

# 3M™ Scotchkote™ Urethane Coating 165PW

## Data Sheet and Application Guide

### Product Description

Scotchkote Urethane Coating 165PW has been specifically developed as a 100% solids protection system with a degree of flexibility for the internals of pipes and tanks for application by plural feed spray equipment or by brush. The product is specifically designed for use in contact with potable water.

### Product Features

- Combines good application characteristics with excellent corrosion protection and chemical resistance.
- Designed for application in a single high build coat of up to 2mm, by plural feed hot airless spray, or by multiple brush coat application.
- Designed for use on concrete and steel surfaces.
- **Adhesion** - Excellent to both blast cleaned steel and correctly prepared concrete.
- **Corrosion Resistance** - Excellent even under aggressive immersion conditions.
- **Chemical Resistance** - Excellent resistance to abrasion and mechanical damage.

### General Application Steps

1. Remove oil, grease and loosely adhering deposits.
2. Abrasive blast clean steel surfaces to NACE No. 2/SSPC-SP10 Near White Metal, ISO 8501:1, Grade SA2½.
3. Lightly abrasive blast or scarify concrete surfaces and apply 3M™ Scotchkote™ Urethane Sealer 165CS.
4. Apply Scotchkote Urethane Coating 165PW at the specified thickness.
5. Allow to cure.
6. Visually or electrically inspect the coating for defects.
7. Repair all defects.

### Properties

Property	Value
Colour	Grey and Cream <b>Note:</b> Not colour stable, where a colour stable finish is required it must be overcoated with an appropriate top coat.
Ratio	3:1 By volume 3:1 By weight
<b>Drying &amp; Cure times at 20°C (68°F)</b>	
Usable Life	20 minutes
Touch Dry	4 hours
Hard Dry	8 hours
Full Cure	7 days
Volume Solids	100%
Specific Gravity (Average Mixed)	1.2
Film Thickness (Typical)	Wet/Dry 1000 microns.
<b>Note:</b> The actual thickness to be applied should be agreed between the specifier and the manufacturer dependant on operational performance criteria and may be higher or lower than the quoted typical value. Detailed application instructions in the form of system recommendations are available on request.	
Theoretical Coverage Rate	1 sq metre per litre at 1000 microns dft.
Standards Met	BS6920 – WRAS Listed, UK Water Regulation 31 (4)(a)*
* To comply under Regulation 31 (4) (a) this product must be applied in accordance with the approved Instructions For Use Document 11T-B, available from the 3M Northallerton Technical Centre on request.	
<b>Performance Data</b>	
Abrasion Resistance	90mgm weight loss per 1000 cycles - 1kg load-CS17 wheel (ASTM D4060)
Impact Resistance	10.5 Joules ( 93 in lbs) (ASTM D256)
Direct Pull Adhesion	20Mpa (2900psi) - Steel (ASTM D4541)
Water Vapour Permeability	1.8gm.mm/m <sup>2</sup> /24hrs (ASTM D1653)
Salt Fog Resistance	Excellent, unaffected after 10,000 hours exposure (ASTM B117)
Cathodic Disbondment	Pass <5mm (28 days @ 25°C) (ASTM G8)
Humidity Resistance	Unaffected 5,000 hours exposure (BS 3900 Part F2)
Tensile Strength	19.5Mpa (2825 psi) (ASTM D412)
Dielectric Strength	>500 v/mil (ASTM D149)



# Application Procedures for 3M™ Scotchkote™ Urethane Coating 165PW

## Surface Preparation

**Steel Surfaces** - Surfaces should be abrasive blasted to a minimum NACE No. 2/SSPC-SP10 Near White Metal, ISO 8501:1, Grade SA2½. The blast profile is generally specified by the client, a typical profile is 75-100 microns. Where blast cleaning cannot be carried out the surface should be mechanically abraded to remove all loose scale and produce a surface which is clean, dry and free from rust or dust and provide a coarse profile.

**Concrete Surfaces** - Surfaces should be lightly abrasive blasted or mechanically scarified, taking care not to expose the aggregate. All dust and loose residue should then be removed and surfaces then sealed using Scotchkote Urethane Sealer 165CS.

Prior to coating, the concrete should be dry and the moisture content should be checked using a proprietary surface moisture indicator such as an Elcometer 7420 Digital Moisture Meter. When tested in accordance with the manufacturers instructions the reading should be classified as 'dry'.

## Product Mixing

The material is a two component material comprising Part A (Base) component and Part B (Activator) component which must be mixed together prior to use. For hand application both components should be thoroughly stirred to incorporate any slight separation prior to mixing. Whilst continually stirring Part A (Base), Part B (Activator) component should be slowly added with mixing continuing until completely homogeneous.

After mixing fully, the material should be transferred to another container with the original container scraped clean into this new container and further mixing then carried out to ensure complete incorporation.

The mixed material must be used within 20 minutes at 20°C (68°F). This time will be reduced at higher temperatures and extended at lower temperatures.

## Application Procedures

The product should not be applied when the relative humidity exceeds 90% or when the surface to be coated is less than 3°C above the dew point.

For application by plural feed airless spray, a material temperature of 40°C is required at the spray tip, which should be attained by heating the Part A (Base) and Part B (Activator) components to temperatures of 50°C and 25°C respectively.

## Airless Spray

Minimum 45: 1 pump ratio

Tip Size 19-25 Thou orifice;

Tip pressure typically 3000 psi

**Note:** Excessively high tip spraying pressures should be avoided. The minimum pressure at the pump conducive with good atomisation should be used.

For application by brush, good quality brushes should be used.

The product should ideally be applied in a single high build coat. If a second coat is required for any reason, overcoating must be carried out within 24 hours of application of the preceding coat. If the overcoating time is extended thorough mechanical abrading or flash blasting of the first coat should be carried out once the coating is hard dry.

Clean all equipment immediately after use with 3M™ Scotchkote™ Thinners PU71.

## Packaging and Storage

Part A (Base) and Part B (Activator) supplied separately in 18 litre units, (3 x Part A (Base) + 1 x Part B (Activator)) for spray application, 2 litre and 1 litre composite units for hand application.

Use within 2 years of date of manufacture. Store in original sealed containers at temperatures between 5°C and 32°C.

## Handling and Safety Precautions

Read all health hazard, precautionary and first aid statements found in the Material Safety Data Sheet, and/or product label prior to handling or use.

## 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 or fax +44 (0)1609 783762 (Sales) or 788718 (Technical).

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

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