C

Epoxy Coving Render

HIGH PERFORMANCE, EPOXY COVING SYSTEM, SUPPLIED AS THREE COMPONENTS IN PRE-MEASURED PACKS FOR EASE OF ON SITE MIXING AND USE. THE CURED SYSTEM FORMS A TOUGH, EASILY CLEANED, PIGMENTED LAYER OF 2”x2” THICK

FEATURES
Hard wearing - extremely durable
Good abrasion resistant with low maintenance costs
Seamless - easily cleaned to maintain high standards of hygiene
Easy to apply

STANDARD COLORS
Available to any standard RAL Card upon request

DESCRIPTION
Specialist applied, Epoxy coving system, combining outstanding wearing properties with high chemical resistance and decorative properties. Ideally suited for aggressive areas where maximum cleanliness is essential. Food processing and storage, abattoir's, drinks production, dairies and general heavy duty plant and traffic areas are just some of the environments that can benefit from this system.

SUBSTRATE PREPARATION
The substrate must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues etc., which will inhibit adhesion to the substrate. All vertical surfaces must be of a rigid construction to resist deflection during the application process.

Use a suitable Degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated substrates should be mechanically prepared, either by grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to applying IF18C. Overwatered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.

NOTE : Any joints or cracks in the substrate where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface and suitably sealed.

PRIMING
All substrates must first be primed with IF N18 Moisture Insensitive Primer. One or more coats may be required depending upon the condition and porosity of the substrate. Ensure that the primer is tacky prior to commencing application of IF 18C.

MIXING
The individual contents of the RIF 18C should be thoroughly stirred before being mixed together. The entire contents of the Part A and B should be poured in to a larger mixing vessel to incorporate the Part C. Mix thoroughly with a spiral mixing paddle in a slow speed drill. Ensure smooth mixing. Finally the Part C is added to the same container. The mixing of all the three should continue for further two minutes to creat consistent homogenous mix is achieved.

APPLICATION
For coving application, the mixed material should be applied to the prepared and primed tacky surface without delay using a trowel to achieve the desired thickness and coving profile.

NOTE : Do not overwork the surface and do not mix more than can be used within the working time. The work area should be protected during the installation process and during the initial curing time to ensure that no airborne debris can contaminate the surface of the wet resin as this will lead to unwanted blemishes in the hardened and cured surface. All movement joints in the substrate must be carried through the coving render and properly sealed. Construction joints and cracks not subject to movement may be overlaid but should the substrate move in anyway, these defects will reflect through the coving render. Isolation joints will need to be allowed for in areas where high thermal movement is anticipated, e.g. around ovens and freezers.

LIMITATIONS
IF 18C should only be applied at temperatures above 10ºC. Substrates should be dry and not affected by rising damp. Concrete or other cementitious substrates should have a surface tensile strength of at least 1.5 N/mm².
IF 18C may be applied to substrates of a lower strength, but the long-term performance may be impaired. Once the mixed material has exceeded its pot life, the viscosity and the characteristics of the product will change and any unused product should be discarded at this time.

CLEANING
IF 18C can be removed from tools and equipment by using CLI RTC 100 immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of results obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

IF 18C	@ 27 ± 1ºC
Pot life	45 mins
Light traffic	24 hrs
Full traffic	48 hrs
Full cure	7 days
Bond strength (7days)	> 1.5 N/mm²
Compressive strength	70 N/mm²
Flexural strength	23 N/mm²
Tensile strength	11 N/mm²

COVERAGE ESTIMATES

Pack size	Coverage
16.5kg	Approximately
Part A 1kg	9.5 running meter
Part B 500g	at 2”x2” thick
Part C 15kg	

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE
IF 18C has a shelf life of 12 months if kept in a dry, store between 5ºC and 30ºC in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

COLORS
IF 18C is available to any standard RAL Card upon request.

PRECAUTIONS
During mixing and application the following precautions should be observed: ensure adequate ventilation and avoid contact of the material with the eyes, nasal passages, mouth and unprotected skin. Avoid contact with the hands by wearing protective gloves and by using, if necessary, a suitable barrier cream. In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to resin-based materials. Always wear gloves and eye / face protection as necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL/SPILLAGE
Spillage of any of the component products should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

CONDITIONS OF SALE
Sold subject to the Company's conditions of sale which are available on request.

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IF 19 EP

Self-Smoothing Epoxy Floor System

HIGH PERFORMANCE, EPOXY RESIN FLOORING SYSTEM, SUPPLIED AS FOUR PARTS INA PRE-MEASURED PACK FOR EASE OF ON SITE MIXING AND USE. THE CURED RESINS FORM A SMOOTH, TOUGH 1-4mm LAYER, WHICH CAN BE EASILY CLEANED

FEATURES

Hard wearing - durable with low maintenance costs
Resistant to a wide range of chemicals and liquids
Seamless - easily cleaned to maintain high standards of hygiene
Self-smoothing properties provide a flat high gloss finish
Conforms to the overall migration standards laid down in 21 CFR 175-300 of US - FDA certified by CFTRI

STANDARD COLURS

Available to any standard RAL Card upon request

DESCRIPTION

A specialist applied, self-smoothing, epoxy resin floor finish combining outstanding wearing properties with chemical resistance and decorative properties. Ideally suited in areas where a seamless, joint free finish is required and maximum cleanliness is essential. Laboratories, clean rooms, and general light industry are just some of the environments that can benefit from this system.

SURFACE PREPARATION

It is essential that IF 19 EP is applied to sound, clean and dry surfaces to ensure maximum adhesion.
IF 19 EP is designed for use as a thin coat application.
NOTE : Thin coatings will reflect the surface texture of the substrates and as such high spots may lead to premature wear of the coating, thus surface preparation techniques should be chosen appropriately. The ideal substrate for application is a flat, lightly textured, clean concrete surface.

SUBSTRATE PREPARATION

The concrete surface must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues etc., that will inhibit adhesion to the substrate.

Use a suitable degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated concrete surfaces should be mechanically prepared, either by scabbling, grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to applying IF 19 EP. Overwatered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.
NOTE : Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface. New concrete slabs must be allowed to cure for at least 14 days.

PRIMING

All areas to be treated with IF 19 EP must first be primed with CLI IF 1 E Solvent Free Epoxy Primer. One or more coats of primer may be required depending upon the condition and porosity of the concrete substrate. High porosity substrates may be revealed after preparation and will be evident by their rapid suction and absorption. If in doubt use two coats of CLI IF 1 E Solvent Free Epoxy Primer. Poorly primed surfaces may lead to blistering or pin holing in the cured resin.

MIXING

The individual contents of the IF 19 EP should be thoroughly stirred before being mixed together. Mix part D with part A Ensure smooth mixing. the entire contents should be pored into a large mixing vessel to incorporate the part C and part C.The four materials are mixed thoroughly with a spiral mixing paddle in a slow speed drill. The mixing of all the four should continue until a consistent homogeneous mix is achieved. One or more packs may be mixed simultaneously to ensure a quick rate of installation.
NOTE: Once mixed, the IF 19 EP will generate heat and lose working time if it is left in the mixing container or otherwise kept in bulk.

APPLICATION

The mixed IF 19 EP material should be applied to the prepared and primed surface without delay using a trowel or depth set rake to achieve the desired thickness. As soon as the IF 19 EP has been laid and as work progresses, the surface should be gently rolled with a spiked roller in order to release any entrapped air from the mix also to blend out any trowel marks. The work area should be protected during the installation process and during the initial curing time to ensure that no debris can contaminate the surface of the resin, as this will lead to unwanted blemishes in the hardened, cured surface.

LIMITATIONS
IF 19 EP should not be applied to floors that are known to have rising moisture or have relative humidity of greater than 75% at the time of application. These products should not be applied in temperatures less than 10ºC or where the ambient relative humidity is greater than 85%. Should it be determined that moisture is present in the concrete then the entire surface should be treated with CLI DPM Surface Damp Proof Membrane mixed and applied in accordance with the recommendations in the CLI product data sheet. Once the mixed material has exceeded its pot life, the viscosity and the characteristics of the product will change and any unused product should be discarded at this time. Do not steam clean or use hot water above 55ºC to wash the surface.
NOTE : All products are manufactured under strict Quality Assurance procedures, however it is recommended that where colour consistency is essential, wherever possible, products from one batch should be used.

CLEANING
IF 19 EP can be removed from tools and equipment by using CLI RTC 100 immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of results obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

IF 19 EP	@ 27 ± 1ºC
Pot life	30 mins
Initial hardness	24 hours
Full cure	7 days
Bond strength	> 1.5 N/mm^2
Compressive strength	70 N/mm^2
Flexural strength	31 N/mm^2
Tensile strength	23 N/mm^2
Shore D Hardness	> 70

COVERAGE ESTIMATES

Pack size	Coverage
16kg	Approximately
Part A 3.80kg	4.70 m^2 @ 2 mm
Part B 1.70kg	thick
Part C 10kg	
Part D 500g	
Mixed Density	1.62 - 1.67 gm/cc
11kg	Approximately
Part A 3.80kg	7.5 m^2 @ 1 mm
Part B 1.70kg	thick
Part C 5kg	
Part D 500g	
Mixed Density	1.45 - 1.50 gm/cc

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE
IF 19 EP has a shelf life of 12 months if kept in a dry, store between 5ºC and 30ºC in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

CHEMICAL RESISTANCE
IF 19 EP is resistant to a wide range of liquids and chemicals, for specific information please refer to the following CLI "Chemical Resistance" chart.

MAINTENANCE
Good housekeeping and regular cleaning is essential in order to maintain the performance of IF 19 EP. It is particularly importance in areas that are subject to regular spillage of chemicals. Spillages should not be allowed to dry, which results in higher concentrations of the chemicals, which may lead to early failure. Regular cleaning of the surface with a rotary scrubbing machine in conjunction with a water miscible cleaning agent or hot water washing at temperatures up to 50°C is recommended.

PRECAUTIONS
In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to epoxide materials. Always wear gloves and eye/face protection is necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL/SPILLAGE
Spillage of any of the component products should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

CONDITIONS OF SALE
Sold subject to the Company's conditions of sale which are available on request.

NOTE
The information supplied in this datasheet is based upon extensive experience and is given in good faith in order to help you. Our Company policy is one of continuous Research and Development; we therefore reserve the right to update this information at any time without prior notice. We also guarantee the consistent high quality of our products; however as we have no control over site conditions or the execution of the work, we accept no liability for any loss or damage which may arise as a result thereof.

IF 20 (WB)
Water - Based Epoxy Coating

FEATURES
Low odour, cost effective floor maintenance coating
Improves durability of concrete surfaces

STANDARD COLORS
Available to any standard RAL Card upon request

DESCRIPTION
To provide an easily cleaned surface, with excellent adhesion to concrete and cement / sand screeds. Particularly suitable for floor applications in garages, warehouses, light industry and other areas subject to light vehicle and pedestrian traffic.

SURFACE PREPARATION
It is essential that IF 20(WB) is applied to sound, clean and dry surfaces to ensure maximum adhesion. IF 20(WB) is designed for use as a thin coat application.

NOTE : Thin coatings will reflect the surface texture of the substrate and as such high spots may lead to premature wear of the coating, thus surface preparation techniques should be chosen appropriately. The ideal substrate for application is a flat, lightly textured, clean concrete surface.

SUBSTRATE PREPARATION
The concrete surface must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues etc., that will inhibit adhesion to the substrate.

Use a suitable degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated concrete surfaces should mechanically prepared, either by scabbling, grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to applying IF 20(WB). Over watered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.
NOTE : Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through the finished surface. New concrete slabs must be allowed to cure for at least 14 days.

MIXING
The individual contents of IF 20(WB) should be thoroughly stirred before being mixed together. The entire content Part B container should be poured into the Part A container and the two materials are mixed thoroughly for at least 3 minutes using a heavy duty slow speed drill with spiral paddle. Some of the mixed components should be reintroduced back into the hardener container in order to activate any residue and then poured back into the larger mixing vessel and remixed for 30 seconds. Mixing in this way will ensure product consistency and that any resin that remains in the containers after application will cure to provide for easier waste disposal.
NOTE : Once mixed, the IF 20(WB) will generate heat and lose working time if it is left in the mixing container or otherwise kept in bulk.

COATING
The mixed IF 20(WB) should be applied to the prepared surface using a brush or a short/medium pile roller. Ensure that the entire surface is coated and that 'ponding' of the material does not occur. The second coat should be applied as soon as the first coat has initially dried (typically 12 to 18 hours). This time will vary depending upon the condition of the surface and the ambient temperature. Provision for ventilation and air movement will be required. When using new rollers, ensure that all loose fibres are removed prior to use, any loose fibres released from the roller will cause unsightly blemishes in the finished coating.

SLIP RESISTANT FINISH
A fine textured finish with improved slip resistance may be achieved by the use of Fine Aggregate. Following the application of the first coat of IF 20(WB), a scatter of Fine Aggregate should be applied into the wet coating to seed the surface, taking care to achieve a uniform distribution. The second application of IF 20(WB) will then encapsulate the fine aggregate.
NOTE : The coverage rate of the pack will be reduced

LIMITATIONS
IF 20(WB) should not be applied at temperature less than 10ºC or where the ambient relative humidity is greater than 85%.
NOTE : The rate of wear of this coating will be increased in areas of concentrated foot and vehicle traffic, in particular, doorways, work benches, drinks dispenses etc. It is advisable in such areas to provide for additional coats product or specify a higher performance treatment. Once the mixed material has exceeded its pot life the viscosity and the characteristics of the product changes and any unused product should be discarded at this time.
NOTE : All CLI products are manufactured under strict Quality Assurance procedures, however, it is recommended where colour consistency is essential, wherever possible, products from one batch should be used.

CLEANING
IF 20(WB) can be removed from tools and equipment by washing in clean water immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of results obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

IF 20(WB)	@ 27 ± 1ºC
Pot life	30 mins
Time between coats	8 - 24 hours
Foot Traffic	24 hours
Full cure	7 days
Dry film thickness	2 coats
(approx.)	(each coat 100 microns thickness)

COVERAGE ESTIMATES

Pack size	Coverage
4.6kg	Approximately
Part A 3.60kg	30 m² per pack
Part B 1kg	per coat

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE
IF20(WB) has a shelf life of 12 months if kept in a dry, store between 5ºC and 30ºC in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

COLORS
IF 20(WB) is available to any standard RAL Card upon request.

MAINTENANCE
Good housekeeping and regular cleaning is essential in order to maintain the performance of IF 20(WB). It is particularly important in areas that are subject to regular spillage. Spillages should not be allowed to dry which results in higher concentrations of the materials, which may lead to early failure. Regular cleaning of the surface with a rotary scrubbing machine in conjunction with a water miscible cleaning agent or hot water washing at temperatures up to 50°C is recommended.

PRECAUTIONS
IF 20(WB) should not come in contact with the skin and eyes or be swallowed. Ensure adequate ventilation and avoid inhalation of vapours. Wear suitable gloves, goggles and other protective clothing. The use of barrier creams can provide additional skin protection. When working in confined areas suitable respiratory equipment must be used. In case of contact with the skin, rinse with plenty of clean water then wash with soap and water. Do not use solvent. In case of contact with the eyes, rinse immediately with plenty of clean water, then seek medical attention without delay. If swallowed, seek medical attention straight away, do not induce vomiting.

DISPOSAL/SPILLAGE
Spillage of any of the component products should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

NOTE : The information supplied in our literature is based upon extensive experience in order to help you. Our Company policy is one of continuous Research and Development; we therefore reserve the right to update this information at any time without prior notice. We also guarantee the consistent high quality of our products; however, as we have no control over site conditions or the execution of the work, we accept no liability for any loss or damage which may arise as a result thereof.

IF 23 EP(WB)

Epoxy Coating for Potable System

HIGH PERFORMANCE, EPOXY POTABLE COATING FOR FLOORS AND WALLS, SUPPLIED AS TWO COMPONENTS IN PRE-MEASURED PACKS FOR EASE OF ON SITE MIXING AND USE. THE CURED RESIN FORMS A TOUGH, EASILY CLEANED COATING

FEATURES

Solvent free, Toxic free
Hard wearing, durable with low maintenance cost
It can be used for food storage and potable water application for floor and walls
Resistance to a range of chemicals and liquids
Provides a glossy finish
High abrasion resistance and corrosion resistant
Suitable for concrete, mild steel substrate
Easily cleaned
Conforms to the overall migration standards laid down in 21 CFR 175-300 of US - FDA certified by CFTRI

DESCRIPTION

To provide a tough, hard wearing, easily cleaned waterproofing surface where a degree of higher resistance to chemicals is required. It is suitable for use in water tanks, water treatment works, production and processing areas, dairies, soft drinks and bottling plants, breweries, kitchen any floor areas subject to wet working and possible chemical spillage.

SURFACE PREPARATION

It is essential that IF 23 EP(WB) is applied to sound, clean and dry surfaces to ensure maximum adhesion.
IF 23 EP(WB) is designed for use as a build dry film thickness 200 micron application per two coat.
NOTE : Thin coatings will reflect the surface texture of the substrates and as such high spots may lead to premature wear of the coating, thus surface preparation techniques should be chosen appropriately. The ideal substrate for application is a flat, lightly textured, clean concrete surface.

SUBSTRATE PREPARATION

IF 23 EP(WB) treated surface must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues, etc., that will inhibit adhesion to the substrate

Use a suitable degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated concrete surfaces should be mechanically prepared, either by scabbling, grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to applying IF 23 EP(WB). Overwatered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.
NOTE : Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface and suitably sealed. New concrete slabs must be allowed to cure for at least 6 weeks. High porosity substrates may be revealed after preparation and will be evident by their rapid suction and absorption

MIXING

The individual contents of the IF 23 EP(WB) should be thoroughly stirred before being mixed together. The entire contents of Part B should be poured into the Part A and the two materials mixed thoroughly for at least 3 minutes using heavy duty slow speed drill and spiral paddle. Some of the mixed components should be reintroduced back into the hardener container in order to activate any residue and then poured back into the larger mixing vessel and re-mixed for 30 seconds. Mixing in this way will ensure product consistency and that any resin that remains in the containers after application will cure to provide for easier waste disposal.
NOTE : Once mixed, the IF 23 EP(WB) will generate heat and lose working time if it is left in the mixing container or otherwise kept in bulk.

COATING

Once mixed the IF 23 EP(WB) should be poured directly onto the floor and distributed without delay to the prepared surface using a brush or short / medium pile roller. Ensure that the entire surface is coated and that 'ponding' of the material does not occur. A second coat is applied as soon as the first coat has initially dried (typically 16 to 18 hours). This time will vary depending upon the condition of the surface and the ambient temperature. Provision for ventilation and air movement will be required. When using new rollers, ensure that all loose fibres are removed prior to use, any loose fibres released from the roller will cause unsightly blemishes in the finished coating.

LIMITATIONS
These products should not be applied at temperature less than 10ºC or where the ambient relative humidity is greater than 85%. Note: The rate of wear of this coating will be increased in areas of concentrated foot and vehicle traffic, in particular, doorways, work benches, drinks dispenses etc. It is advisable in such areas to provide for additional coats product or specify a higher performance treatment.
Once the mixed material has exceeded its pot life the viscosity and the characteristics of the product changes and any unused product should be discarded at this time.
NOTE : All products are manufactured under strict Quality Assurance procedures, however it is recommended that where colour consistency is essential, wherever possible, products from one batch should be used.

CLEANING
IF 23 EP(WB) can be removed from tools and equipment by using CLI RTC 100 immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of results obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

IF 23 EP(WB)	@ 27 ± 1ºC
Pot life	40 mins
Mixed density	1.62 - 1.70g/cc
Time between coats	16 - 18 hours
Walkability	24 hours
Full cure	7 days
Bond strength	> 1.50 N/mm^2
Potability test	21 CFR 175 - 300

COVERAGE ESTIMATES

Pack size	Coverage
7kg	Approximately
Part A 5.95kg	40 m2 per pack /
Part B 1.05kg	coat @ around 100 microns thickness (2 coat is minimum)

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE
IF 23 EP(WB) has a shelf life of 12 months if kept in a dry, store between 5ºC and 30ºC in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

CHEMICAL RESISTANCE
IF 23 EP(WB) is resistant to a wide range of liquids and chemicals, for specific information please refer to the following CLI "Chemical Resistance" chart.

MAINTENANCE
Good housekeeping and regular cleaning is essential in order to maintain the performance of IF 23 EP(WB). It is particularly importance in areas that are subject to regular spillage of chemicals. Spillages should not be allowed to dry, which results in higher concentrations of the chemicals, which may lead to early failure. Regular cleaning of the surface with a rotary scrubbing machine in conjunction with a water miscible cleaning agent or hot water washing at temperatures up to 50°C is recommended.

PRECAUTIONS
In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to epoxide materials. Always wear gloves and eye/face protection is necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL/SPILLAGE
Spillage of any of the component products should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

CONDITIONS OF SALE
Sold subject to the Company's conditions of sale which are available on request.

NOTE
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IF 24 EP

Solvent Based Epoxy Coating

GOOD PERFORMANCE, SOLVENT BASED EPOXY RESIN FLOOR COATING, SUPPLIED AS TWO PARTS IN PRE-MEASURED PACKS FOR EASE OF ON SITE MIXING AND USE. THE CURED RESIN FORMS A TOUGH, EASILY CLEANED COATING

FEATURES
Hard wearing - durable with low maintenance costs
Easily cleaned
Available in a range of colours
Provides gloss finish

STANDARD COLORS
Available to any standard RAL Card upon request

DESCRIPTION
IF 24 EP provides a hard wearing, easily cleaned surface in industrial environments where a degree of hygiene is required. It is suitable for use in workshops, production and processing areas, dairies, soft drinks and bottling plants, breweries, kitchens any floor areas subject to wet working.

SURFACE PREPARATION
It is essential that IF 24 EP is applied to sound, clean and dry surfaces to ensure maximum adhesion. is designed for use as thin coat application.
NOTE : Thin coatings will reflect the surface texture of the substrate and as such high spots may lead to premature wear of coating, thus surface preparation techniques should be chosen appropriately. The ideal substrate for application is a flat, lightly textured, clean concrete surface. A two coat application is recommended.

SUBSTRATE PREPARATION
The concrete surface must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues, etc., that will inhibit adhesion to the substrate.

Use a suitable degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated concrete surfaces should be mechanically prepared, preferably either by grinding or light contained shot blasting equipment or similar, and be vacuumed clean prior to applying IF 24 EP. Overwatered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment
NOTE : Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface. New concrete slabs must be allowed to cure for at least 6 weeks.

High porosity substrates may be revealed after preparation and will be evident by their rapid suction and absorption. In these cases a priming coat of CLI IF 2 E Solvent Based Epoxy Primer is advisable before applying the IF 24 EP. Dense, high porosity surfaces typically provided by rapid setting pumped screeds will require an appropriate primer. For all proprietary products used as substrates, please refer to the manufacturer's instructions for advice on priming.

MIXING
The individual contents of the IF 24 EP should be thoroughly stirred before being mixed together. The entire contents of Part B should be poured into Part A and the two materials mixed thoroughly for at least 3 minutes using a heavy duty slow speed drill with spiral paddle. Some of the mixed components should be reintroduced back into the hardener container in order to activate any residue and then poured back into the larger mixing vessel and re-mixed for 30 seconds. Mixing in this way will ensure product consistency and that any resin that remains in the containers after application will cure to provide for easier waste disposal.
NOTE : Once mixed, the IF 24 EP will generate heat and lose working time if it is left in the mixing container or otherwise kept in bulk.

COATING
Once mixed the IF 24 EP should be poured directly onto the floor and distributed without delay to the prepared surface using a brush or short / medium pile roller. Ensure that the entire surface is coated and that ‘ponding' of the material does not occur.A second coat is applied as soon as the first coat has initially dried (typically 8 to 10 hours). This time will vary depending upon the condition of the surface and the ambient temperature. Provision for ventilation and air movement will be required. When using new rollers, ensure that all loose fibres are removed prior to use, any loose fibres released from the roller will cause unsightly blemishes in the finished coating.

SLIP RESISTANT FINISH
A fine textured finish with improved slip resistance may be achieved by the use of Fine Aggregate. Following the application of the first coat of IF 24 EP a scatter of Fine Aggregate should be applied into the wet coating to seed the surface, taking care to achieve a uniform distribution. The second application of IF 24 EP will then encapsulate the fine aggregate.
NOTE : The coverage rate of the pack will be reduced.

LIMITATIONS
These products should not be applied at temperature less than 10°C or where the ambient relative humidity is greater than 85%.
NOTE : The rate of wear of this coating will be increased in areas of concentrated foot and vehicle traffic, in particular, doorways, work benches, drinks dispenses etc. It is advisable in such areas to provide for additional coat product or specify a higher performance treatment.

Once the mixed material has exceeded its pot life the viscosity and the characteristics of the product changes and any unused product should be discarded at this time.

NOTE : All CLI products are manufactured under strict Quality Assurance procedures, however, it is recommended where colour consistency is essential, wherever possible, products from one batch should be used.

CLEANING
IF 24 EP can be removed from tools and equipment by using CLI RTC 100 immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of results obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

IF 24 EP	@ 27 ± 1ºC
Pot life	2 - 3 hours
Time between coats	8 - 10 hours
Walkability	24 hours
Full cure	7 days
Dry film thickness	100 microns per
for two or more coats	coat
Bond strength	> 2.0 N/mm²
7 days	

COVERAGE ESTIMATES

Pack size	Coverage
6kg	18 - 22 m²² per pack
Part A 4.440kg	per coat at
Part B 1.560kg	100 microns per coat

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced. Marking out areas to be covered per pack or for a number of packs provides a method of ensuring the correct and uniform coverage.

STORAGE AND SHELF LIFE
IF 24 EP has a shelf life of 12 months if kept in a dry, store between 5ºC and 30ºC in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

COLORS
IF 24 EP is available to any standard RAL Card upon request.

MAINTENANCE
Good housekeeping and regular cleaning is essential in order to maintain the performance of IF 24 EP. It is particularly important in areas that are subject to regular spillage. Spillages should not be allowed to dry, which results in higher concentrations of the materials, which may lead to early failure. Regular cleaning of the surface with a rotary scrubbing machine in conjunction with a water miscible cleaning agent or hot water washing at temperatures up to 50ºC is recommended.

PRECAUTIONS
The hardener is classified as corrosive and the epoxy resin can be irritating to the eyes and skin, and may cause sensitization by contact. They are considered harmful in contact with the skin and if swallowed. During mixing and application the following precautions should be observed: ensure adequate ventilation and avoid contact of the

material with the eyes, nasal passages, mouth and unprotected skin. Avoid contact with the hands by wearing protective gloves and by using, if necessary, a suitable barrier cream.

In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to epoxide materials. Always wear gloves and eye/face protection as necessary. Observe personal hygiene, particularly washing the hands after work has completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL/SPILLAGE
Spillage of any of the component products should be absorbed onto sand or other inert material and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

CONDITIONS OF SALE
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NOTE
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IF 25 CU

Epoxy Modified Cementitious Floor Screed

GOOD PERFORMANCE, SUPPLIED AS THREE PARTS IN A PRE-MEASURED PACK FOR EASE OF ON SITE MIXING AND USE

FEATURES

Toxic free, solvent free, interiors application
Excellent resistance to wear & abrasion
Excellent slip resistance to vehicular & foot traffic
Suitable with cementitious toppings
Suitable on damp concrete surface
Provides combining strength of both cement & epoxy

DESCRIPTION

A specialist applied, self-levelling, epoxy modified cementitious floor screed finish combining outstanding wearing properties with chemical resistance and decorative properties. Ideally suited in areas where a seamless, joint free finish is required and maximum cleanliness is essential. Clean rooms, and general light industry are just some of the environments that can benefit from this system. When over coated with Epoxy coating like IF 21 EP Solvent Free High Build Epoxy Coating, the chemical resistance properties are enhanced. It is also suited for the areas where high hygiene is required.

SUBSTRATE PREPARATION

The concrete surface must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues etc. that will inhibit adhesion to the substrate.

Use a suitable degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated concrete surfaces should be mechanically prepared, either by scabbling, grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to application of IF 25 CU. Overwatered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.
NOTE : Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface. New concrete slabs must be allowed to cure for at least 14 days.

PRIMING

All areas of concrete surfaces to be treated with IF 25 CU must first be primed with a IF N18 Moisture Insensitive Primer. Two or more coats of primer may be required depending upon the condition and the porosity of the concrete substrate. Poorly primed surfaces may lead to blistering or pinholes in the cured resin. Before applying IF 25 CU make sure the primer is dried for 24 hours.

MIXING

The individual contents of the IF 25 CU should be thoroughly stirred before being mixed together. The entire contents of the Part A and Part B should be poured into a larger mixing vessel to incorporate the Part C. Mix thoroughly for 30 seconds in a medium duty drilling machine (600 rpm). Finally the Part C is added to the same container. The mixing of all the three should continue for 1 minute do not mix for more than 1 minute. Particularly for mixing IF 25 CU do not use heavy duty or high speed drill machine (600 - 1000 rpm).

APPLICATION

The mixed IF 24 CU material should be applied to the prepared and primed surface without delay using a gauged notched trowel or depth set rake to achieve the desired thickness. One kit application should be completed (Trowel & Rolling) within 8 - 10 minutes at 30°C including mixing time. As soon as the IF 25 CU is has been laid and as work progresses, the surface should be gently rolled with a spiked roller in order to release any entrapped air from the mix also to blend out any trowel marks. Do not use more rolling, it should be one time rolling with both direction. The work area should be protected during the installation process and during the initial curing time to ensure that no debris contaminate the surface of the resin, as this will lead to unwanted blemishes in the hardened, cured surface.

LIMITATIONS

IF 25 CU should not be applied to floors that are known to have rising moisture or have relative humidity of greater than 75% at the time of application. These products should not be applied in temperatures less than 10 degrees C or where the ambient relative humidity is greater than 85%. Once the mixed material has exceeded its pot life, the viscosity and the characteristics of the product will change and any unused product should be discarded at this time. Do not steam, clean or use hot water above 50 degrees C to wash the surface.
NOTE : All CLI products are manufactured under strict Quality Assurance procedures; however it is recommended that where colour consistency is essential, wherever possible, products from one batch should be used.

CLEANING
IF 25 CU can be removed from tools and equipment by using CLI RTC 100 cleaner immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of results obtained in the laboratory at 27 ± 1 degree C. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

IF 25 CU	@ 27 ± 1ºC
Pot life	30 mins
Mixed Density	1.77 - 1.82 gram/cc
Initial hardness	24 hours
Full cure	7 days
Application Thickness	2 - 4 mm

BOND STRENGTH

after 7 days	>1.5 N/mm²
After 28 days	>2.5 N/mm²

COMPRESSIVE STRENGTH

after 7 days	26.00 N/mm²
after 28 days	31.00 N/mm²

TENSILE STRENGTH

after 28 days	3.8 N/mm²

FLEXTURAL STRENGTH

after 28 days	8.00 N/mm²

SHORE D HARDNESS > 70.00
after 7 days

COVERAGE ESTIMATES

Pack size	Coverage
26.25kg	Approximately
2 Part A 1.50kg	7.0m @ 2mm thick
Part B 4.50kg	
Part C 20.25kg	

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE
IF 25 CU has a shelf life of 6 months if kept in dry condition between 5 degrees C and 30 degrees C in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

PRECAUTIONS
During mixing and application the following precautions should be observed: ensure adequate ventilation and avoid contact of the material with the eyes, nasal passages, mouth and unprotected skin. Avoid contact with the hands by wearing protective gloves and by using, if necessary, a suitable barrier cream. In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to resin-based materials. Always wear gloves and eye / face protection as necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL/SPILLAGE
Spillage of any of the component products should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

CONDITIONS OF SALE
Sold subject to the Company's conditions of sale which are available on request.

NOTE

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IF - 26AN

Antistatic Epoxy

HIGH PERFORMANCE, ANTISTATIC, CONDUCTIVE SELF-SMOOTHING, EPOXY FLOORING SYSTEM

FEATURES
Electrostatically Conductive
Excellent Chemical, Mechanical and Abrasion Resistance
Seamless- easily cleaned to maintain high standards of hygiene
Hard wearing and durable with low maintenance costs
Solvent free
Microelectronic industry grade conductivity

STANDARD COLOURS
Available to any standard RAL Card upon request.

DESCRIPTION
IF - 26AN is seamless, self-smoothing, solvent free, conductive epoxy flooring system with excellent conductive properties. The cured conductive epoxy flooring exhibits an attractive joint free finish with chemical resistance and decorative properties. Suitable in industries such as Electronic & Telecommunication, Automotive, Pharmaceutical, Aerospace, Operation Theratres, Computer rooms, etc.

SURFACE PREPARATION
Good substrate preparation is essential for optimum performance. The concrete surface must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, and curing agents. Laitance, adhesive residues etc. that will inhibit adhesion to the substrate.

Use a suitable degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated concrete surfaces should be mechanically prepared, either by scabbling, scarifying, grinding or shot blasting equipment or similar, and be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.
NOTE : Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface. New concrete slabs must be allowed to cure for at least 14 days. The maximum moisture content of the substrate should be <4% measured by an accurate moisture meter.

IF - 26AN Primer
IF - 26AN Primer is supplied in two contents Part A & Part B. Before applying IF - 26AN Primer, prime the surface with minimum two coats of IF - 1E Solvent Free Epoxy Primer. All areas to be treated with IF - 26AN must first be primed with IF - 26AN Primer.
A minimum of two coats of IF - 26AN Primer is required. Poorly primed surface may lead to blistering, pinholing and more importantly the conductive values get affected. Use a mechanical mixer and mix the two parts of the IF - 26AN Primer for one minute so that it forms a homogeneous mix. Do not over mix as it will result in air entrainment and also the mixed material may get heated up.

Apply IF N18 Primer by roller on the surface. Apply 2 coats of
IF - 26AN Primer to get a total thickness of 175 - 200 microns in 2 coats. Time interval between the two coats should be 6 - 8 hours depending on temperature & humidity. After application of first coat place self adhesive copper tape of 12 - 20mm width and 70 - 100 micron thick at the periphery of the primed surface.

IF - 26 AN Top Coat
After 24hours of IF - 26AN Primer application, the IF - 26AN Top Coat has to be applied. The IF - 26AN Top Coat comprises of Part A, Part B & Part C. The individual contents should be thoroughly stirred before being mixed together. Initially the entire contents of the Part A should be poured into a larger mixing vessel to incorporate Part B and mix thoroughly. Then add Part C into the mixed Part A & Part B. The three parts should be mixed for at least 2 minutes with a spiral mixing paddle using a slow speed mechanical mixer at a speed of 300 - 400 rpm. The mixing should continue until a consistent, uniform colour and homogenous mix is achieved. Do not over mix as it will result to an increase in the resistance of the floor and may no longer comply with the specification for antistatic floors along with issues like air entrainment and also the mixed material may get heated up which will eventually reduce the pot life.
IF - 26AN Top Coat should be applied to the prepared and primed surface without delay using a trowel or depth set rake to achieve the desired thickness of 1.5 - 2.0mm.

As soon as the IF - 26AN Top Coat has been laid and as work progresses, the surface should be gently rolled with a spike roller in order to release any entrapped air from the mix also to blend out any trowel marks. IF - 26AN is self curing and the work area should be protected during the installation process and during the initial curing time for at least 24 hours, to ensure that no debris, insects, dust, spillage can contaminate the surface of the IF - 26AN Top Coat, as this will lead to unwanted blemishes in the hardened, cured surface.

LIMITATIONS

IF - 26AN should not be applied to floors that are known to have rising moisture or have relative humidity of greater than 75% at the time of application. These products should not be applied in temperatures less than10°C. Once the mixed material has exceeded its pot life, the viscosity and the characteristics of the product will change and any unused product should be discarded at this time. Do not steam, clean or use hot water above 55°C to wash the surface.

NOTE : All products are manufactured under strict Quality Assurance procedures; however it is recommended that wherever colour consistency is essential, products from one batch should be used as much as possible.

CLEANING

IF - 26AN can be removed from tools and equipment by using ARDEX ENDURA RTC 100 immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES

The values shown are typical of results obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

IF - 26AN Primer	@ 27 ± 1ºC
Colour	Black
Pot life	60 mins
Mixed Density	1.0 - 1.03 gm/cc
Mixing Ratio	Part A : Part B 4 : 1

IF - 26AN Top CoatPot life 40 minutes

Mixed Density	1.65 - 1.70 gm/cc
Foot Traffic	24 Hours
Full Cure	7 days
Shore D after 7 days	Hardness > 80
Bond Strength after 7 days	2.5 N/mm²
Tensile Strength BS 6319, Part - 7	> 16.00 N/mm²
Flexural Strength BS 6319, Part - 3	> 39.00 N/mm²
Compressive Strength after 7 days	> 50.00 N/mm²

COVERAGE ESTIMATES

Pack size	Coverage
IF - 26AN Primer 2.250 kg Part A 1.80kg Part B 450g	Approximately 9m²/coat
R 625 CE Top Coat 14 kg Part A 4.30kg Part B 1.69kg Part C 8.01kg	Approximately 4.0m² @ 2 mm thickness

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE

IF - 26AN store under cover, out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air-conditioned environment. Shelf life is 12 months when stored as above.

MAINTENANCE
Good housekeeping and regular cleaning is essential in order to maintain the performance of IF - 26AN. It is particularly important in areas that are subject to regular spillage of chemicals. Spillages should not be allowed to dry, which results in higher concentrations of the chemicals, which may lead to early failure. Regular cleaning of the surface with a rotary scrubbing machine in conjunction with a water miscible cleaning agent or hot water washing at temperatures up to 50°C is recommended.

PRECAUTIONS
In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to epoxide materials. Always wear gloves and eye/face protection is necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

CONDITIONS OF SALE
Sold subject to the Company's conditions of sale which are available on request.

NOTE
The information supplied in this datasheet is based upon extensive experience and is given in good faith in order to help you. Our Company policy is one of continuous Research and Development; we therefore reserve the right to update this information at any time without prior notice. We also guarantee the consistent high quality of our products; however as we have no control over site conditions or the execution of the work, we accept no liability for any loss or damage which may arise as a result thereof.

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IF EU 11 P

Self Smoothing Epoxy Polyurethane Floor Topping

HIGH PERFORMANCE, EPOXY POLYURETHANE FLOORING SYSTEM, SUPPLIED AS TWO PARTS IN A PRE-MEASURED PACK FOR EASE OF ON SITE MIXING AND USE. THE CURED RESINS FORM A PIGMENTED SMOOTH, TOUGH 1 mm LAYER, WHICH CAN BE EASILY CLEANED

FEATURES
Hard wearing - durable with low maintenance costs
Good abrasion resistance. Withstands foot and vehicular traffic
Resistant to a wide range of chemicals and liquids
Seamless - easily cleaned to maintain high standards of hygiene
Self-smoothing properties provide a flat high gloss finish
Hygienic

STANDARD COLOURS
Available to any standard RAL Card upon request.

DESCRIPTION
A specialist applied, self-smoothing epoxy polyurethane resin floor finish combining outstanding wearing properties with chemical resistance and decorative properties. Ideally suited in areas where a seamless, joint free finish is required and maximum cleanliness is essential. Laboratories, clean rooms, and general light industry are just some of the environments that can benefit from this system.

SURFACE PREPARATION
It is essential that IF EU 11 P is applied to sound, clean and dry surfaces to ensure maximum adhesion.

IF EU 11 P is designed for use as a thin coat application.
NOTE : Thin coatings will reflect the surface texture of the substrates and as such high spots may lead to premature wear of the coating, thus surface preparation techniques should be chosen appropriately. The ideal substrate for application is a flat, lightly textured, clean concrete surface.

SUBSTRATE PREPARATION
The concrete surface must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues etc., that will inhibit adhesion to the substrate.

Use a suitable degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated concrete surfaces should be mechanically prepared, either by scabbling, grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to applying IF EU 11 CP. Overwatered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.
NOTE : Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface. New concrete slabs must be allowed to cure for at least 14 days.

PRIMING
All areas to be treated with IF EU 11 P must first be primed with IF N18 Solvent Free Epoxy Primer. One or more coats of primer may be required depending upon the condition and porosity of the concrete substrate. High porosity substrates may be revealed after preparation and will be evident by their rapid suction and absorption. If in doubt use two coats of CLI IF 1 E Solvent Free Epoxy Primer. Poorly primed surfaces may lead to blistering or pin holing in the cured resin.

MIXING
The individual contents of the IF EU 11 P should be thoroughly stirred before being mixed together. The entire contents of the Part B should be poured in to a larger mixing vessel to incorporate the Part A. Materials are mixed thoroughly with a spiral mixing paddle in a slow speed drill. The mixing of all the two should continue until a consistent homogenous mix is achieved. One or more packs may be mixed simultaneously to ensure a quick rate of installation.
NOTE: Once mixed, the IF EU 11 P will generate heat and lose working time if it is left in the mixing container or otherwise kept in bulk.

APPLICATION
The mixed IF EU 11 P material should be applied to the prepared and primed surface without delay using a trowel or depth set rake to achieve the desired thickness. As soon as the IF EU 11 P has been laid and as work progresses, the surface should be gently rolled with a spiked roller in order to release any entrapped air from the mix also to blend out any trowel marks. The work area should be protected during the installation process and during the initial curing time to ensure that no debris can contaminate the surface of the resin, as this will lead to unwanted blemishes in the hardened, cured surface.

LIMITATIONS
IF EU 11 P should not be applied to floors that are known to have rising moisture or have relative humidity of greater than 75% at the time of application. These products should not be applied in temperatures less than 10ºC or where the ambient relative humidity is greater than 85%. Should it be determined that moisture is present in the concrete then the entire surface should be treated with CLI SLP 14 E Surface Damp Proof Membrane mixed and applied in accordance with the recommendations in the CLI product data sheet. Once the mixed material has exceeded its pot life, the viscosity and the characteristics of the product will change and any unused product should be discarded at this time. Do not steam clean or use hot water above 50ºC to wash the surface.
NOTE : All products are manufactured under strict Quality Assurance procedures, however it is recommended that where colour consistency is essential, wherever possible, products from one batch should be used.

CLEANING
IF EU 11 P can be removed from tools and equipment by using CLI Eco Sol 205 immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of results obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

IF EU 11P	@ 27 ± 1ºC
Pot life	20 minutes
Mixed Density	1.33 - 1.43 gm/cc
Initial hardness	24 hours
Full cure	7 days
Application Thickness	1 mm
Shore D Hardness > 70	
Bond Strength	> 1.50 N/mm²
After 1 day	
Compressive Strength	> 90.0 N/mm²
Tensile Strength	> 24.0 N/mm²
Flexural Strength	> 60.0 N/mm²

COVERAGE ESTIMATES

Pack size	Coverage
6.5kg	Approximately
Part A 5kg	4.5 m² @ 1 mm
Part B 1.5kg	thick

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE
IF EU 11 P has a shelf life of 12 months if kept in a dry, store between 5ºC and 30ºC in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

MAINTENANCE
Good housekeeping and regular cleaning is essential in order to maintain the performance of IF EU 11 P. It is particularly importance in areas that are subject to regular spillage of chemicals. Spillages should not be allowed to dry, which results in higher concentrations of the chemicals, which may lead to early failure. Regular cleaning of the surface with a rotary scrubbing machine in conjunction with a water miscible cleaning agent or hot water washing at temperatures up to 50ºC is recommended.

PRECAUTIONS
In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to epoxide materials. Always wear gloves and eye/face protection is necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL/SPILLAGE
Spillage of any of the component products should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

CONDITIONS OF SALE
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NOTE
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IF N18
Moisture Insensitive Primer

FEATURES
Good adhesion of epoxy/Polyurethane floor toppings & with the cementitious substrate
Can be applied on damp concrete surface
Easy to apply
Seal the substrate

DESCRIPTION
IF N18 is a two component, for use with Epoxy Modified Cementitious Floor Screed and Heavy Duty Epoxy Floor Screed. IF N18 provides good penetrating properties for porous substrates like concrete, sand / cement screed etc. normally minimum of two coats is recommended. Where surfaces are very porous, more than two coat of primer may be required to achieve the desired bonding efficiency.

SUBSTRATE PREPARATION
The concrete or screed substrate must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues etc., that will inhibit adhesion to the substrate.

Use a suitable Degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated concrete surfaces should be mechanically prepared, either by scabbling, grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to applying IF N18. Overwatered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.

NOTE : Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface and suitably sealed. New concrete slabs must be allowed to cure for at least 14 days.

MIXING
The individual contents of the IF N18 should be thoroughly stirred before being mixed together. The entire contents of Part B and Part A should be poured into the larger mixing vessel and two materials are mixed thoroughly for at least 3 minutes using a heavy duty slow speed spiral paddle drill. Some of the mixed components should be reintroduced back into the hardener container in order to activate any residue and then poured back into the larger mixing vessel and re-mixed for 30 seconds. Mixing in this way will ensure product consistency and that any resin that remains in the containers after application will cure to provide for easier waste disposal.

APPLICATION
Once mixed, the material should be spread over the prepared floor as self-heating in the container will reduce working time. Apply using a brush or short / medium pile roller. Two or more coats may be needed to ensure that a uniform coating is achieved and to compensate for differences in surface porosity.

All movement joints in the sub-floor must be carried through the topping and properly sealed. Construction joints and cracks not subject to movement may be overlaid but should the floor move in anyway, these defects will reflect through the system. Isolation joints will need to be allowed for in areas where high thermal movement is anticipated, e.g. around ovens and freezers.

CLEANING
IF N18 can be removed from tools and equipment by using CLI Eco Sol 205 immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of results obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

IF N 18	@ 27 ± 1ºC
Working time	35 mins
Re-coat time	10 - 12 hours
Bond strength to concrete	> 2.0 N/mm2

IF 4 E should be allowed to cure prior to the installation of the final floor finish, typically 24 hours at 27 ± 1 degree C.

COVERAGE ESTIMATES

Pack Size	Coverage
2.5kg	Approximately
Part A 1.5kg	15 m² per coat
Part B 1kg	

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE

IF N18 has a shelf life of 12 months if kept in dry condition between 5 degree C and 30 degree C in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

PRECAUTIONS

The hardener which contains phenalkamine and the epoxy resin which contains bisphenol A/F epichlorhydrin, can be irritating to the eyes and skin, and may cause sensitisation by contact. They are considered harmful in contact with the skin and if swallowed. During mixing and application the following precautions should be observed: ensure adequate ventilation and avoid contact of the material with the eyes, nasal passages, mouth and unprotected skin.

Avoid contact with the hands by wearing protective gloves and by using, if necessary, a suitable barrier cream. In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to epoxide materials. Always wear gloves and eye/face protection as necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL/SPILLAGE

Spillage of any of the component products should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

CONDITIONS OF SALE

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IF PUSL 10 D

Self-Smoothing Epoxy Polyurethane Floor Topping

HIGH PERFORMANCE, EPOLYURETHANE RESIN FLOORING SYSTEM, SUPPLIED AS TWO PARTS IN A PRE-MEASUREDPACK FOR EASE OF ON SITE MIXING AND USE. THE CURED RESINS FOR

FEATURES
Hard wearing - durable with low maintenance costs
Good abrasion resistance. Withstands foot and vehicular traffic
Resistant to a wide range of chemicals and liquids
Seamless - easily cleaned to maintain high standards of hygiene
Self-smoothing properties provide a flat high gloss finish
Hygienic

STANDARD COLORS
Available to any standard RAL Card upon request

DESCRIPTION
A specialist applied, self-smoothing epoxy polyurethane resin floor finish combining outstanding wearing properties with chemical resistance and decorative properties. Ideally suited in areas where a seamless, joint free finish is required and maximum cleanliness is essential. Laboratories, clean rooms, and general light industry are just some of the environments that can benefit from this system.

SURFACE PREPARATION
It is essential that IF PUSL 10 D is applied to sound, clean and dry surfaces to ensure maximum adhesion.

NOTE: Thin coatings will reflect the surface texture of the substrates and as such high spots may lead to premature wear of the coating, thus surface preparation techniques should be chosen appropriately. The ideal substrate for application is a flat, lightly textured, clean concrete surface.

SUBSTRATE PREPARATION
The concrete surface must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues etc., that will inhibit adhesion to the substrate.

Use a suitable degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated concrete surfaces should be mechanically prepared, either by scabbling, grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to applying IF PUSL 10 D. Overwatered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.
NOTE : Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface. New concrete slabs must be allowed to cure for at least 14 days.

PRIMING
All areas to be treated with RIF PUSL 10 Dmust first be primed with CLI N18 Solvent Free Epoxy Primer. One or more coats of primer may be required depending upon the condition and porosity of the concrete substrate. High porosity substrates may be revealed after preparation and will be evident by their rapid suction and absorption. If in doubt use two coats of CLI N18 Solvent Free Epoxy Primer. Poorly primed surfaces may lead to blistering or pin holing in the cured resin.

MIXING
The individual contents of the IF PUSL 10 D should be thoroughly stirred before being mixed together. The entire contents of the Part B should be poured in to a larger mixing vessel to incorporate the Part A. Materials are mixed thoroughly with a spiral mixing paddle in a slow speed drill. The mixing of all the two should continue until a consistent homogenous mix is achieved. One or more packs may be mixed simultaneously to ensure a quick rate of installation.
NOTE : Once mixed, the IF PUSL 10 Dwill generate heat and lose working time if it is left in the mixing container or otherwise kept in bulk.

APPLICATION
The mixed IF PUSL 10 D material should be applied to the prepared and primed surface without delay using a trowel or depth set rake to achieve the desired thickness. As soon as the IF PUSL 10 D has been laid and as work progresses, the surface should be gently rolled with a spiked roller in order to release any entrapped air from the mix also to blend out any trowel marks. The work area should be protected during the installation process and during the initial curing time to ensure that no debris can contaminate the surface of the resin, as this will lead to unwanted blemishes in the hardened, cured surface.

LIMITATIONS
IF PUSL 10D should not be applied to floors that are known to have rising moisture or have relative humidity of greater than 75% at the time of application. These products should not be applied in temperatures less than 10ºC or where the ambient relative humidity is greater than 85%. Should it be determined that moisture is present in the concrete then the entire surface should be treated with CLI DPM Surface Damp Proof Membrane mixed and applied in accordance with the recommendations in the CLI product data sheet. Once the mixed material has exceeded its pot life, the viscosity and the characteristics of the product will change and any unused product should be discarded at this time. Do not steam clean or use hot water above 50ºC to wash the surface.
NOTE : All products are manufactured under strict Quality Assurance procedures, however it is recommended that where colour consistency is essential, wherever possible, products from one batch should be used.

CLEANING
IF PUSL 10 D can be removed from tools and equipment by using CLI Eco Sol 205 immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of results obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

IF PUSL 10 D	@ 27 ± 1ºC
Pot life	20 minutes
Mixed Density	1.33 - 1.43 gm/cc
Initial hardness	24 hours
Full cure	7 days
Application Thickness	1 mm
Shore D Hardness	> 70
Bond Strength	> 1.50 N/mm²
After	1 day
Compressive Strength	> 90.0 N/mm²
Tensile Strength	> 24.0 N/mm²
Flexural Strength	> 60.0 N/mm²

COVERAGE ESTIMATES

Pack size	Coverage
Part A 5kg	4.5 m² @ 1 mm
Part B 1.5kg	thick

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE
IF PUSL 10 D has a shelf life of 12 months if kept in a dry, store between 5ºC and 30ºC in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

CHEMICAL RESISTANCE
IF PUSL 10 D is resistant to a wide range of chemicals like Petrol, Engine oil, Brake fluid, Mineral spirit, Diesel, Mild acids, Detergents etc

MAINTENANCE
Good housekeeping and regular cleaning is essential in order to maintain the performance of IF PUSL 10D. It is particularly importance in areas that are subject to regular spillage of chemicals. Spillages should not be allowed to dry, which results in higher concentrations of the chemicals, which may lead to early failure. Regular cleaning of the surface with a rotary scrubbing machine in conjunction with a water miscible cleaning agent or hot water washing at temperatures up to 50ºC is recommended.

PRECAUTIONS
In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to epoxide materials. Always wear gloves and eye/face protection is necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL/SPILLAGE
Spillage of any of the component products should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

CONDITIONS OF SALE
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NOTE
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IF 18 EP

Epoxy Self Leveling Screed

HIGH PERFORMANCE, EPOXY RESIN FLOORING SYSTEM, SUPPLIED AS THREE PARTS INA PRE-MEASURED PACK FOR EASE OF ON SITE MIXING AND USE. THE CURED RESINS FORM A SMOOTH, TOUGH 2.4mm LAYER, WHICH CAN BE EASILY CLEANED

FEATURES
Hard wearing - durable with low maintenance costs
Resistant to a wide range of chemicals and liquids
Seamless - easily cleaned to maintain high standards of hygiene
Self-smoothing properties provide a flat high gloss finish

DESCRIPTION
A specialist applied, self-levelling, epoxy resin floor finish combining outstanding wearing properties with chemical resistance and decorative properties. Ideally suited in areas where a seamless, joint free finish is required and maximum cleanliness is essential. Clean rooms, and general light industry are just some of the environments that can benefit from this system.

SURFACE PREPARATION
It is essential that IF 18 EP is applied to sound, clean and dry surfaces to ensure maximum adhesion.

SUBSTRATE PREPARATION
The concrete surface must be hard, sound and free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, adhesive residues etc., that will inhibit adhesion to the substrate.

Use a suitable degreaser to remove polish, wax, grease, oil and similar contaminating substances prior to mechanical preparation. Contaminated concrete surfaces should be mechanically prepared, either by scabbling, grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to applying IF 18 EP. Overwatered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.
NOTE : Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface. New concrete slabs must be allowed to cure for at least 14 days.

PRIMING
All areas to be treated with IF 18 EP must first be primed with CLI IF 2 E Solvent Based Epoxy Primer. One or more coats of primer may be required depending upon the condition and the porosity of the concrete substrate. High porosity substrates may be revealed after preparation and will be evident by their rapid suction and absorption. If in doubt use two coats of CLI IF 2 E Solvent Based Epoxy Primer. Poorly primed surfaces may lead to blistering or pin holding in the cured resin.

MIXING
The individual contents of the IF 18 EP should be thoroughly stirred before being mixed together. The entire contents of the Part A and Part B should be poured in to a larger mixing vessel to incorporate the Part C. Mix thoroughly with a spiral mixing paddle in a slow speed drill. Finally the Part C is added to the same vessel together and the mixing of all the three should continue until a consistent homogenous mix is achieved. One or more packs may be mixed simultaneously to ensure a quick rate of installation.
NOTE: Once mixed, the IF 18 EP will generate heat and lose working time if it is left in the mixing container or otherwise kept in bulk.

APPLICATION
The mixed IF 18 EP material should be applied to the prepared and primed surface without delay using a trowel or depth set rake to achieve the desired thickness. As soon as the R 24 CE has been laid and as work progresses, the surface should be gently rolled with a spiked roller in order to release any entrapped air from the mix also to blend out any trowel marks. The work area should be protected during the installation process and during the initial curing time to ensure that no debris can contaminate the surface of the resin, as this will lead to unwanted blemishes in the hardened, cured surface.

LIMITATIONS
IF 18 EP should not be applied to floors that are known to have rising moisture or have relative humidity of greater than 75% at the time of application. These products should not be applied in temperatures less than 10°C or where the ambient relative humidity is greater than 85%. Once the mixed material has exceeded its pot life, the viscosity and the characteristics of the product will change and any unused product should be discarded at this time. Do not steam, clean or use hot water above 55°C to wash the surface.

NOTE: All products are manufactured under strict Quality Assurance procedures.

CLEANING
IF 18 EP can be removed from tools and equipment by using CLI RTC 100 immediately after use. Any hardened material will need to be removed mechanically.

PROPERTIES
The values shown are typical of results obtained in the laboratory at 27 ± 1ºC. Actual performance values obtained on site may vary from those quoted.

PHYSICAL PROPERTIES

IF 18 EP	@ 27 ± 1ºC
Pot life	60 mins
Initial hardness	24 hours
Full cure	7 days
Application thickness	2 - 4 mm
Compressive strength EN13892-2	78 N/mm2
Tensile strength BS 6319 Part 7	11 N/mm2
Bond Strength	> 1.5 N/mm2
Water absorption	< 1%
Shore D hardness	> 80

COVERAGE ESTIMATES

Pack size	Coverage
16.68kg	Approximately
Part A 3.88kg	5.0 m^2 @ 2 mm
Part B 2kg	thick
Part C 10.8kg	

NOTE : These figures are theoretical, due to the wastages and the variety and nature of substrates practical coverage figures may be reduced.

STORAGE AND SHELF LIFE
IF 18 EP has a shelf life of 12 months if kept in a dry, store between 5ºC and 30ºC in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

CHEMICAL RESISTANCE
IF 18 EP is resistant to a wide range of liquids and chemicals, for specific information please refer to the following CLI "Chemical Resistance" chart.

MAINTENANCE
Good housekeeping and regular cleaning is essential in order to maintain the performance of IF 18 EP. It is particularly importance in areas that are subject to regular spillage of chemicals. Spillages should not be allowed to dry, which results in higher concentrations of the chemicals, which may lead to early failure. Regular cleaning of the surface with a rotary scrubbing machine in conjunction with a water miscible cleaning agent or hot water washing at temperatures up to 50°C is recommended.

PRECAUTIONS
In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water (do not use solvents). Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to epoxide materials. Always wear gloves and eye/face protection is necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

DISPOSAL/SPILLAGE
Spillage of any of the component products should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

CONDITIONS OF SALE
Sold subject to the Company's conditions of sale which are available on request.

NOTE

The information supplied in this datasheet is based upon extensive experience and is given in good faith in order to help you. Our Company policy is one of continuous Research and Development; we therefore reserve the right to update this information at any time without prior notice. We also guarantee the consistent high quality of our products; however as we have no control over site conditions or the execution of the work, we accept no liability for any loss or damage which may arise as a result thereof.

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