
TECHNICAL DOCUMENT PACK


System Information & Data Sheets

A waterproofing and structural strengthening system for below-ground structures, comprising a reactive waterproofing compound and reinforcing mesh encapsulated within two layers of high-performance render.

INFORMATION SHEET

TIS No. 11

RenStrength System overview

ISSUE

Version 2.0

Supersedes all prior issues

DATA SHEETS

TDS C1 – C4

Component technical data

FORMAT

A4 · 16 pages

Print & PDF

CONTENTS

PAGES

01	Technical Information Sheet No. 11 — RenStrength System	02 – 04
02	Component 1 — Active water-stopping compound (TDS)	05 – 07
03	Component 2 — Reactive waterproofing slurry (TDS)	08 – 09
04	Component 3 — Pre-bagged fibre-reinforced render (TDS)	10 – 13
05	Component 4 — Carbon / glass-fibre strengthening mesh (TDS)	14 – 15

Renlon Ltd.

renlon.co.uk · operations@renlon.com

+44 (0)20 8687 4000

FOR ISSUE TO CLIENTS, CONTRACTORS,
SURVEYORS & CONSULTANTS**RENLON SAMPLE DESIGN PACK**

TECHNICAL INFORMATION SHEET · NO. 11

RenStrength System

The RenStrength System is a versatile and adaptable solution for waterproofing and stabilising below-ground structures. Available in multiple forms, the system can be tailored to meet specific project requirements. Its innovative design integrates a reactive waterproofing compound and a reinforcing mesh encapsulated within two layers of high-performance render.

KEY FEATURES

- 01 Customizable Configurations.** Offered in various forms to suit project-specific specifications and needs.
- 02 Environmentally Friendly.** Eliminates the need to remove existing render, minimising environmental impact.
- 03 Full Waterproof Protection.** Provides exceptional resistance against water ingress.
- 04 Preserves Substrates.** Prevents damage to substrates, avoiding costly repairs such as brickwork damage or wall replacements.
- 05 Enhanced Structural Strength.** Carbon fibre reinforcement improves resistance to cracking and structural degradation.
- 06 Efficient Installation.** Ensures a faster, cleaner process with minimal waste.
- 07 Steel Beam Encapsulation.** Capable of encapsulating steel beams to bolster structural integrity.
- 08 Service Integration Flexibility.** Accommodates service penetration details and includes provisions for serviceable acrylic injection hoses at strategic weak points.

This system's adaptability and advanced features make it an ideal choice for addressing the complexities of below-ground construction while ensuring durability, efficiency, and environmental responsibility.

01 System Components

REFER TO INDIVIDUAL TDS

The RenStrength System comprises various specialised components that work together to deliver effective waterproofing and structural reinforcement. Detailed specifications for each component can be found in the respective RenStrength Technical Data Sheets.

C1**Active water stopping**

Plugging compound to stop persistent water leakage where required and enable following works.

C2**Reactive waterproofing slurry**

Creates a waterproofing barrier with self-healing properties.

C3**Pre-bagged render**

Used to encapsulate carbon fibre mesh; applied in two layers.

C4**Carbon / glass-fibre strengthening mesh**

Provides a stabilising layer to enhance structural integrity.

02 RenStrength System Variations

SPECIFIED BY SURVEYOR

The RenStrength System offers specialised solutions, ensuring flexibility and efficiency across a wide range of applications. These will be specified by the surveyor during the specification stage.

VARIATION	DESCRIPTION
RS-1	The base system, designed for application over existing concrete surfaces. Suitable where no concrete repairs or fairing coats are required.
RS-2	Optimised for application over existing render systems. Eliminates the need for hacking off old existing render.
RS-3PRO	Ideal for high-risk soffit applications where existing soffits are porous or in poor condition, such as Clinker, Yorkstone, or Poor Concrete with Steel Filler Joists. Incorporates reinforcing mesh to enhance durability and structural integrity.
RS-FA to Slab	Tailored 30 mm thick application for use over existing concrete slabs. Suitable where no repairs or levelling are required.
RS-FB to Slab	Tailored 50 mm thick application for use over existing concrete slabs or existing fully bonded screeds. Prevents the need for screed removal, offering a more efficient solution.

Each variation ensures optimal performance by addressing specific substrate conditions.

03 Surface Preparation

REFER TO TDS

- A** Ensure the substrate is sound, stable, and clean with no defects such as honeycombing, debonding, or low areas.
- B** Remove any lime scale.
- C** For debonded areas, identify and cut the perimeter using a diamond saw. Chip out the debonded area and replace it with lime-based render.
- D** Mechanically prepare all concrete surfaces via bush hammer and/or blasting as specified.
- E** If persistent water seepage is present, use component **C1** to stop it.
- F** Open all joints using a mechanical tool and open cracks to a nominal 5 × 5 mm. Fill these with component **C2**.

04 Application

SUBJECT TO RENSTRENGTH VARIATION

- A** Apply the first coat **C2** by brush, trowel, spray, or long-haired roller to a thickness of at least 1.0 mm.
- B** Allow the first coat to sit for 2–4 hours.
- C** Apply the second coat **C2** to a thickness of at least 1.0 mm.

APPLICATION — CONTINUED

Application of the render & mesh system

- D** Apply by trowel onto the pre-wet **C3** surface to a thickness of 5 mm.
- E** If specified, while the render is wet, install a layer of **C4** by pressing it into the wet render using a trowel. Ensure the lap of the mesh is 150 mm.
- F** Apply a second coat of **C3** also at a thickness of 5.0 mm and trowel smooth.
- G** Cure the applied render for 5 days using spray-applied water.

APPLICATION SEQUENCE AT A GLANCE

STEP 01	STEP 02	STEP 03	STEP 04	STEP 05	STEP 06
Surface preparation	C2 — coat 1	C2 — coat 2	C3 — coat 1	C4 mesh	C3 — coat 2 & cure
Sound, clean substrate · prepare mechanically	Brush / trowel / spray · ≥ 1.0 mm	After 2–4 hr · ≥ 1.0 mm	Trowel · 5 mm onto pre-wet surface	Press into wet render · 150 mm lap	5 mm · trowel smooth · 5-day water cure

05 Specific Recommendations

CURING & TEMPERATURE Applied **C3** must be kept damp for a minimum of 2 days. Do not apply if the temperature is lower than **+5 °C** or on freezing surfaces.

STRUCTURAL RESPONSIBILITY All Structural Calculations and/or Recommendations are to be pre-approved by a reputable Structural Engineer. **Renlon accept no responsibility for Structural Conditions or Calculations.**

06 Important Notes

- The method of application is for guidance only and may change depending on site conditions but without lessening the overall performance that can be achieved.
- Products shall only be applied in accordance with their intended use and by a **Renlon Approved Installer**.
- Local product differences may result in performance variations.
- The most recent and relevant Technical Data Sheets shall apply.
- All work shall be carried out as directed by a supervising officer or a qualified specialist.
- It is not the responsibility of Renlon to ensure that our recommendations are implemented.

For further information, consult Health & Safety guidelines, system, product, and application data or contact our Head Office or operations@renlon.com.

TECHNICAL DATA SHEET · COMPONENT 1 OF 4

Active water-stopping hydraulic binder

USE WITH SYSTEM Component 1 of the RenStrength System is used in combination with Components 1–4. Refer to **Renlon Technical Information Sheet No. 11**.

Component 1 is a Mapei-produced ultra-fast setting and curing hydraulic binder for stopping water leaks, even water under pressure.

The product is pre-blended powder binder composed of high-strength cements and special admixtures in a formula developed in the Mapei Research Laboratories. The product contains no chlorides.

Mixed with water, the product produces a paste with a plastic-thixotropic consistency easy to apply even on vertical surfaces, with no need for formwork.

It has an extremely fast setting time (about one and a half minutes at +20 °C) and, after curing:

- has very high compressive and flexural strength after only half an hour;
- is waterproof and water-repellent;
- suitable for use in potable water. Certified to **AS/NZS 4020:2018**.

01 Application

REFER TO TIS NO. 11

SEALING WATER LEAKS

Enlarge the cracks or dovetail holes so that the wider part is towards the inside. The minimum external sizes must be about 2 cm in width and 2 cm in depth. Remove any incoherent material from cavities.

WATERPROOF SEALING OF RIGID JOINTS

Remove any degraded or loose material and clear all dust by means of compressed air. Thoroughly wet the substrate with water. Before sealing, wait until any excess water has evaporated. Compressed air or a sponge can be used, if necessary, to facilitate the removal of unabsorbed water. The ideal condition would be a cavity saturated with water but with a dry surface.

COMPONENT 1 — PREPARATION & HANDLING

Mixing, application data & storage

MIXING

While stirring, pour 1 kg of Component 1 into a container holding 280 g of water and mix manually with trowel to obtain a smooth mix with no lumps. For dosing by volume, mix 2.5 parts Component 1 with 1 part water. Given the fast setting time prepare only enough of the product for use within one minute.

CONSUMPTION

1.8 kg of the product will fill a one-dm³ cavity.

CLEANING

Before it hardens, the product can be cleaned from tools with water. After setting, residues can be removed by mechanical means.

PACKAGING

1 box with 4 bags of 5 kg.

STORAGE

Store the product in a dry place indoor for 12 months. The product complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH) – All. XVII, item 47.

IMPORTANT NOTES

DO NOT Do not add lime, cement or gypsum to the product. Do not leave drums of the product exposed to sunlight before using.

TEMPERATURE HANDLING No special precautions need be taken when the temperature is approx. +20 °C. **In warm weather** do not expose material to sunlight and use very cold water for preparing the mix. **In low temperatures**, the water should be around +20 °C and the material should be stored in heated rooms because the beginning of setting and curing is delayed at low temperatures.

HEALTH & SAFETY During use wear protective gloves and goggles and take the usual precautions for handling chemicals. If the products come in contact with eyes or skin, wash immediately with plenty of water and seek medical attention.

TECHNICAL DATA — PRODUCT IDENTITY

PROPERTY	VALUE
Consistency	Fine powder
Colour	Grey
Bulk density	1,100 kg/m ³
Dry solids content	100 %

COMPONENT 1 — TECHNICAL DATA

Application data & final performance

APPLICATION DATA at +23 °C · 50 % R.H.

PROPERTY	VALUE
Colour of mix	Grey
Mix ratio by weight	100 g Component 1 to 28 g water
Mix ratio by volume	2.5 parts Component 1 to 1 part water
Consistency of mix	Plastic
pH of mix	12.8
Minimum application temperature	+5 °C
Pot life at +20 °C	Approx. 1 minute

FINAL PERFORMANCE Mechanical characteristics per EN 196/1 · prepared using 28 % water

FLEXURAL STRENGTH	N/MM ²	COMPRESSIVE STRENGTH	N/MM ²
after ½ hour	3	after ½ hour	17
after 1 hour	4	after 1 hour	20
after 3 hours	4	after 3 hours	24
after 24 hours	5	after 24 hours	32
after 7 days	8	after 7 days	44
after 28 days	9	after 28 days	46

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet. The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in effect at the time of the product installation.



ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED WARRANTIES.

TECHNICAL DATA SHEET · COMPONENT 2 OF 4

Reactive waterproofing cementitious slurry

USE WITH SYSTEM Component 2 of the RenStrength System is used in combination with Components 1–4. Refer to **Renlon Technical Information Sheet No. 11**.

Component 2 is a Mapei-produced one-component cementitious mortar slurry, containing crystalline promoting chemicals which penetrate the substrate and prevent the penetration of moisture. When mixed with water it becomes fluid mortar that can be applied by a roller, brush or by spray with excellent adhesion to the substrate.

The product is used for internal and external waterproofing of brickwork, blockwork, concrete and concrete blockwork.

COMPLIANCE & CERTIFICATION



01 Application

REFER TO TIS NO. 11

APPLICATION BY BRUSH OR ROLLER

To achieve proper application, particular care must be taken at internal and external junctions. Apply in even layers using a suitable slurry brush or roller, ensure the first coat is well worked into the surface with no voids. Apply a second coat when the first coat has hardened (approximate 2–5 hours) at 90° to the first coat, ensuring a minimum overall thickness of **2 mm**. Do not let the first coat fully set.

APPLICATION BY SPRAY

Use a traditional wet mortar spraying equipment; ensure minimum overall thickness of **2 mm**.

PRIMING

Pre-wet surface with water to SSD condition prior to application of Component 2.

MIXING

Pour 3.2–4.2 litres of clean water into a suitable container.

WATER REQUIREMENT	L PER 20 KG PACK
Brush applied	3.2 – 4.0
Trowel applied	3.2 – 3.6
Spray applied	3.5 – 4.2

Slowly add the product powder while mixing using a mechanical mixer at a low speed to reduce dust generation. Once all the powder has been added, increase the mixing speed.

Mix thoroughly for 1–3 minutes, taking care to blend in all the unmixed powder deposited on the sides and bottom of the bucket, until a mortar lump-free slurry is formed. If required, more water can be gradually added until the desired consistency is obtained. Do not exceed the maximum water content. Excessive mechanical mixing should be avoided.

MIXING Do not mix by hand.

COMPONENT 2 — HANDLING & TECHNICAL DATA

Consumption, storage, notes & performance

CONSUMPTION

Applied in at least two coats to achieve a minimum thickness of **2 mm** at a total consumption of not less than **4 kg/m²**.

CLEANING

Because of the high adhesion of Component 2, we recommend cleaning tools with water before the mortar starts to set. Once hardened, cleaning must be carried out mechanically.

PACKAGING

Component 2 is available in 20 kg paper bags.

STORAGE

The product may be stored for 6 months in its original packaging in a dry place at a temperature of at least +5 °C and below +35 °C.

IMPORTANT NOTES

- Do not puncture or fix through the product.
- Do not apply the product if the temperature is lower than **+5 °C**.
- Do not add cement, aggregates or other admixtures to the product.

HEALTH & SAFETY During use wear protective gloves and goggles and take the usual precautions for handling chemicals. If the products come in contact with eyes or skin, wash immediately with plenty of water and seek medical attention.

TECHNICAL DATA at +20 °C · 50 % R.H.

PRODUCT IDENTITY	VALUE
Consistency of mix	Brush, roller & sprayable
Colour of mix	Grey
Application temperature	+5 °C to +35 °C
Service temperature	-30 °C to +90 °C
Pot life of mix	≈ 30 min at +20 °C
Reaction to fire (EN 13501-1)	Euroclass A1
Hardened density	1,850 kg/m ²

FINAL PERFORMANCE · THICKNESS 2.0 MM	VALUE
Compressive strength · 28 days	30 MPa
Flexural strength · 28 days	7 MPa
Adhesion to concrete	> 0.8 MPa
Resistance to water pressure	> 7 Bar

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet. The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in effect at the time of the product installation.



ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED WARRANTIES.

TECHNICAL DATA SHEET · COMPONENT 3 OF 4

Pre-bagged fibre-reinforced render

USE WITH SYSTEM Component 3 of the RenStrength System is used in combination with Components 1–4. Refer to **Renlon Technical Information Sheet No. 11**.

Component 3 is a Mapei-produced two-part, high-strength cement-based mortar with glass fibres, selected aggregates in a granulometric curve, special admixtures and synthetic polymers in water dispersion according to a formula developed in Research Laboratories. When the two components are mixed together (Part A powder and Part B liquid) they form a plastic-thixotropic mix which may be applied by trowel or spray in layers up to **25 mm** thick on horizontal and vertical surfaces. The product has high adhesion strength and when hardened forms a compact layer that is impermeable to water and aggressive gases present in the atmosphere while remaining permeable to water vapour.

COMPLIANCE Component 3 meets the requirements of **EN 1504–9** and the minimum requirements of **EN 1504–3** ("Structural and non-structural repairs") for R2-class mortars. Furthermore, Component 3 is classified as **M25** masonry mortar according to **EN 998–2** and as **GP render, category CS IV** according to **EN 998–1**.

COMPLIANCE & CERTIFICATION



01 Application

REFER TO TIS NO. 11

MIXING

Pour component B (liquid) into a suitable clean container and slowly add component A (powder) while stirring with a mixer. Carefully mix for several minutes, making sure no powder remains attached to the sides or bottom of the container. Keep mixing until thoroughly blended (completely lump-free). A mechanical mixer at low speed is recommended for this operation to prevent entraining too much air into the mix. Avoid mixing the product manually.

Large quantities of mortar may be prepared with a cement mixer. When applying the product by spray, use a rendering machine with a worm-gear pump. In hot weather the consistency of the mix may be modified by adding extra water up to 2 % in weight of the powder.

CLEANING

Clean tools with clean water while materials have cured. Once hardened, materials can only be removed by mechanical tools.

PACKAGING

Part A: 25 kg bags · **Part B:** 6.25 kg bottles

STORAGE

Part A may be stored for 12 months in its original packaging in a dry place. This product complies with the prescriptions of Reg. (EC) N. 1907/2006 (REACH) – Annex XVII, article 47. Part B may be stored for 24 months. Store both components at a temperature of at least +5 °C.

PRECAUTIONS TO BE TAKEN

No particular precautions need to be taken if the temperature is around +20 °C. After application, the product must be very carefully cured if the weather is particularly dry, hot or windy and we recommend protecting the surface to prevent the mixing water from evaporating too quickly.

COMPONENT 3 — IMPORTANT NOTES & TECHNICAL DATA

Handling notes, product identity & application data

IMPORTANT NOTES

- Do not apply the product if the temperature is lower than **+5 °C**.
- Do not add cement, aggregates or other admixtures to the product.
- **Component A** contains cement that, when in contact with sweat or other body fluids, causes irritant alkaline reactions and allergic reactions to those predisposed. It can cause damage to eyes.
- **Component B** is not considered dangerous according to current regulations regarding the classification of mixtures.

HEALTH & SAFETY During use wear protective gloves and goggles and take the usual precautions for handling chemicals. If the products come in contact with eyes or skin, wash immediately with plenty of water and seek medical attention.

Component 3: two-component fibre-reinforced cementitious mortar used for structural strengthening and levelling substrates in compliance with the requirements of EN 1504-3 class R2, EN 998-1 category CS IV and EN 998-2 class G-M25.

TECHNICAL DATA — PRODUCT IDENTITY

PART A — POWDER		PART B — LIQUID	
Consistency	Powder	Consistency	Fluid liquid
Colour	Grey	Colour	White
Maximum aggregate size	1 mm	Density	1.07 g/cm ³
Bulk density	1,200 kg/m ³	Dry solids content	14 %
Dry solids content	100 %	Chloride ion content (EN 1015-17)	≤ 0.05
Chloride ion content (EN 1015-17)	≤ 0.05	minimum requirement ≤ 0.05 %	
minimum requirement ≤ 0.05 %			

APPLICATION DATA at +20 °C · 50 % R.H.

PROPERTY	VALUE
Colour of mix	Grey
Mixing ratio	25 kg Part A : 6.25 kg Part B : 0.5 kg water
Consistency of mix	Plastic-thixotropic
Density of wet mix	1,850 kg/m ³
Maximum applicable thickness	25 mm
Application temperature	+5 °C to +35 °C
Pot life of mix	Approx. 1 hour

COMPONENT 3 — FINAL PERFORMANCE

EN 1504-3 (R2) & EN 998 — performance data

FINAL PERFORMANCE 25 % Part B + 2 % water · mixing per EN 196-1

CHARACTERISTIC	TEST METHOD	REQUIREMENT (EN 1504-3 / R2)	PERFORMANCE
Compressive strength	EN 12190	≥ 15 MPa after 28 days	> 15 MPa @ 7 d · 25 MPa @ 28 d
Flexural strength	EN 196-1	Not required	> 6 MPa @ 7 d · 8 MPa @ 28 d
Compressive modulus of elasticity	EN 13412	Not required	10 GPa @ 28 d
Adhesion on concrete substrate MC 0.40 (w/c = 0.40) per EN 1766	EN 1542	≥ 0.8 MPa @ 28 d	≥ 2 MPa @ 28 d
Thermal compatibility (adhesion per EN 1542) · freeze-thaw cycles with de-icing salts · storm cycles · dry thermal cycles	EN 13687-1 EN 13687-2 EN 13687-4	≥ 0.8 (50 cycles) ≥ 0.8 (30 cycles) ≥ 0.8 (30 cycles)	≥ 0.8 ≥ 0.8 ≥ 0.8
Capillary absorption	EN 13057	≤ 0.5 kg/(m ² ·h ^{0.5})	< 0.3
Reaction to fire	EN 13501-1	—	Euroclass A2-s1, d0

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application.

Continued on page 13 — final performance per EN 1015-2 (EN 998-1 / EN 998-2).

COMPONENT 3 — FINAL PERFORMANCE · CONTINUED

EN 998-1 & EN 998-2 — performance data

FINAL PERFORMANCE 25 % Part B + 2 % water · mixing per EN 1015-2

CHARACTERISTIC	TEST METHOD	EN 998-1	EN 998-2	PERFORMANCE
Compressive strength @ 28 days	EN 1015-11	CS I (0.4–2.5) CS II (1.5–5.0) CS III (3.5–7.5) CS IV (≥ 6)	Class M1 (≥ 1 N/mm ²) ... Class Md (≥ 25 N/mm ² or multiples of 5)	> 25 Category CS IV (Class M25)
Adhesion to substrate	EN 1015-12	declared value & FP	Not required	≥ 1.0 · FP = B
Initial shear strength	EN 1052-3	Not required	chart value	0.15
Capillary water absorption	EN 1015-18	Wc 0 not specified Wc 1 ≤ 0.40 Wc 2 ≤ 0.20	declared value	Category WC 2 · ≤ 0.1
Coefficient of permeability to water vapour (μ)	EN 1015-19	declared value	—	≤ 50
Thermal conductivity (λ _{10,dry})	EN 1745	chart value	chart value	0.76 W/m·K (P=50%)
Reaction to fire (Euroclass)	EN 13501-1	Euroclass	—	Euroclass A2-s1, d0

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.



ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED WARRANTIES.

TECHNICAL DATA SHEET · COMPONENT 4 OF 4

Carbon / glass-fibre strengthening mesh

USE WITH SYSTEM Component 4 of the RenStrength System is used in combination with Components 1–4. Refer to **Renlon Technical Information Sheet No. 11**.

Component 2 is a Mapei-produced glass-fibre mesh for localised "reinforced" structural strengthening of masonry and concrete elements. The product is made from primed, alkali-resistant A.R. glass fibres with a zirconia content of 17 % in a special weave pattern.

The product is used in combination with Component 2 and 3 of the RenStrength System for localised reinforced strengthening of masonry elements and concrete to improve the distribution of stresses acting on the surface of strengthened elements. The system may be used to reduce the vulnerability of non-structural buffer and partition walls which, because of their weight and position, could present a risk to the safety of people, including in buildings that are not seriously damaged. May also be used for "anti-collapse" systems on floor slabs.

COMPLIANCE The system complies with the "Reluis guidelines for repairing and strengthening structural elements, buffer walls and partition walls" and the approach defined in the guidelines for the approval of **FRCM** (Fibre Reinforced Cementitious Matrix) systems which stress the importance of obtaining approval for the entire strengthening package.

SOME APPLICATION EXAMPLES

- Localised structural strengthening of facing walls, applied on the internal and/or external face.
- Anti-fracture membrane to connect the edges of buffer walls, partition walls and structural cornices in elements with a reinforced concrete frame (beams, pillars and floor slabs).
- "Localised" protection for cracked and damaged structures.
- "Anti-collapse" protection on floor slabs.

01 Application of the strengthening system

REFER TO TIS NO. 11

- A** Apply an even layer of **Component 3** around 5–6 mm thick with a metal smoothing trowel. Level off the surface of the wall to form a sufficiently flat surface.
- B** After applying the first layer of mortar, while it is still "wet", place **Component 4** mesh over the entire surface and press down lightly with a flat smoothing trowel so that it adheres perfectly to the mortar.
- C** Apply a second even layer of **Component 3** on the still "wet" first one (around 5–6 mm thick) so that it completely covers the mesh.
- D** Adjacent sheets of **Component 4** must be overlapped at the joints for a thickness of at least **15 cm** both longitudinally and transversally.

COMPONENT 4 — HANDLING & TECHNICAL DATA

Packaging, storage, notes & specification

PACKAGING

Component 4 is available in 0.45 m-wide by 25 m-long rolls and 1 m-wide by 50 m-long rolls packed in cardboard boxes.

STORAGE

Store in a dry, covered area.

IMPORTANT NOTES

Component 4 is an article and referring to the current European regulations (Reg. 1906/2007/CE – REACH) does not require the preparation of the safety data sheet.

During use it is recommended to wear gloves and goggles and follow the safety requirements of the workplace.

USE RESTRICTION Product for professional use only.

TECHNICAL DATA typical values

PRODUCT IDENTITY		APPLICATION DATA	
Type of fibre	A.R. glass fibres	Tensile strength	≥ 30 kN/m
Zirconia content (ZrO ₂)	17 %	Modulus of elasticity	72 GPa
Weight	125 g/m ²	Load-resistant area per unit width	23.51 mm ² /m
Mesh size	10.5 × 11.5 mm (± 2 %)	Equivalent thickness of dry mesh	0.024 mm
		Elongation at failure	1.8 %

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet. The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in effect at the time of the product installation.



ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED WARRANTIES.



END OF DOCUMENT

For specification & technical enquiries

For further information, consult Health & Safety guidelines, system, product, and application data, or contact our Head Office.

HEAD OFFICE**Renlon Ltd.**

United Kingdom

EMAIL**operations@renlon.com**

Specifications & orders

TELEPHONE**+44 (0)20 8687 4000**

Mon – Fri, business hours

WEB**renlon.co.uk**Latest TDS & TIS revisions

DOCUMENT REVISION

VERSION	STATUS	NOTES
v2.0	Current issue	RenStrength System – TIS No. 11 with TDS for Components 1–4.
–	Supersedes	All prior issues of TIS No. 11 and individual Component TDS documents.

This document is issued as part of a Renlon Sample Design Pack for use by clients, contractors, surveyors and consultants. Always refer to the current version of the Technical Data Sheet at the time of product installation. The contents may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in effect at the time of product installation.



ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED WARRANTIES.