

# TANK BASE PROTECTION SYSTEM - VISCOTAQ™ SYSTEM SPECIFICATION GUIDE

## 1.0 SCOPE

- 1.1 This specification may be used for protecting tank bases and chimes with Denso VISCOTAQ™ products.
- 1.2 The Engineer shall select appropriate sections of the specification to ensure that the specification is comprehensive for specified work.

## 2.0 GENERAL REQUIREMENTS

- 2.1 Contractor shall comply with all written recommendations of the manufacturer regarding applications of the specified system.
- 2.2 To obtain the specified materials, contact:  
DENSO (Australia) Pty Ltd, 77 – 95 National Boulevard,  
Campbellfield Victoria 3061 AUSTRALIA  
TEL: +61 (0) 3 9356 7600 FAX: +61 (0) 3 9356 7699  
EMAIL: denso@densoaustralia.com.au  
www.densoaustralia.com.au

## 3.0 MATERIALS

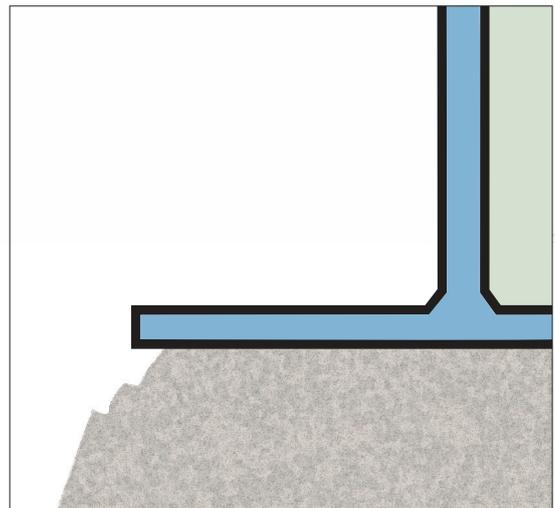
- 3.1 **VISCOTAQ™ ViscoMastic or VISCOTAQ™ ViscoMastic XHT**
  - 3.1.1 VISCOTAQ™ ViscoMastic and VISCOTAQ™ ViscoMastic XHT shall be comprised of an amorphous, apolar, visco-elastic, semi-solid and polyolefin mastic. The ViscoMastic XHT has been formulated for high temperatures up to 125°C.
  - 3.1.2 The physical specification values shall meet the values given on the data sheet.
- 3.2 **PROTAL ST EPOXY (CONCRETE PRIMER)**
  - 3.2.1 Protal ST Epoxy is a two-part, high solids, fast drying, glass flake epoxy coating for application directly onto steel, galvanised steel or concrete. Its good penetration and adhesive properties ensure excellent protection in long term exterior exposure.
  - 3.2.2 The physical specification values shall meet the values given on the data sheet.
- 3.3 **VISCOTAQ™ EZ Wrap**
  - 3.3.1 VISCOTAQ™ EZ Wrap shall be comprised of an amorphous, apolar, visco-elastic, semi-solid, polyolefin with a paintable fabric backing.
  - 3.3.2 The physical specification values shall meet the values given on the data sheet.

## 3.4 DENSO ACRYLIC (UV) TopCoat

- 3.4.1 DENSO Acrylic Topcoat is an acrylic paint designed for use in various applications within Denso coating systems, including topcoating the VISCOTAQ™ EZ Wrap. Pigmented, waterbased, high opacity, acrylic paint. An integral component in various Denso coating systems as a topcoat finish. Available in black, grey or green.
- 3.4.2 Archco 65 may be used as a high solids, two-part aliphatic polyurethane topcoat. It is a topcoat that provides long-term protection and aesthetic enhancement of structures when applied over VISCOTAQ™ EZ Wrap. It is primarily used for higher temperatures on tank base applications up to 93°C.
- 3.4.3 The physical specification values shall meet the values given on the data sheet.

## 4.0 GENERAL SURFACE PREPARATION REQUIREMENTS

- 4.1 The surface area to be coated should be inspected prior to coating; known defects must be documented and photographed prior to application.
- 4.2 Any existing damaged coating shall be removed before or as part of the surface preparation process.



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- 4.3 The surface of the tank where the VISCOTAQ™ is to be applied shall be cleaned to a minimum of St 2/SSPC-SP2 (Hand Tool Cleaned); however, where possible to St 3/SSPC-SP3 (Power Tool Cleaned).
- 4.4 Power wash the application area to remove any loose particles.
- 4.5 Clean all surfaces to be coated to Solvent Clean SSPC-SP1, using an oil-free solvent (sopropyl alcohol, IPA, Isopropanol) to remove all mud, mill lacquer, wax, tar, oil, grease, or other foreign particles.

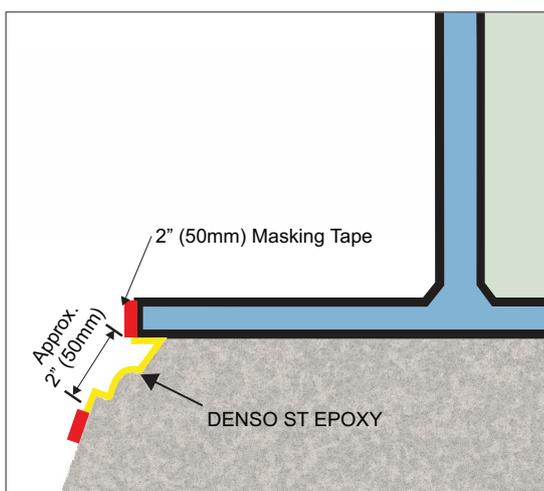
NOTE: Industrial-grade citrus-based (d-Limonene) products are not approved for use as an oil-free solvent.

- 4.6 Dry thoroughly the area where VISCOTAQ™ is to be applied.
- 4.7 Cleaned areas shall have a protective coating applied before the end of the shift. If a cleaned surface does not get coated, it shall be re-cleaned on the next shift.

## 5.0 APPLICATION OF DENSO VISCOTAQ™ SYSTEM FOR TANK CHIME SEALING

### 5.1 PROTAL ST EPOXY (CONCRETE PRIMER)

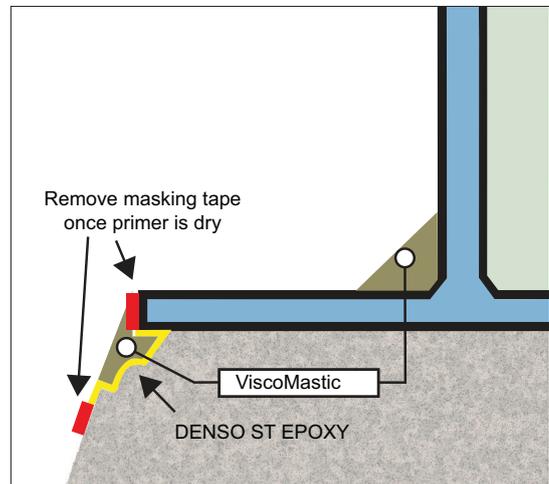
- 5.1.1 Measure and mask top and bottom with 50 mm masking tape to mark areas where the concrete primer is required. The bottom masking strip shall start a minimum 50 mm below the base floor plate just below the chime and concrete base. The top strip of masking tape shall be applied at the edge of the tank chime ring.
- 5.1.2 Apply a thin uniform coat of PROTAL ST Epoxy to all surfaces within the masked area and allow it to tack dry. Care must be taken not to contaminate the substrate outside of the measured masking tape areas. PROTAL ST Epoxy shall be allowed to reach full cure or 'completely dry' as specified in the manufacturers TDS prior to all VISCOTAQ™ products. Once the PROTAL ST Epoxy is dry to touch, remove the top and bottom strips of masking tape.



### 5.2 VISCOTAQ™ VISCOMASTIC, OR VISCOTAQ™ VISCOMASTIC XHT

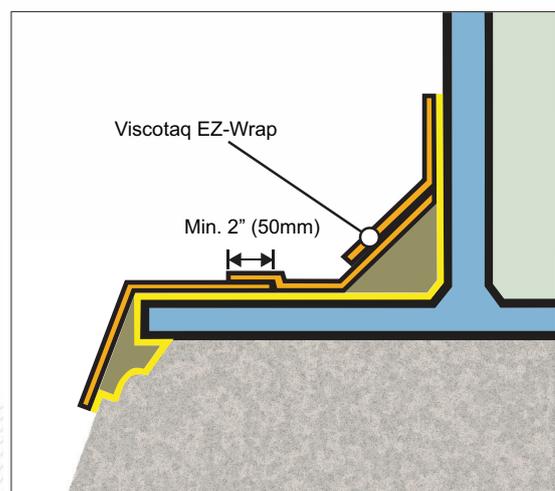
- 5.2.1 The ViscoMastic shall be used to seal all gaps/cracks. The appropriate amount of ViscoMastic shall be applied by hand at approximately 25mm deep into the gap between the base of the tank and the ring wall.

- 5.2.2 Fill all small voids, cracks and profile the 90° tank base angle by molding the ViscoMastic to create a 45° angle toward the concrete base. Should the base feature a stepped profile, apply ViscoMastic at a 45° angle toward the ground in order to create a smooth profile for wrapping with the EZ-Wrap.



### 5.3 VISCOTAQ EZ WRAP

- 5.3.1 Viscotaq EZ Wrap is applied by removing the release liner and placing the adhesive side onto the surface to be protected.
- 5.3.2 The first strip of VISCOTAQ™ EZ Wrap should start from the bottom of the concrete base, carefully aligning the EZ Wrap with the outer edge of the PROTAL ST Epoxy. Thus, starting from the bottom up providing a weatherboard effect.
- 5.3.3 Subsequent strips of EZ Wrap shall be overlapped by a minimum of 50 mm and extend over the mastic onto the ring wall and going up approximately 100 mm to 150mm up the tank wall to carefully align with the PROTAL ST Epoxy.
- 5.3.4 When connecting rolls the EZ-Wrap should be overlapped a minimum 25mm.



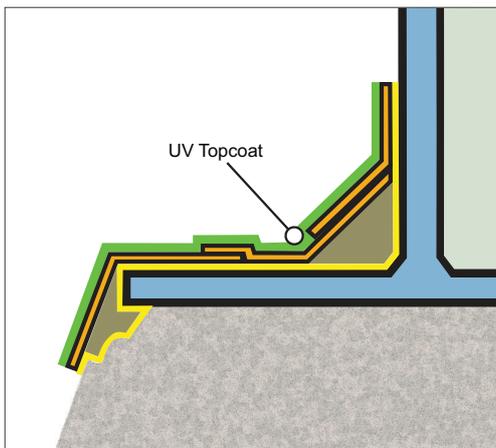
## TANK BASE PROTECTION SYSTEM - VISCOTAQ™ SYSTEM

5.3.5 The VISCOTAQ™ EZ Wrap shall be gently smoothed by hand and steel roller to ensure there are no wrinkles, folds, or entrapped air. If required you may use a heat gun and pressure to make sure the sealing compound is fully impregnated in the polyester backing of the VISCOTAQ™ EZ Wrap.

### 5.4 DENSO ACRYLIC (UV) TOP COAT

5.4.1 Prior to applying DENSO Acrylic Topcoat we recommend applying masking tape approximately 20 mm above the top and bottom edges of the EZ-Wrap. Brush apply the Acrylic Top Coat in two coats consisting of approximately 10 to 12 mils (254 - 305 microns) wet-film thickness per coat. Recoat time of DENSO Acrylic Topcoat is approximately 1 to 2 hours at 25°C.

5.4.2 For tank bases that require higher temperature the Archco 65 shall be used. Prior to applying Archco 65 we recommend applying masking tape approximately 20 mm above the top and bottom edges of the EZ-Wrap. Brush apply Archco 65 in two coats consisting of approximately 5 to 8 mils (125 - 203 microns) wet-film thickness per coat. Recoat time of Archco 65 is approximately 6 to 8 hours at 25°C. All EZ-Wrap should be top coated including all edges. Once Archco 65 is dry, remove masking tape. Archco 65 shall only be used on tank bases at high temperatures up to 93°C.



### 5.5 INSPECTION

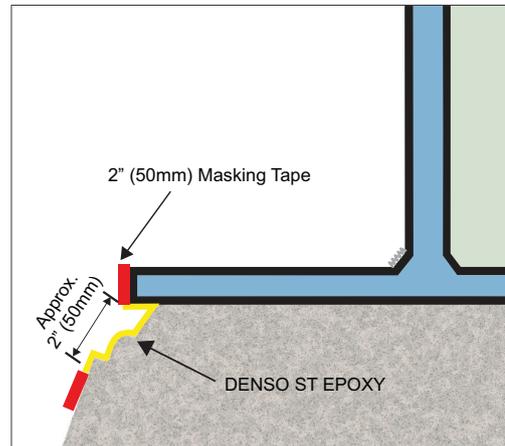
5.5.1 Ensure that the entire surface to be protected is covered with no gaps or air pockets. Ensure that the correct overlap is achieved.

## 6.0 APPLICATION OF DENSO VISCOTAQ™ SYSTEM FOR TANK CHIME SEALING FOR API-653 STANDARD

### 6.1 PROTAL ST EPOXY (CONCRETE PRIMER)

6.1.1 Measure and mask top and bottom with 50mm masking tape to mark areas where the ST Epoxy will be applied. The bottom masking strip shall start at minimum 50 mm below the tank base floor plate just below the chime and concrete base. The top strip of masking tape shall be applied at the edge of the tank base floor plate chime, leaving the flat area of the base plate exposed. The weld joint shall not be coated. The weld joint shall remain visible once all products are applied so that future weld inspections may be completed.

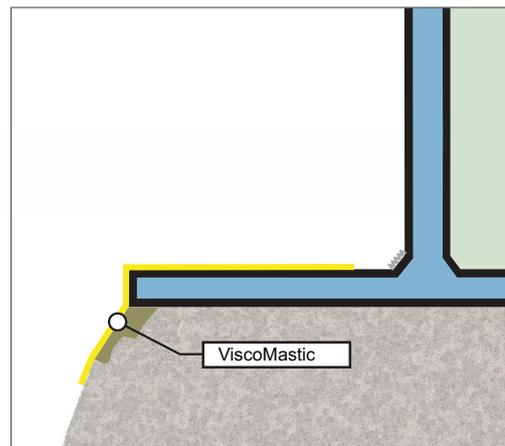
6.1.2 Apply a thin uniform coat of PROTAL ST Epoxy to all surfaces within the masked area and allow it to tack dry. Care must be taken not to contaminate the substrate outside of the measured masking tape areas. PROTAL ST Epoxy shall be allowed to reach full cure or 'completely dry' as specified in the manufacturers TDS prior to all VISCOTAQ™ products. Once the ST Epoxy is dry to touch, remove the top and bottom strips of masking tape.



### 6.2 VISCOTAQ™ VISCOMASTIC, OR VISCOTAQ™ VISCOMASTIC XHT

6.2.1 The ViscoMastic shall be used to seal all gaps/cracks. The appropriate amount of mastic shall be applied by hand at approximately 1" (2.5 cm) deep into the gap between the base of the tank and the ring wall.

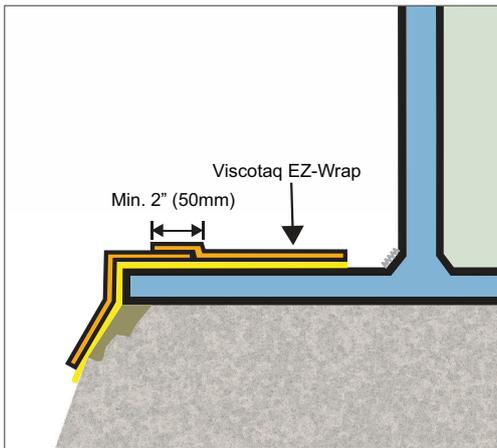
6.2.2 Fill all small voids, cracks. Should the tank base feature a stepped profile, apply ViscoMastic at a 45° angle toward the ground in order to create a smooth profile for wrapping with the EZ-Wrap.



## TANK BASE PROTECTION SYSTEM - VISCOTAQ™ SYSTEM

### 6.3 VISCOTAQ EZ WRAP

- 6.3.1 Viscotaq EZ Wrap is applied by removing the release liner and placing the adhesive side onto the surface to be protected.
- 6.3.2 The first strip of Viscotaq EZ Wrap should start from the bottom of the concrete base, carefully aligning the EZ Wrap with the outer edge of the Adhesion Promoter. Thus, starting from the bottom up providing a weatherboard effect.
- 6.3.3 Subsequent strips of EZ Wrap shall be overlapped by a minimum of 2" (50 mm) and extend over the mastic onto the tank base plate and terminate before the weld joint of the base plate and tank wall carefully aligning the EZ Wrap with the edge of the Adhesion Promoter.
- 6.3.4 When connecting rolls the EZ-Wrap should be overlapped a minimum 1" (2.5 cm).
- 6.3.5 The Viscotaq EZ Wrap shall be gently smoothed by hand and steel roller to ensure there are no wrinkles, folds, or entrapped air. If required you may use a heat gun and pressure to make sure the sealing compound is fully impregnated in the polyester backing of the Viscotaq EZ Wrap.

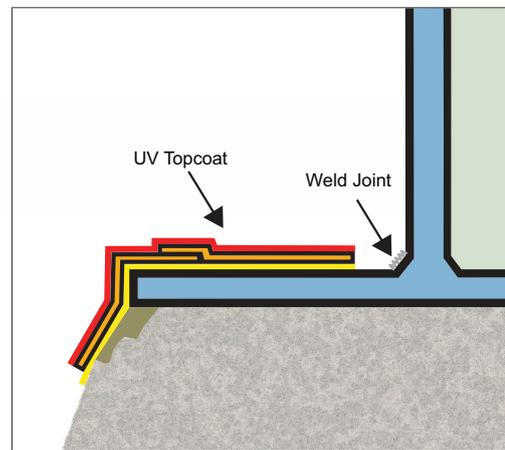


### 6.4 UV TOP COAT

- 6.4.1 Prior to applying Archco 15 we recommend applying masking tape approximately ½" (13 mm) above the top and bottom edges of the EZ-Wrap. Brush apply the Archco 15 in two coats consisting of approximately

10 to 12 mils (254 - 305 microns) wet-film thickness per coat. Recoat time of Archco 15 is approximately 1 to 2 hours at 77°F (25°C). All EZ-Wrap should be top coated including all edges. Once Archco 15 is dry, remove masking tape. Archco 15 shall only be used on tank bases at regular temperatures up 150°F (65°C).

- 6.4.1 For tank bases that require higher temperature the Archco 65 shall be used. Prior to applying Archco 65 we recommend applying masking tape approximately ½" (13 mm) above the top and bottom edges of the EZ-Wrap. Brush apply Archco 65 in two coats consisting of approximately 5 to 8 mils (125 - 203 microns) wet-film thickness per coat. Recoat time of Archco 65 is approximately 6 to 8 hours at 77°F (25°C). All EZ-Wrap should be top coated including all edges. Once Archco 65 is dry, remove masking tape. Archco 65 shall only be used on tank bases at high temperatures up 200°F (93°C).



### 6.5 INSPECTION

- 6.5.1 Ensure that the entire surface to be protected is covered with no gaps or air pockets. Ensure that the correct overlap is achieved and that the weld joint at the base plate and tank wall has not been covered.

*More than you think!*

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