



# Protective & Marine Coatings



# TANK CLAD HS

PART A	B62W80	SANITARY WHITE
PART A	B62L80	LIGHT BLUE
PART B	B60V80	STANDARD HARDENER
PART B	B60V85	LOW TEMP HARDENER

Revised 9/09

## PRODUCT INFORMATION

4.79

### PRODUCT DESCRIPTION

**TANK CLAD HS** is a VOC compliant, 80% solids epoxy coating formulated as an interior lining for pipes and tanks containing potable water, fresh water, salt water, and other commodities. May also be used as part of a system for tank exteriors.

- Chemical and abrasion resistant
- Direct to metal application
- Outstanding application properties

### PRODUCT CHARACTERISTICS

<b>Finish:</b>	Semi-gloss
<b>Color:</b>	Sanitary White, Light Blue
<b>Volume Solids:</b>	80% ± 2%, mixed
<b>Weight Solids:</b>	90% ± 2%, mixed
<b>VOC (EPA Method 24):</b>	Unreduced: <200 g/L; 1.67 lb/gal mixed Reduced 10%: <240 g/L; 2.00 lb/gal
<b>Mix Ratio:</b>	2 component, premeasured 4:1

#### Recommended Spreading Rate per coat:

	Standard		AWWA					
	Min.	Max.	Min.	Max.				
Wet mils (microns)	6.0	150	10.0	250	3.75	94	7.5	188
Dry mils (microns)	5.0	125	8.0*	200*	3.0	75	6.0*	150*
~Coverage sq ft/gal (m <sup>2</sup> /L)	160	3.9	255	6.2	213	5.2	426	10.4
Theoretical coverage sq ft/gal (m <sup>2</sup> /L) @ 1 mil/25 micron dft			1280 (31.3)					

*NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance. \*See recommended systems on reverse side.*

#### Drying Schedule @ 10.0 mils wet (250 microns):

	@ 55°F/13°C	@ 77°F/25°C	@ 120°F/49°C
<b>With B60V80</b> (Standard Hardener)	50% RH		
<b>To touch:</b>	7 hours	3 hours	1 hour
<b>Tack free:</b>	8 hours	4 hours	2 hours
<b>To recoat:</b>			
<b>minimum:</b>	48 hours	18 hours	4 hours
<b>maximum:</b>	60 days	60 days	60 days
<b>To cure:</b>	14 days	7 days	3 days
<i>If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.</i>			
<b>Pot Life:</b>	4 hours	2 hours	30 minutes
<b>Sweat-in-time:</b>	30 minutes	15 minutes	Not required

#### Drying Schedule @ 10.0 mils wet (250 microns):

	@ 40°F/4.5°C	@ 77°F/25°C
<b>With B60V85*</b> (Low Temp Hardener)	50% RH	
<b>To touch:</b>	24 hours	2 hours
<b>Tack free:</b>	48 hours	2.5 hours
<b>To recoat:</b>		
<b>minimum:</b>	48 hours	8 hours
<b>maximum:</b>	30 days	14 days
<b>To cure:</b>	10 days	5 days
<i>If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.</i>		
<b>Pot Life:</b>	2 hours	30 minutes
<b>Sweat-in-time:</b>	10 minutes	None

\* Do not use Tank Clad HS Low Temp Hardener above 80°F (27°C) For Potable Water Service, allow a minimum cure time of 7 days @ 77°F (25°C) (5 days with low temp hardener) prior to placing into service, sterilize and thoroughly rinse with potable water. Per AWWA C652.

### PRODUCT CHARACTERISTICS (CONT'D)

<b>Shelf Life:</b>	36 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
<b>Flash Point:</b>	80°F (27°C), PMCC, mixed
<b>Reducer/Clean Up:</b>	Xylene, R2K4

### RECOMMENDED USES

Lining system for the interior of steel tanks and concrete reservoirs used for potable water. Meets requirements of AWWA C210 for coating systems for the interior and exterior of steel water pipe-lines. Meets NSF Standard 61 requirements for use in potable water storage tanks:

- 60,000 gallons and larger tanks with standard hardener
  - 1,000 gallons and larger tank with low temp hardener
  - 36" or greater pipe with low temp hardener
  - Acceptable for use with cathodic protection systems.
  - Suitable for use in USDA inspected facilities
  - Conforms to AWWA D102-03 ICS #, 1 #2,#3, and #5.\*\*\*
- \*\*\*Refer to respective System

### PERFORMANCE CHARACTERISTICS

**Substrate\*:** Steel

**Surface Preparation\*:** SSPC-SP10/NACE 2

**System Tested\*:**

2 cts. Tank Clad HS @ 6.0 mils (150 microns) dft/ct  
\*unless otherwise noted below

Test Name	Test Method	Results
<b>Abrasion Resistance</b>	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	120 mg loss
<b>Adhesion</b>	ASTM D4541	1000 psi
<b>Direct Impact Resistance (on cold rolled steel)</b>	ASTM G14	30 in. lb.
<b>Dry Heat Resistance</b>	ASTM D2485 (discolors)	200°F (93°C)
<b>Flexibility (on cold rolled steel)</b>	ASTM D522, 180° bend, 1" mandrel	Passes
<b>Immersion</b>	18 months fresh and salt water	Passes, no rusting, blistering, or loss of adhesion
<b>Moisture Condensation Resistance</b>	ASTM D4585, 100°F (38°C), 1000 hours	No blistering, underfilm corrosion, or rust creepage observed
<b>Pencil Hardness</b>	ASTM D3363	4H
<b>Salt Fog Resistance</b>	ASTM B117, 1000 hours	No blistering, underfilm corrosion, or rust creepage observed

Epoxy coatings may darken or yellow following application and curing.



# Protective & Marine Coatings



Certified to NSF/ANSI 61

# TANK CLAD HS

<b>PART A</b>	<b>B62W80</b>	<b>SANITARY WHITE</b>
<b>PART A</b>	<b>B62L80</b>	<b>LIGHT BLUE</b>
<b>PART B</b>	<b>B60V80</b>	<b>STANDARD HARDENER</b>
<b>PART B</b>	<b>B60V85</b>	<b>LOW TEMP HARDENER</b>

## PRODUCT INFORMATION

4.79

### RECOMMENDED SYSTEMS

	Dry Film Thickness / ct.	
	Mils	(Microns)
<b>Immersion, *Steel</b>		
<b>*AWWA D102: Inside Coating System No. 1</b>		
minimum AWWA	8.0	(200)
1 ct. Tank Clad HS	3.0	(75)
1 ct. Tank Clad HS	5.0	(125)
<b>*AWWA D102: Inside Coating System No. 2</b>		
minimum AWWA	12.0	(300)
1 ct. Tank Clad HS	3.0	(75)
1 ct. Tank Clad HS	4.0	(100)
1 ct. Tank Clad HS	5.0	(125)
<b>*AWWA D102: Inside Coating System No. 3</b>		
minimum AWWA	10.0	(250)
1 ct. Zinc Clad II LV or Plus	2.0	(50)
1 ct. Tank Clad HS	3.0	(75)
1 ct. Tank Clad HS	5.0	(125)
<b>*AWWA D102: Inside Coating System No. 5</b>		
minimum AWWA	10.0	(250)
1 ct. Corothane I – Galvacap NSF	2.0	(50)
1 ct. Tank Clad HS	4.0	(100)
1 ct. Tank Clad HS	4.0	(100)
<b>*NSF Standard 61 Approved:</b>		
2 cts. Tank Clad HS	5.0-8.0	(125-200)
<b>Atmospheric, steel:</b>		
<b>*AWWA D102: Outside Coating System No. 5</b>		
minimum AWWA	6.0	(150)
1 ct. Tank Clad HS	2.0	(50)
1 ct. Tank Clad HS	2.0	(50)
1 ct. Acrolon 218HS	2.0	(50)
<b>*AWWA D102: Outside Coating System No. 6</b>		
minimum AWWA	6.0	(150)
1 ct. Corothane I – Galvacap NSF	2.0	(50)
1 ct. Tank Clad HS	2.0	(50)
1 ct. Acrolon 218HS	2.0	(50)
<b>Concrete/ Masonry- Smooth</b>		
2 cts. Tank Clad HS	5.0-8.0	(125-200)

The systems listed above are representative of the product's use, other systems may be appropriate. Also suitable for Ductile Iron, Aluminum, and Galvanized surfaces.

### DISCLAIMER

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

### SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

**Iron & Steel:**  
 Atmospheric: SSPC-SP6/NACE 3  
 Immersion: SSPC-SP10/NACE 2, 2-3 mil (50-75 micron) profile

**Concrete & Masonry:**  
 Immersion: SSPC-SP 13/NACS 6-4.3.1 or 4.3.2, or ICRI 03732, CSP 2-3

#### Surface Preparation Standards

Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal	Sa 3	Sa 3	SP 5	1
Near White Metal	Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast	Sa 2	Sa 2	SP 6	3
Brush-Off Blast	Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	C St 2	C St 2	SP 2	-
Pitted & Rusted	D St 2	D St 2	SP 2	-
Rusted	C St 3	C St 3	SP 3	-
Power Tool Cleaning	D St 3	D St 3	SP 3	-

### TINTING

Do not tint.

### APPLICATION CONDITIONS

**Temperature:**  
 Standard Hardener 55°F (13°C) minimum, 120°F (49°C) maximum  
 Low Temp Hardener 40°F (4.5°C) minimum, 80°F (27°C) maximum (air, surface, and material)  
 At least 5°F (2.8°C) above dew point  
**Relative humidity:** 85% maximum

**Do not use Low Temp Hardener (B60V85) above 80°F (27°C).**

Refer to product Application Bulletin for detailed application information.

### ORDERING INFORMATION

**Packaging:** 5 gallons (18.9L) mixed  
**Part A:** 4 gallons (15.1L) in a 5 gallon (18.9L) container  
**Part B:** 1 gallon (3.78L)  
**Weight:** 14.4 ± 0.2 lb/gal ; 1.73 Kg/L, mixed

### SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

### WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.



# Protective & Marine Coatings



# TANK CLAD HS

PART A	B62W80	SANITARY WHITE
PART A	B62L80	LIGHT BLUE
PART B	B60V80	STANDARD HARDENER
PART B	B60V85	LOW TEMP HARDENER

Revised 9/09

## APPLICATION BULLETIN

4.79

### SURFACE PREPARATIONS

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

#### Carbon Steel, Immersion Service:

Clean and degrease the surface prior to abrasive blasting per SSPC-SP 1 Solvent Cleaning. Methods described in SSPC-SP 1 include solvents, alkali, detergent/water, emulsions, and steam. The surface shall be abrasive blasted to SSPC-SP10/NACE No. 2 Near-White Blast Cleaning with a 2-3 mil (50-75 micron) profile. The anchor pattern shall be sharp with no evidence of a polished surface. The finished surface shall be free of all visible oil, grease, dust, dirt, mill scale, rust, coating, oxides, corrosion products, and other foreign matter with no more than 5% staining. After blasting, all dust and loose residue should be removed from the surface by acceptable means. Coat steel the same day as it is prepared and prior to the formation of rust.

#### Iron & Steel, Atmospheric Service:

Minimum surface preparation is Hand Tool Clean per SSPC-SP2. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6/NACE 3, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel within 8 hours or before flash rusting occurs.

#### Ductile Iron, Immersion Service:

Refer to National Association of Pipe Fabricators Surface Preparations Standard NAPF 500-03 as follows:

- NAPF 500-03-01 "Solvent Cleaning"
- NAPF 500-03-02 "Hand Tool Cleaning"
- NAPF 500-03-03 "Power Tool Cleaning"
- NAPF 500-03-04 "Abrasive Blast Cleaning of Ductile Iron Pipe".

#### Concrete and Masonry

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with Steel-Seam FT910. Primer required.

#### Always follow the standard methods listed below:

- ASTM D4258 Standard Practice for Cleaning Concrete.
- ASTM D4259 Standard Practice for Abrading Concrete.
- ASTM D4260 Standard Practice for Etching Concrete.
- ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.
- SSPC-SP 13/NACE 6 Surface Preparation of Concrete.
- ICRI 03732 Concrete Surface Preparation.

#### Concrete, Immersion Service:

For surface preparation, refer to SSPC-SP13/NACE 6, Section 4.3.1 or 1.3.2 or ICRI 03732, CSP 1-3.

#### Previously Painted Surfaces:

If in sound condition, clean the surface of all foreign material. Scarify the surface to create the desired surface profile. Apply coatings on a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if this product attacks the previous finish, removal of the previous coating may be necessary.

#### Surface Preparation Standards

Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal	Sa 3	Sa 3	SP 5	1
Near White Metal	Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast	Sa 2	Sa 2	SP 6	3
Brush-Off Blast	Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	C St 2	C St 2	SP 2	-
Pitted & Rusted	D St 2	D St 2	SP 2	-
Rusted	C St 3	C St 3	SP 3	-
Power Tool Cleaning	Pitted & Rusted	D St 3	SP 3	-

### APPLICATION CONDITIONS

#### Temperature:

Standard Hardener	55°F (13°C) minimum, 120°F (49°C) maximum
Low Temp Hardener	40°F (4.5°C) minimum, 80°F (27°C) maximum (air, surface, and material) At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

**Do not use Low Temp Hardener (B60V85) above 80°F (27°C).**

### APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

#### Reducer/Clean up .....Xylene, R2K4

Use of any other solvent than Xylene, R2K4 may affect the performance or compliance of this product for its intended service.

#### Airless Spray

Pump.....	45:1 minimum
Pressure.....	3600 psi minimum
Hose.....	3/8" ID
Tip.....	.017" - .019"
Filter.....	30 mesh
Reduction.....	As needed up to 10% by volume

#### Brush

Brush.....	Natural Bristle
Reduction.....	Not recommended

#### Roller

Cover.....	3/8" - 1/2" woven with solvent resistant core
Reduction.....	Not recommended

#### Recommended Spreading Rate per coat:

	Standard	AWWA
Wet mils (microns):	6.0 (150) - 10.0 (250)	3.75 (94) - 7.5 (188)
Dry mils (microns):	5.0 (125) - 8.0* (200)	3.0 (75) - 6.0* (150)
Coverage:	160 (3.9) - 255 (6.2)	213 (5.2) - 426 (10.4)
	sq ft/gal (m <sup>2</sup> /L)	

\* See recommended systems on Product Information Page

If specific application equipment is not listed above, equivalent equipment may be substituted.



# Protective & Marine Coatings



# TANK CLAD HS

<b>PART A</b>	<b>B62W80</b>	<b>SANITARY WHITE</b>
<b>PART A</b>	<b>B62L80</b>	<b>LIGHT BLUE</b>
<b>PART B</b>	<b>B60V80</b>	<b>STANDARD HARDENER</b>
<b>PART B</b>	<b>B60V85</b>	<b>LOW TEMP HARDENER</b>

## APPLICATION BULLETIN

4.79

### APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mix contents of each component thoroughly with low speed power agitation. Make certain no pigment remains on the bottom of the can. Then combine four parts by volume of Part A with one part by volume of Part B. Thoroughly agitate the mixture with power agitation. Allow the material to sweat-in as indicated. Re-stir before using.

If reducer solvent is used, add only after both components have been thoroughly mixed, after sweat-in.

Apply paint at the recommended film thickness and spreading rate as indicated below:

#### Recommended Spreading Rate per coat:

	Standard		AWWA	
	Min.	Max.	Min.	Max.
Wet mils (microns)	6.0 150	10.0 250	3.75 94	7.5 188
Dry mils (microns)	5.0 125	8.0* 200*	3.0 75	6.0* 150*
~Coverage sq ft/gal (m <sup>2</sup> /L)	160 3.9	255 6.2	213 5.2	426 10.4
Theoretical coverage sq ft/gal (m <sup>2</sup> /L) @ 1 mil/25 micron dft	1280 (31.3)			

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.  
\*See recommended systems on reverse side

#### Drying Schedule @ 10.0 mils wet (250 microns):

	With B60V80 @ 55°F/13°C	@ 77°F/25°C	@ 120°F/49°C
(Standard Hardener)		50% RH	
To touch:	7 hours	3 hours	1 hour
Tack free:	8 hours	4 hours	2 hours
To recoat:			
minimum:	48 hours	18 hours	4 hours
maximum:	60 days	60 days	60 days
To cure:	14 days	7 days	3 days

If maximum recoat time is exceeded, abrade surface before recoating.  
Drying time is temperature, humidity, and film thickness dependent.

Pot Life: 4 hours    2 hours    30 minutes

Sweat-in-time: 30 minutes    15 minutes    Not required

#### Drying Schedule @ 10.0 mils wet (250 microns):

	With B60V85* @ 40°F/4.5°C	@ 77°F/25°C
(Low Temp Hardener)		50% RH
To touch:	24 hours	2 hours
Tack free:	48 hours	2.5 hours
To recoat:		
minimum:	48 hours	8 hours
maximum:	30 days	14 days
To cure:	10 days	5 days

If maximum recoat time is exceeded, abrade surface before recoating.  
Drying time is temperature, humidity, and film thickness dependent.

Pot Life: 2 hours    30 minutes

Sweat-in-time: 10 minutes    None

\* Do not use Tank Clad HS Low Temp Hardener above 80°F (27°C)  
For Potable Water Service, allow a minimum cure time of 7 days @ 77°F (25°C) (5 days with low temp hardener) prior to placing into service, sterilize and thoroughly rinse with potable water. Per AWWA C652.

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

### PERFORMANCE TIPS

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Excessive reduction of material can affect film build, appearance, NSF 61 approval, and may cause lifting of old paint.

Insufficient ventilation, incomplete mixing, miscatalyzation, and external heaters may cause premature yellowing.

Excessive film build, poor ventilation, and cool temperatures may cause solvent entrapment and premature coating failure.

Do not apply the material beyond recommended pot life.

Do not mix previously catalyzed material with new.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Xylene, R2K4.

For Immersion Service: (if required) Holiday test in accordance with ASTM D5162 for steel, or ASTM D4787 for concrete.

\* Do not use Tank Clad HS Low Temp Hardener above 80°F (27°C)

Refer to Product Information sheet for additional performance characteristics and properties.

### CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Xylene, R2K4. Clean tools immediately after use with Xylene, R2K4. Follow manufacturer's safety recommendations when using any solvent.

### DISCLAIMER

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

### SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

### WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.