

3M™ Scotchkote™ Urethane Coating 165HB

Data Sheet and Application Guide

Product Description

Scotchkote Urethane Coating 165HB has been specifically developed as a 100% solids lining with a degree of flexibility for the internals of pipes, tanks, vessels and other equipment in contact with fresh water, sea water and effluent. The product can also be used on externals of pipes where an abrasion-resistant system is required.

Product Features

Scotchkote Urethane Coating 165HB combines good application characteristics with excellent corrosion protection and chemical resistance and is suitable for many different immersion conditions, including sea, foul and raw water, also in chemically polluted marine or underground environments.

Scotchkote Urethane Coating 165HB is designed for application in a single high build coat of up to 2mm, by plural feed hot airless spray.

Scotchkote Urethane Coating 165HB is suitable for use on both steel and concrete surfaces.

- **Adhesion**—Excellent to both blast cleaned and mechanically scraped surfaces.
- **Corrosion Resistance**—Excellent even under aggressive immersion conditions.
- **Chemical Resistance**—Virtually unaffected by most industrial chemicals.

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. Scarify or lightly blast concrete surfaces and seal with 3M™ Scotchkote™ Urethane Sealer 165CS.
3. Apply Scotchkote Urethane Coating 165HB at the specified thickness.
4. Allow to cure.
5. Visually or electrically inspect the coating for defects.
6. Repair all defects.

Properties

Property	Value
Colour	Light Grey, 12B21 Note: Not colour stable, where a colour stable finish is required it must be overcoated with an appropriate top coat.
Ratio	4:1 By volume 100:23 By weight
Drying & Cure times at 20°C (68°F)	
Usable Life	4-6 minutes at 50-60°C
Touch Dry	3 hours
Hard Dry	6 hours
Full Cure	7 days
Volume Solids	100%
Specific Gravity	1.3
V.O.C (As supplied)	0g/ltr, as calculated
Film Thickness (Typical)	Wet/Dry 1000 microns. Note: 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.
Theoretical Coverage Rate	1 sq metre per litre at 1000 microns dft.
Standards Met	DIN 30671
Performance Data	
Dielectric Strength	> 20KV
Abrasion Resistance	130mgm weight loss per 1000 cycles - 1kg load - CS17 wheel (ASTM D4060)
Impact Resistance	7 Joules (62 in lbs) (DIN 30671)
Tensile Elongation	50% (ASTM D412)
Direct Pull Adhesion	18.5N/mm ² -Steel (ASTM D4541)
Operating Temperature	0-60°C (ASTM D2485)
Salt Fog Resistance	Excellent, unaffected after 5,000 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	19.5N/mm ² (ASTM D412)
Hardness (Shore D)	83 (ASTM D2240)
Accellerated Weathering	Unaffected after 5,000 hours other than colour change (ASTM G53)
Chemical Resistance (10% H ₂ SO ₄ , 30% NaCl, 30% NaOH, Diesel Fuel)	No change in weight (ASTM D543)



Application Procedures for 3M™ Scotchkote™ Urethane Coating 165HB

Surface Preparation: Steel Surfaces

Steel surfaces should be abrasive blasted to 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.

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 3M™ 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'.

Application Procedures

Scotchkote Urethane Coating 165HB should not be applied when the relative humidity exceeds 85% or when the surface to be coated is less than 3°C above the dew point.

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.

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Scotchkote Urethane Coating 165HB is intended for application by plural feed airless spray. A material temperature of 50–60°C is required, which should be attained by heating the Part A (Base) and Part B (Activator) components.

- Airless Spray Minimum 45:1 pump ratio
- Tip Size 19–27 Thou orifice;
- Tip pressure typically 4000 psi

Ideally Scotchkote Urethane Coating 165HB should be applied in a single high-build coat. If a second coat is required for any reason, thorough mechanical 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.

Note: When airless spray is being used, excessively high tip spraying pressures should be avoided. The minimum pressure at the pump conducive with good atomization should be used.

Packaging and Storage

Part A (Base) and Part B (Activator) supplied separately in 18 and 180 litre units, (4 x Part A (Base) + 1 x Part B (Activator)).

Use within 2 years 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 or fax +44 (0)1609 783762 (Sales) or 788718 (Technical).

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



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