

Data Sheet and Application Guide

Product Description

Scotchkote Liner 2100 is an in-situ spray applied, rapid setting lining system for the non structural lining of drinking water mains 75 to 915 mm (3 to 36 inch) diameter. It has been formulated to contain no epoxy resin or Bisphenol A (BPA)

The product provides an effective barrier coat to the ingress of iron deposits from pipelines into the water course, thereby improving water quality.

The rapid curing characteristics of the product help ensure that return to service procedures can begin 60 minutes after completion of the lining operation.

Product Features

Approved for use under Regulation 31(4)(a) of the Water Supply (Water Quality) Regulations 2000 and Regulation 27(4) Water Supply (Water Quality) (Scotland) Regulations 2001

- 60 minute cure time allows for same day return to service.
- Obviates reinstatement of service connections.
- Increased customer satisfaction as a result of same day return to service and reduced road traffic disruption.
- Moisture tolerant during application and curing - Not for application over standing or running water.
- Minimises road traffic disruption, by reducing the number of excavations when compared to traditional replacement techniques.
- 50 year service life - based on accelerated corrosion testing to ASTM B117.

General Application Steps

Important: Always refer to 3M Instructions For Use Document 29P-2100 Issue 4.

1. Excavate a pit on either end of pipe section to be rehabilitated
2. Clean tuberculation, corrosion and debris from pipe using methods described overleaf.
3. Inspect pipe using CCTV
4. Blow back through service connections if any lines are found to be blocked or plugged by debris
5. Line pipe per 3M Instructions for Use Document 29P-2100 Issue 4. Inspect lining using CCTV
6. Disinfect and flush pipe as per Instructions for Use Document 29P-2100 Issue 4.
7. Return pipe to service

Properties

Property	Value
Colour	Grey
Ratio	1:1 by volume 100:108 by weight

Drying & Cure times at 20°C

Gel Time	60 seconds
Film Set Time	2 minutes
Cure Time (CCTV inspected)	10 minutes
Cure Time (Return to Service)	60 minutes
Volume Solids	100%
Film Thickness (Typical)	1mm-1.5mm
Theoretical Coverage Rate	1 sq metres per litre at 1mm 0.66 sq metres per litre at 1.5 mm

Potable Water Approvals:

UK	Regulation 31(4)(a)
Scotland	Regulation 27(4)

Performance Data

Tensile Strength	29 MPa (ASTM D638-8)
Tensile Elongation	8% (ASTM D638-08)
Flexural Strength	49.5 MPa (ASTM D790-07)
Flexural Modulus	4350 MPa (ASTM D790-07)
Hardness	80 Shore D (ASTM D2240-5)
Abrasion Resistance	230mg loss per 1000 cycles CS17 Wheel (ASTM D4060-07)
Tg	63°C (145°F) (ASTM D7028-07)
Water Absorption*	0.8% (28 days) (ASTM D570-98)

*Meets AWWA C222-08 required 21 day value of <2%

Application Procedures for Scotchkote Liner 2100

Surface Preparation

A number of cleaning techniques can be used for the removal of debris and encrustation to prepare the main for lining. These include:

- Power Boring (diameter range 75mm to 250mm)
- Drag Scraping (diameter range 75mm to 1025mm)
- Abrasive Pigging (diameter range 75mm to 300mm)
- Pressure Scraping (diameter \geq 300mm)
- Pressure Jetting (all diameters)
- Forced Air Vortex (diameter range 75mm to 200mm)

Plunging can be used to remove residual corrosion debris and water from the pipe. Alternative cleaning methods are acceptable if they meet the requirements of OR 6.1 of Water Industry Specification WIS 4-02-1 which specifies the quality of cleaning. Alternatives to those above should be checked with a nominated certifying body.

Preparation of Cleaned Mains

Prior to spray application of any resin material, the main shall be free from standing water. This is achieved by foam swabbing (using oversized clean swabs) and applies to all mains diameters of 75mm and above.

Swabbing should be used to remove residual corrosion debris and standing water from the pipeline.

Handling and Safety Precautions

Read all Health Hazard, Precautionary and First Aid Material Safety Data Sheet, and/or product label prior to handling or use.

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Important Notice

All statements, technical information and recommendations are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using the 3M™ Scotchkote™ Product, you must evaluate it and determine if it is suitable for your intended application. Because conditions of product use are outside of 3M control's and vary widely you assume all risks and liability associated with such use. Any product related statements not contained in current 3M publications, or any contrary statements contained in your purchase order, shall have no force or effect unless expressly agreed to in writing by an authorised officer of 3M.

Warranty; Limited Remedy; Limited Liability.

3M warrants that the 3M™ Scotchkote™ Product will conform to 3M published specifications upon shipment. If the product is proven not to have met the specifications your exclusive remedy within 12 months of sale by 3M of the product and 3M's sole obligation will be, at 3M's option, to replace the Product or to refund the purchase price of the Product. Except where prohibited by law, this warranty is made in lieu of all other warranties, express or implied, including, but not limited to, any implied warranty of suitability or fitness for a particular purpose, or those arising from a course of dealing, custom or usage or trade.

3M has no obligation under this warranty with respect to any product that has failed due to inadequate or improper storage, handling, surface preparation, application, or maintenance; failure to follow product instructions or recommendations or alteration or damage to the Product caused by accident, neglect, or misuse. OTHER THAN IN THE CASE OF DEATH OR PERSONAL INJURY CAUSED BY ITS NEGLIGENCE AND EXCEPT WHERE PROHIBITED BY LAW, IN NO EVENT SHALL 3M BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL LOSS OR DAMAGES (INCLUDING LOST PROFITS) ARISING FROM THIS PRODUCT, REGARDLESS OF THE LEGAL THEORY ASSERTED.



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Application Procedures

Scotchkote Liner 2100 should only be applied by special plural feed lining equipment, which has been independently assessed and approved as detailed in WIS 4-02-01. A material temperature of 15-25°C is required, which should be attained by heating the Part A (Base) and Part B (Activator) components.

To comply with the conditions of authorisation under Regulation 31(4)(a) Scotchkote Liner 2100 must be applied by an independently assessed and approved contractor and in accordance with the relevant Instructions For Use Document (IFU 29P-2100 Issue 4), and in accordance with the requirements of the Operational Requirements: In-situ Resin Lining of Water Mains (WIS 4-02-01) and the Code of Practice: In-situ Resin Lining of water Mains (IGN 04-02-02)

In addition rigs must be assessed & approved by 3M.

Packaging and Storage

Supplied separately in 12 litre Part A (Base) and Part B (Activator) units. **Use within 12 months of date of manufacture.** Store in original sealed containers at temperatures between 5°C and 32°C.

Ordering Information/Customer Service

For ordering, technical and product information or to request a copy of the Material Safety Data Sheet, call +44 (0)1609 780170.

For emergencies, please contact +44 (0)1344 858000.