Technical Data Sheet

Vandex Plug

Fast setting, cement based permanent mortar to plug running water leaks

USES

Rapid setting, permanent plugging of water seepage through porous concrete and fast flowing water through cracks and construction joints in concrete and masonry.

Applications include plugging in-situ and precast concrete segments in tunnels, water storage tanks, sewerage mains and processing tanks, basements, below ground car parks, access chambers, building foundations and mines.

Vandex plug is effective in sealing water leaks through concrete, concrete block walls, brickwork, earthenware and all types of stone and masonry.

ADVANTAGES

- Highly abrasion resistant
- Stops water flow
- Sets in approximately 30 seconds after mixing
- Permanent durable repair
- Works on concrete, brick, stone and all types of masonry
- Can be installed underwater
- Non-toxic
- Can be mixed with water or used as a dry powder
- Easy application
- Colour compatible with the host concrete
- Packed in convenient resealable plastic containers

DESCRIPTION

Vandex Plug is a one-component, rapid setting, ready-mixed, cementitious, waterproof plugging mortar which is ready for on-site application to leaking cracks and water seepage areas in concrete, stone and all types of masonry after mixing with water.

TEST REPORTS AND APPROVALS

WRc Evaluation & Testing Centre Ltd, Oakdale, Gwent

- Potable water compatibility
  WBS Approval / Water Byelaws Scheme - approved

Drinking Water Inspectorate, Romney House, London

- Potable water compatibility - DWI-approval

National Sanitation Foundation, Michigan

- Potable water compatibility
  NSF-approval

DESIGN CRITERIA

Vandex Plug can be applied in vertical, horizontal and overhead applications. Areas of leakage must be identified and a rebate with width and depth of 30-50 mm, formed along the defect to accept the Vandex Plug.

Applications where a very high water pressure exists behind the leak can be repaired more effectively by drilling a hole through the substrate and inserting a plastic tube to allow the water to flow and release the pressure. Plugging can then be performed on the surrounding leakage points before removing the plastic tube and plugging the hole.

PROPERTIES

Form:	Cementitious powder
Colour:	Cement grey
Bulk density:	1.10 - 1.30 kg / L
Initial setting time:	30 seconds (after mixing)
Physical or chemical change:	Chemical cure
Application temperature:	5 - 30°C

CHEMICAL RESISTANCE

Vandex Plug is suitable for use in contact with sewerage water, sea water, aggressive ground water and a range of chemical solutions.

MAINTENANCE

No special requirements, any damage identified during normal inspections should be water blasted clean, chiselled out, repaired and recoated as appropriate.

SPECIFICATION CLAUSES

Where so designated, surfaces subject to water leakage must have the leakage points identified and repaired using a one-component, rapid setting, cementitious plugging mortar.

All cracks and leakage points will be chiselled out to create a rebate having a minimum width and depth of 25 mm.

The plugging compound must have a bulk density of 1.1 to 1.3 kg / L and a setting time of 20 - 40 seconds after mixing with clean fresh water.

The cementitious mortar must be non-toxic and be suitable for hand or trowel application to vertical, horizontal and overhead repairs.

Both the manufacturer and supplier of the plugging mortar must be accredited to ISO9001.

Vandex Plug supplied by Parchem is such a product.

SURFACE PREPARATION

When applying Vandex Plug to existing concrete or masonry, all surfaces to be waterproofed should be clean, sound and free of concrete curing compounds, form release agents, paints and all other coatings, dirt and contamination.

Where surface contamination exists, concrete surfaces should be prepared by water blasting, grit blasting or wire brushing in the area of the leak in order to remove the laitance in preparation to receive the Vandex Plug.

PRIMING

Priming is not required on good quality concrete or masonry substrates before applying Vandex Plug.

APPLICATION INSTRUCTIONS

Vandex Plug is supplied in the form of a dry powder and can be dry packed as a powder or applied by hand as a putty consistency after mixing with water by spatula.

To mix, place 500 g of Vandex Plug into a small clean plastic container, add approximately 120 g of clean tap water and mix by hand with a spatula.

Mix the powder and the water quickly for about 15 seconds. Scoop the mixed mortar out of the plastic mixing container by hand and knead the mix for 5 - 15 seconds as the temperature of the mix increases. The mortar should become quite warm and stiffen indicating that it is ready for application. The rapid setting time does not allow for any delay in application, ensure that all substrate preparation has been completed ready for immediate application of the plugging mortar.

With gloved hands, roll the wet mortar between the hands like putty to shape it into an appropriate sized plug to fill the prepared rebate. Install the plugging mortar immediately ensuring that the correct temperature and consistency has been achieved and maintain firm hand pressure on the installed mortar for about 30 seconds until it has set.

In large repairs, work from the lowest end of the repair towards the highest end, applying each new plugging mix next to the previous.

Allow the mortar to set for 1 minute and using a trowel or spatula in a cutting action, cut away any excess mortar from the surface of the repair.

After completing the repair, the effectiveness of the plug can be tested by sprinkling dry Vandex Plug powder over the surface of the repair. If the powder remains dry after 30 seconds, the repair has been successful. It is recommended that areas treated with Vandex Plug be overcoated with Vandex BB75, BB75-EZ or Cemelast.

Applications where a very high water pressure exists behind the leak can be repaired more effectively by drilling a hole through the substrate and inserting a plastic tube to allow the water to flow and release the water pressure. Plugging can then be performed on the surrounding leakage points before removing the plastic tube and plugging the hole.

Note: the water temperature used for mixing the Plug has a large effect on the setting time. Use cold water in summer and avoid using water from a hose that has been lying in the sun. In very cold winter conditions warm water may be used to accelerate the cure.

ESTIMATING

PACKAGING

Vandex Plug:	15 kg resealable plastic pail

STORAGE

12 months in original containers stored in cool, dry conditions ie; not exceeding 30°C. Storage above this temperature may reduce storage life.

EQUIPMENT

Small plastic mixing container capable of holding about 1 litre of wet mortar.

A spatula for mixing.

Rubber gloves to protect the hands.

A hammer and masonry chisel for creating a rebate for the plugging mortar.

High pressure washing equipment or a wire brush for removing surface contamination where required.

ADDITIONAL INFORMATION

Parchem provides a wide range of complementary products which include:

- concrete repair – cementitious and epoxy
- grouts and anchors – cementitious and epoxy
- waterproofing membranes – liquid applied, cementitious and bituminous sheet membranes
- waterstops – pvc and swellable
- joint sealants – building, civil and chemical resistant
- industrial flooring systems – cementitious and epoxy
- architectural coatings
- filler boards – swellable cork, bituminous and backing rod
- ancillary products

For further information on any of the above, please consult with your local distributor or Parchem sales office.

IMPORTANT NOTICE

A Material Safety Data Sheet (MSDS) and Technical Data Sheet (TDS) are available from the Parchem website or upon request from the nearest Parchem sales office. Read the MSDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact the Poisons Information Centre (phone 13 11 26 within Australia or 0800 764 766 in New Zealand) or see a doctor for advice.

PRODUCT DISCLAIMER

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.