

DATA SHEETS

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1. TECHNICAL DATA

1.1 DESCRIPTION

SEALiTe[®] is a multi-purpose, highly flexible, non-toxic cement based damp proof sealing compound and waterproofing system. It is highly UV resistant and requires minimal maintenance after application.

SEALiTe[®] allows for substrate joint movement, whilst still keeping its waterproofing integrity.

The product has the following features:

Grey in Colour

Excellent tensile strength with high flexibility properties

Exceptional durability

Excellent adhesion to rock and concrete surfaces

Non-Toxic and non-flammable

No unusual storage or ventilation required during application, clean up or waste disposal.

1.2 PRODUCT OVERVIEW

1.2.1 SEALING APPLICATIONS:

SEALiTe[®] is suitable for waterproofing applications, and where minor cracks or joins are present, with the incorporation of **SEALiTe**[®] Membrane

Typical Applications for **SEALiTe**[®] include:

Water Retaining structures (fish ponds, reservoirs, water canals etc.)

Concrete roofs / concrete slabs

Damp proofing

Waterproofing on retaining walls

Negative pressure applications

Damp proofing in Showers, Walls, Retaining Walls and Flower Boxes

Sealing of Parapet walls (**SEALiTe**[®] Membrane must be used)

Fixing of Concrete Water Holding structures (**SEALiTe**[®] Membrane must be used)

For Restoration work in Irrigation Canals

NOTE: Any cracks in the structure have to be bridged with the specially designed **SEALiTe**[®] Membrane. The white delamination strip is placed over the crack whilst applying the **SEALiTe**[®] product on both sides of the strip. Once the membrane is stuck on **SEALiTe**[®] must be allowed to cure for 1 hour at least. Once cured a second coat must be added to cover the membrane completely. The system must be allowed to dry for at least 3 days before water can be added back into the water holding structure.

SEALiTe®

UV-RESISTANT DAMP
PROOFING COMPOUND



Photo 1: Flat roofing application



Photo 2: **SEALiTe®** treated concrete roof



Photo 3: Illustrate negative pressure performance: Porous Brick treated with **SEALiTe®** – Blocks off all water.



Photo 4: Typical crack in a reservoir structure
SEALiTe® membrane must be used the white shows dampness coming through; the delamination strip must be placed over the crack to allow for movement but still have it.



Photo 5: Illustrating the second coat over the membrane to seal off the crack completely.

1.3 CONCRETE RESTORATION - WATER CANAL

SEALiTe® is designed to prolong the life of deteriorating concrete within the irrigation canals and to seal off any cracks and joints to decrease water losses within the irrigation system. The excellent mechanical coating properties of **SEALiTe®** are:

Adhesion

Flexibility

Water resistance

Total UV protection

Abrasion resistance and

Low friction coefficient

SEALiTe®

UV-RESISTANT DAMP PROOFING COMPOUND

SEALiTe® extends the lifetime of the existing concrete structure by estimated +20 years without having to replace sections of weathering concrete. The coating acts like a barrier halting all further mechanical and chemical deterioration of the underlying concrete. Using **SEALiTe®** as a Joint and crack sealer, stops any water leaking, but does not inhibit the natural movement of the concrete at the joints or cracks. These movements are induced by:

Temperature changes

Sub – base movements (rainy or dry season)

Other stress related inhibiting aspects



Photo 6: Irrigation canal Pongola: Before



Photo 7: After Crack and Joint Sealing Spray application

Elongation Test 7SC: 7 days standard conditions 23°C and 50% humidity

Standard abrasion resistance test is the calculation of the amount of product that is abraded in 50 cycles with an abrasion wheel together with carborundum powder (standard hard grout would be 100mm³ <)

DESCRIPTION	AMOUNT	UNIT
Pumping Life Pumping Life @ 20°C@ 20°C	25-30	MIN
INITIAL SET TIME	50-60	MIN
TENSILE ADHESION	3.21	MPA
NEGATIVE HYDROSTATIC PRESSURE	2.5	BAR
POSITIVE HYDROSTATIC PRESSURE	5	BAR
ELONGATION TEST 7SC*	16.75% @ 2.83	MPA
ABRASION RESISTANCE*	18.3	MM ³

1.4 TESTING METHODOLOGY

1.4.1 ADHESION

The adhesion tests were done on a concrete slab with a fine rough surface – similar to a sand blasted surface as depicted in photo 1.1 and testing equipment in 1.2.

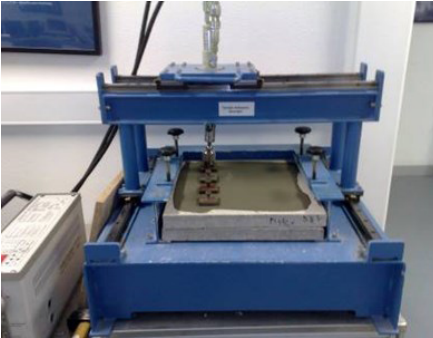


Photo 1.1



Photo 1.2

1.4.2 ELONGATION / TENSILE STRENGTH

The elongation / tensile strength was tested using dumbbells cut from approx.. 1.5mm thick dry film and tested at a jaw separation rate of 50mm/min, as depicted in photos 2.1 and 2.2. together with the load elongation curves depicted in Graph 1.1 and 1.2.

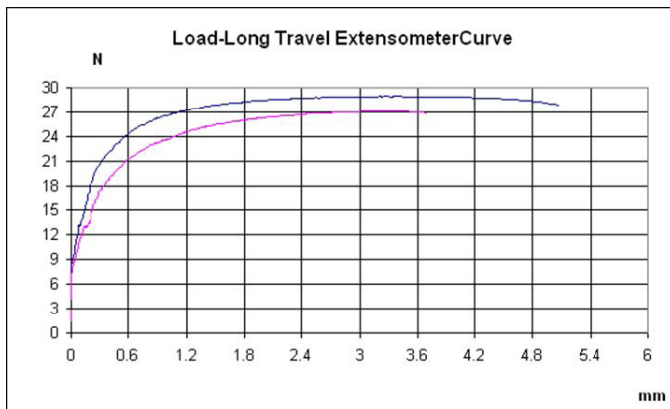


Photo 2.1

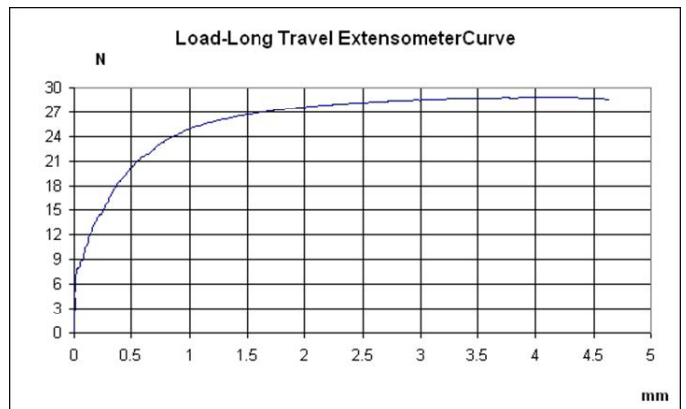


Photo 2.2

7 days SC / 7 days submersed / 3 days SC



Graph 1.1



Graph 1.2

1.4.3 HYDROSTATIC/POSITIVE PRESSURE TESTING:

The negative pressure testing was conducted on a very porous concrete block with a reasonably smooth but open surface as depicted in photos 3.1 and 3.2 below.



Photo 3.1



Photo 3.2

1.4.4 ABRASION RESISTANCE TESTING:

The standard abrasion test entails 50 cycles with an abrasion wheel together with carborandum powder. A standard high strength tile grout has a figure of an excess of 100mm³. **SEALiTe**[®]'s reading is 18.3. This shows that the **SEALiTe**[®] has a very high wear resistance to abrasion.



Photo 4.1

1.5 SURFACE PREPARATION

All surfaces should be cleaned down prior to **SEALiTe**[®] being applied. It is important that the surface is free of any loose debris and that any water used for the surface cleaning be free of contaminants such as oil or lubricants.

1.6 MIXING

The **SEALiTe**[®] drymix product must be mixed with 22-23% water content. It can be mixed by hand using a paddle stick and drill or by mixing machine.

1.7 APPLICATION

SEALiTe[®] is used as a flexible waterproofing and stabilizing membrane in tunnels, mines and water channels. **SEALiTe**[®] must have a minimum application thickness between 3-4mm. The application can be sprayed (tunnels and mines) or troweled/rolled on (water channels).

1.8 WARNING

*Do not ingest. Wear rubber gloves, approved dust mask and goggles when spraying **SEALiTe[®]** onto wall surfaces. In the event of contact with eyes or skin, rinse thoroughly with cold water. Seek medical advice if irritation or discomfort persists. For further information, consult the relevant health and safety data sheet.*

1.9 IMPORTANT NOTICE

The information supplied in our literature or given by our employees is given in good faith. We reserve the right to update this information at any time without prior notice. We guarantee the consistent high quality of our product, however we have no control over site conditions or execution of the work of third party contractors.

2. MATERIAL SAFETY DATA

2.1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Name of substance/preparation:

Commercial product name:**SEALiTe**[®]

2.2 USE OF SUBSTANCE / PREPARATION

Industrial/Commercial.

Use for: Waterproofing roofs, walls, floors .

All other areas of application to be agreed with the Application Engineering/Technical Marketing Department of the manufacturer.

2.3 COMPANY NAME

Manufacturer/distributor:.....iTe Products (Pty) Ltd

Street:.....7 Clarke Street South

State/postal code/city:.....Alrode, 1451

Telephone:.....+27 11 864 4918

Telefax:.....+27 11 864 2123

Information about the Safety Data Sheet:.....+27 11 864 4918

eMail:.....info@iteproducts.co.za

2.4 HAZARDS IDENTIFICATION

2.4.1 CLASSIFICATION

Classification (67/548/EEC, 1999/45/EC):

R-Phrase Description – irritant to eyes

This product is not a dangerous preparation within the meaning of Directive 1999/45/EC.

2.4.2 LABELLING

Labelling (67/548/EEC, 1999/45/EC):

R-Phrase Description – 36/38 Irritant to eyes

S-Phrase Description

2.4.3 FURTHER HAZARDS TO HUMAN AND ENVIRONMENT:

The product does not have any further hazards

2.5 COMPOSITION/INFORMATION ON INGREDIENTS

2.5.1 CHEMICAL CHARACTERIZATION:

Mixture

2.5.2 DESCRIPTION:

Mixture of cement and sand mixture with other non hazardous additions

2.6 FIRST-AID MEASURES

2.6.1 GENERAL INFORMATION:

Under ordinary workplace conditions: No special measures required

2.6.2 AFTER CONTACT WITH THE SKIN

Wash with plenty of water or water and soap.

2.6.3 AFTER CONTACT WITH THE EYES

Rinse immediately with plenty of water. Seek medical advice in case of continuous irritation.

2.6.4 AFTER SWALLOWING

If conscious, give several small portions of water to drink. Do not induce vomiting. In cases of sickness seek medical advice (show label if possible).

2.6.5 ADVICE FOR THE PHYSICIAN

Due to its physical properties, may cause mechanical irritation. Product may agglutinate in the gastro-intestinal tract. Medical assistance should be sought. Depending on the symptoms, invasive measures may be necessary.

2.7 FIRE-FIGHTING MEASURES

2.7.1 SUITABLE EXTINGUISHING MEDIA

Water spray , water mist , extinguishing powder , foam , carbon dioxide.

2.7.2 EXTINGUISHING MEDIA WHICH MUST NOT BE USED FOR SAFETY REASONS

Water jet .

2.7.3 SPECIAL EXPOSURE HAZARDS ARISING FROM THE SUBSTANCE OR PREPARATION ITSELF, COMBUSTION PRODUCTS, RESULTING GASES

No further relevant information available

2.7.4 SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING

No further relevant information available

2.8 ACCIDENTAL RELEASE MEASURES

2.8.1 PERSONAL PRECAUTIONS

Wear a dust mask

2.8.2 ENVIRONMENTAL PRECAUTIONS

Do not allow to enter into sewer, drainage or potable water systems

2.8.3 METHODS FOR CLEANING UP

Take up mechanically and dispose of according to local/state/federal regulations.

2.8.4 FURTHER INFORMATION:

Observe notes under section 7 with regards to safe handling

Observe section 8 for information on personal protective equipment.

2.9 HANDLING AND STORAGE

2.9.1 HANDLING

Precautions for safe handling:

Avoid dust formation.

Precautions against fire and explosion:

No special measures required

2.9.2 STORAGE

Conditions for storage rooms and vessels:

No special measures required

Advice for storage of incompatible materials:

not applicable .

2.10 EXPOSURE CONTROLS AND PERSONAL PROTECTION EQUIPMENT

2.10.1 EXPOSURE LIMITS

2.10.2 EXPOSURE LIMITED AND CONTROLLED

2.10.3 EXPOSURE IN THE WORK PLACE LIMITED AND CONTROLLED

General protection and hygiene measures:

Do not breathe dust. Do not eat when handling.

Personal protection equipment

Respiratory protection

In case of dust formation: fine dust mask without protection rating .

Eye protection

Recommendation in case of dust formation: tight fitting protective goggles .

2.10.4 EXPOSURE TO THE ENVIRONMENT LIMITED AND CONTROLLED

Prevent material from entering surface waters and soil.

2.11 PHYSICAL AND CHEMICAL PROPERTIES

2.11.1 GENERAL INFORMATION

Physical state / form.....: solid - powder

Colour: grey - brown

Odour: odourless

2.11.2 IMPORTANT INFORMATION ABOUT THE PROTECTION OF HEALTH, SAFETY AND THE ENVIRONMENT

Property: Value: Method:

Melting point / melting range: not applicable

Boiling point / boiling range: "

Flash point.....: "

Auto-ignition temperature.....: product is not self-igniting

Lower explosion limit (LEL): not applicable

Vapour pressure.....: "

Bulk density: 1300-1500 kg/m³ (DIN EN ISO 60)
Water solubility / miscibility.....: Insoluble sets in water
pH-Value: 11
Viscosity (dynamic): not applicable

2.12 STABILITY AND REACTIVITY

2.12.1 GENERAL INFORMATION:

If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

2.12.2 CONDITIONS TO AVOID

none known .

2.12.3 MATERIALS TO AVOID

none known .

2.12.4 HAZARDOUS DECOMPOSITION PRODUCTS

If stored and handled properly: none known . At increased temperature: acetic acid

2.13 TOXICOLOGICAL INFORMATION

2.13.1 GENERAL INFORMATION:

According to our present state of knowledge no damaging effect expected when treated in accordance with standard industrial practices and local regulations where applicable.

2.13.2 TOXICOLOGICAL TESTS

Acute toxicity

Primary irritation:

Eyes: irritating effect

Sensitization:

no sensitizing effects known

Further information:

The product shows the following aspects:

Irritant

2.14 ECOLOGICAL INFORMATION

2.14.1 ECOTOXICITY

No expected damaging effects to aquatic organisms.

Effects in sewage treatment plants (bacteria toxicity: respiration-/reproduction inhibition):

According to current knowledge adverse effects on water purification plants are not expected.

2.14.2 MOBILITY

No further relevant information available

2.14.3 BIO-ACCUMULATION POTENTIAL

No adverse effects expected.

2.14.4 OTHER HARMFUL EFFECTS

2.14.5 ADDITIONAL INFORMATION

General information:

2.15 DISPOSAL CONSIDERATIONS

2.15.1 MATERIAL

Do not allow product to reach sewerage system

Disposal should be in accordance with local, state or national legislation.

Mix product residue with water, allow to harden and dispose of as construction waste

2.15.2 UNCLEANED PACKAGING

Recommendation:

Completely discharge packaging. Paper packaging may be recycled

2.16 TRANSPORT INFORMATION

2.16.1 LAND TRANSPORT ADR AND RID

Road ADR:

Valuation: Not regulated for transport

Railway RID:

Valuation: Not regulated for transport

2.17 REGULATORY INFORMATION

2.17.1 NATIONAL REGULATIONS

National and local regulations must be observed.

For information on labelling please refer to section 2 of this document.

2.18 OTHER INFORMATION

2.18.1 MATERIAL

The above information describes exclusively the safety requirements of the product(s) and is based on our present-day knowledge. It does not represent a guarantee for the properties of the product(s) described in terms of the legal warranty regulations. Properties of the product are to be found in the respective product leaflet.

2.18.2 FURTHER INFORMATION:

Commas appearing in numerical data denote a decimal point. Vertical lines in the left-hand margin indicate changes compared with the previous version. This version supersedes all previous versions.

3. METHOD STATEMENT

SEALiTe® is arguably the best waterproofing compound for use behind exterior natural wall cladding products such as rivens, slate, stone etc. It has class leading adhering properties, does not age or deteriorate over time, and is a perfect match for conventional riven adhering methods using cement based agents.

SEALiTe® can be applied over raw brick work, bag washed plaster, or sand/cement plaster.

As with all applications, preparation is critical, and the substrate must be sound, dry and free of loose particles, dustiness etc. The system can only be as good as the substrate, and structural cracks and defects need to be rectified before commencement. In order to ensure that the **SEALiTe®** will perform, it must be applied so that the entire surface is sealed, with voids being filled.

3.1 PREPARATION

Raw brick walls: Usage rates for **SEALiTe®** are dependant on the roughness and/or unevenness of the wall. We therefore recommend that the brickwork be bag-washed with a sand cement mixture, with **PLASTERiTe®** blended into the mixture to promote adhesion.

Plastered walls: Repair all cracks or imperfections. In corners or over construction joins, **SEALiTe®** membrane with delamination strip is recommended to improve the waterproofing system's ability to withstand expansion and contraction. Any loose material must be wire brushed until no dust is evident.

3.2 MIXING

We recommend that a 20 litre bucket be used for mixing the compound. In order to obtain a smooth, evenly mixed compound we recommend use of a powered mixer with a stirrer.

20Kg Bags Pour 5 Litres of clean water into the bucket. Pour the 20 kg of powder into the bucket gradually, while stirring continuously. Once a smooth, lump free paste is achieved, it is ready for application. In hot conditions, a film will develop on the surface, and the paste should therefore be stirred whenever the roller or brush is inserted.

3.3 APPLICATION:

Cracks in the structure have to be bridged with the specially designed **SEALiTe®** Membrane. The white delamination strip is placed over the crack whilst applying the **SEALiTe®** product on both sides of the strip. Once the membrane is stuck on **SEALiTe®** must be allowed to cure for 1 hour at least. Once cured a second coat must be added to cover the membrane completely.

Apply the mixture onto the wall using a lambs-wool roller or good quality block brush, ensuring that the entire surface is covered in a thin coat of **SEALiTe®**. The application rate should be approximately 1,2 kg **SEALiTe®** per m².

Allow the first coat to dry for at least an hour before applying the second coat at a rate of approximately 1kg per m².

The wall cladding can then be installed over the waterproofed areas the following day.

3.4 WARNING

Do not ingest. Wear rubber gloves, approved dust mask and goggles when spraying **SEALiTe®** onto wall surfaces. In the event of contact with eyes or skin, rinse thoroughly with cold water. Seek medical advice if irritation or discomfort persists. For further information, consult the relevant health and safety data sheet.

4. THEORETICAL (VOC) CONTENT

4.1 **PRODUCT:**

SEALiTe[®] Moisture Barrier/Waterproofing compound

4.2 **ABBREVIATIONS**

S.G. = Specific Gravity

g/ml = grams/millilitre

g/l = grams/litre

4.3 **FORMULAS**

Sum of VOC's in Sealer/Primer formulation = VOC %

$VOC (g/l) = VOC \% \times S.G. \times 10$

4.4 **S.G. (g/ml) = 1.00g/ml**

4.5 **VOC % = 0%**

4.6 **$VOC (g/l) = 0 \times 1.00 \times 10 = 0g/l$**

Maximum VOC content (Specified by Green Building Council of South Africa): 50g/l

Peter Funke

Product Development Manager

5. SHORT REPORT VOC

7 August 2014

Short Report: Product SEALiTe W30 Waterproofing Compound

iTe Products **SEALiTe**[®] Waterproofing meets the Green Building Council of South Africa's credit criteria for the following reasons:

Maximum VOC allowable (gms/litre) 50g/l

SEALiTe[®] 0g/l

This is based on the fact that the product contains no organic solvents.

I declare the above information to be correct

Signed:



Shaun Van Heerden

6. VOC CONFIRMATION NOTICE

7 August 2014

To: All interested Parties

Dear Sir/Madam,

Re: GBCSA requirements for VOC levels in flooring adhesives, sealers and primers

We hereby confirm that **SEALiTe**[®] Moisture Barrier/Waterproofing Compound as manufactured by **iTe PRODUCTS** (Pty) Ltd complies with the GBCSA requirements in respect of permissible VOC levels in flooring adhesives, sealers and primers.

The attached Short Report, VOC Datasheet and this signed letter provides the necessary supporting documentation required as per page 107 of the GBCSA Technical Manual.

The Flooring Contractor must provide written confirmation that **SEALiTe**[®] is to be used in the moisture / waterproofing of buildings.

Should there be any questions or queries, please contact the writer at 082 772 9137 or via e-mail at sales@iteproducts.co.za

Yours faithfully,



Shaun Van Heerden