

Specification 2.1.B.1

Fully Blasted Exterior Coating System

International

Epoxy Zinc-Rich

PRODUCT DESCRIPTION

A two component, metallic zinc rich epoxy primer which complies with the composition and performance requirements of SSPC Paint 20.

INTENDED USES

As a high performance primer to give maximum protection as part of any anti-corrosive coating system for aggressive environments including those found on offshore structures, petrochemical facilities, pulp and paper plants, bridges and power plants. Interzinc 52 has been designed to provide excellent corrosion resistance in both maintenance and new construction situations.

PRACTICAL INFORMATION FOR INTERZINC 52

Color	Blue, Grey, Green
Gloss Level	Matte
Volume Solids	59%
Typical Thickness	2-3 mils (50-75 microns) dry equivalent to 3.4-5.1 mils (85-127 microns) wet
Theoretical Coverage	315 sq.ft/US gallon at 3 mils d.f.t and stated volume solids 7.90 m ² /liter at 75 microns d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors
Method of Application	Airless Spray, Air Spray, Brush

Drying Time

Temperature	Touch Dry	Hard Dry	Overcoating Interval with recommended topcoats	
			Minimum	Maximum
41°F (5°C)	2 hours	10 hours	8 hours	Extended ¹
59°F (15°C)	90 minutes	6 hours	4 hours	Extended ¹
77°F (25°C)	75 minutes	4 hours	3 hours	Extended ¹
104°F (40°C)	45 minutes	2 hours	2 hours	Extended ¹

¹ See International Protective Coatings Definitions & Abbreviations

For curing at low temperatures an alternative curing agent is available. See Product Characteristics for details. Maximum overcoating intervals are shorter when using polysiloxane topcoats. Consult International Protective Coatings for further details.

REGULATORY DATA **Flash Point (Typical)** Part A 84°F (29°C); Part B 86°F (30°C); Mixed 84°F (29°C)

Product Weight 21.0 lb/gal (2.52 kg/l)

VOC 2.80 lb/gal (336 g/l)
152 g/kg

EPA Method 24
EU Solvent Emissions Directive
(Council Directive 1999/13/EC)

See Product Characteristics section for further details

Epoxy Zinc-Rich

SURFACE PREPARATION

All surfaces to be coated should be clean, dry and free from contamination. Prior to paint application, all surfaces should be assessed and treated in accordance with ISO 8504:2000.

Oil or grease should be removed in accordance with SSPC-SP1 solvent cleaning.

Abrasive Blast Cleaning

Abrasive blast clean to a minimum of SSPC-SP6 or Sa2½ (ISO 8501-1:2007). If oxidation has occurred between blasting and application of Interzinc 52, the surface should be reblasted to the specified visual standard.

Surface defects revealed by the blast cleaning process, should be ground, filled, or treated in the appropriate manner.

A surface profile of 1.6-3.0 mils (40-75 microns) is recommended.

Shop Primed Steelwork

Interzinc 52 is suitable for application to unweathered steelwork freshly coated with zinc silicate shop primers.

If the zinc shop primer shows extensive or widely scattered breakdown, or excessive zinc corrosion products, overall sweep blasting will be necessary. Other types of shop primer are not suitable for overcoating and will require complete removal by abrasive blast cleaning.

Weld seams and damaged areas should be cleaned to a minimum St3 (ISO 8501-1:2007) or SSPC-SP3. Optimum performance will be achieved with blasting to Sa2½ (ISO 8501-1:2007) or SSPC-SP6; where this is not practical, hand preparation to SSPC-SP11 is recommended.

APPLICATION

Mixing	Material is supplied in two containers as a unit. Always mix a complete unit in the proportions supplied. Once the unit has been mixed, it must be used within the working pot life specified.			
	(1)	Agitate Base (Part A) with a power agitator.		
	(2)	Combine entire contents of Curing Agent (Part B) with Base (Part A) and mix thoroughly with power agitator.		
Mix Ratio	4 part(s) : 1 part(s) by volume			
Working Pot Life	41°F (5°C) 24 hours	59°F (15°C) 12 hours	77°F (25°C) 5 hours	104°F (40°C) 2 hours
Airless Spray	Recommended	Tip Range 17-21 thou (0.43-0.53 mm) Total output fluid pressure at spray tip not less than 2503 psi (176 kg/cm ²)		
Air Spray (Pressure Pot)	Recommended	Gun	DeVilbiss MBC or JGA	
		Air Cap	704 or 765	
		Fluid Tip	E	
Brush	Suitable - Small areas only	Typically 2.0-3.0 mils (50-75 microns) can be achieved		
Roller	Not recommended			
Thinner	International GTA220 (or International GTA415)	Do not thin more than allowed by local environmental legislation		
Cleaner	International GTA822 (or International GTA415)			
Work Stoppages	Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with International GTA822. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed units.			
Clean Up	Clean all equipment immediately after use with International GTA822. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays.			
	All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.			

Epoxy Zinc-Rich

PRODUCT CHARACTERISTICS

In order to ensure good anti-corrosive performance, it is important to achieve a minimum dry film thickness of Interzinc 52 of 1.5 mils (40 microns). To achieve a uniform, coalesced, closed film at this dry film thickness, it will be necessary to thin Interzinc 52 with 10% with International thinners. The film thickness of Interzinc 52 applied must be compatible with the blast profile achieved during surface preparation. Low film thickness should not be applied over coarse blast profiles.

Care should be exercised to avoid the application of dry film thicknesses in excess of 6 mils (150 microns).

Care should be exercised to avoid over-application which may result in cohesive film failure with subsequent high builds, and to avoid dry spray which can lead to pinholing of subsequent coats. Over-application will also result in slower curing and extended handling and overcoating times.

Over-application of Interzinc 52 will extend both the minimum overcoating periods and handling times, and may be detrimental to long term overcoating properties.

When Interzinc 52 is allowed to weather before topcoating ensure all zinc salts are removed prior to paint application and only topcoat with recommended materials.

Surface temperature must always be a minimum of 5°F (3°C) above dew point.

Interzinc 52 is not normally recommended for underwater use. Please consult International Protective Coatings for further details in this situation.

Interzinc 52 is suitable for the localized repair of damaged inorganic zinc primer - consult International Protective Coatings for specific advice.

Low Temperature Curing

An alternative curing agent is available for applications at temperatures less than 41°F (5°C). When using this alternative curing agent it should be noted that the VOC will increase to 3 lb/gal (360 g/l).

Interzinc 52 is capable of curing at temperatures below 32°F (0°C). However, this product should not be applied at temperatures below 32°F (0°C) where there is a possibility of ice formation on the substrate.

Temperature	Touch Dry	Hard Dry	Minimum overcoating interval with recommended topcoats	
			Minimum	Maximum
23°F (-5°C)	6 hours	32 hours	36 hours	Extended*
32°F (0°C)	3 hours	16 hours	18 hours	Extended*
5°C (41°F)	2 hours	6 hours	6 hours	Extended*

Touch dry times shown above are actual drying times due to chemical cure, rather than physical set due to solidification of the coating film at temperatures below 32°F (0°C).

*See International Protective Coatings Definitions & Abbreviations

For further details regarding cure times and overcoatability, please contact International Protective Coatings.

This product has the following specification approvals:

- Steel Structures Painting Council - SSPC Paint 20

On consultation with International Protective Coatings this product is compatible with alternative application methods such as flow coating.

Note: VOC values are typical and are provided for guidance purpose only. These may be subject to variation depending on factors such as differences in color and normal manufacturing tolerances.

Low molecular weight reactive additives, which will form part of the film during normal ambient cure conditions, will also effect VOC values determined using EPA Method 24.

SYSTEMS COMPATIBILITY

Interzinc 52 is designed for application to correctly prepared steel. It is possible to apply over approved prefabrication primers. Details of these can be obtained from International Protective Coatings.

Recommended topcoats are:

Intercure 200	InterH2O 401
Intercure 420	Interseal 670HS
Interfine 629HS	Interthane 990
Intergard 251	Interzone 1000
Intergard 269	Interzone 505
Intergard 475HS	Interzone 954
Intergard 740	

For other suitable topcoats, consult International Protective Coatings.

Epoxy Zinc-Rich

ADDITIONAL INFORMATION

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the following documents available at www.international-pc.com:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage

Individual copies of these information sections are available upon request.

SAFETY PRECAUTIONS

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Material Safety Data Sheet and the container(s), and should not be used without reference to the Material Safety Data Sheet (MSDS) which International Protective Coatings has provided to its customers.

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

In the event welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

If in doubt regarding the suitability of use of this product, consult International Protective Coatings for further advice.

PACK SIZE	Unit Size	Part A		Part B	
		Vol	Pack	Vol	Pack
	10 liter	8 liter	10 liter	2 liter	2.5 liter
	3 US gal	2.4 US gal	3.5 US gal	0.6 US gal	1 US gal
For availability of other pack sizes contact International Protective Coatings					
SHIPPING WEIGHT (TYPICAL)	Unit Size	Part A		Part B	
	10 liter	24.5 kg		2.1 kg	
	3 US gal	63.3 lb		5.3 lb	
STORAGE	Shelf Life	12 months minimum at 77°F (25°C). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.			

Disclaimer

The information in this data sheet is not intended to be exhaustive; any person using the product for any purpose other than that specifically recommended in this data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at their own risk. All advice given or statements made about the product (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability at all for the performance of the product or for (subject to the maximum extent permitted by law) any loss or damage arising out of the use of the product. We hereby disclaim any warranties or representations, express or implied, by operation of law or otherwise, including, without limitation, any implied warranty of merchantability or fitness for a particular purpose. All products supplied and technical advice given are subject to our Conditions of Sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is liable to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to check with their local representative that this data sheet is current prior to using the product.

This Technical Data Sheet is available on our website at www.international-marine.com or www.international-pc.com, and should be the same as this document. Should there be any discrepancies between this document and the version of the Technical Data Sheet that appears on the website, then the version on the website will take precedence.

Issue date: 8/17/2015

Copyright © AkzoNobel, 8/17/2015.

All trademarks mentioned in this publication are owned by, or licensed to, the AkzoNobel group of companies.

www.international-pc.com

Surface Tolerant Epoxy

PRODUCT DESCRIPTION

A low VOC, two component high build, high solids surface tolerant epoxy maintenance coating.

INTENDED USES

For application to a wide variety of substrates including hand prepared rusty steel, abrasive blast cleaned and hydroblasted steel, and a wide range of intact, aged coatings. Provides excellent anti-corrosive protection in industrial, coastal structures, pulp and paper plants, bridges and offshore environments in both atmospheric exposure and immersion service.

NSF Certification is for tanks greater than 100 gallons (378.5 litres).



Certified to NSF/ANSI 61

PRACTICAL INFORMATION FOR INTERSEAL 670HS

Colour	Available in a wide range of colours including Aluminium
Gloss Level	Semi-gloss (Aluminium is eggshell)
Volume Solids	82% ± 3% (depends on colour)
Typical Thickness	100-250 microns (4-10 mils) dry equivalent to 122-305 microns (4.9-12.2 mils) wet
Theoretical Coverage	6.56 m ² /litre at 125 microns d.f.t and stated volume solids 263 sq.ft/US gallon at 5 mils d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors
Method of Application	Airless spray, Air spray, Brush, Roller

Drying Time ▲

Temperature	Touch Dry	Hard Dry	Overcoating Interval Interseal 670HS with Self			Overcoating Interval with recommended topcoats		
			Min	Max ●	Max †	Min	Max ●	Max †#
10°C (50°F)	8 hours	32 hours	32 hours	6 weeks	Extended*	20 hours	21 days	12 weeks
15°C (59°F)	7 hours	26 hours	26 hours	4 weeks	Extended*	14 hours	14 days	8 weeks
25°C (77°F)	5 hours	18 hours	18 hours	14 days	Extended*	10 hours	7 days	4 weeks
40°C (104°F)	2 hours	6 hours	6 hours	7 days	Extended*	4 hours	3 days	2 weeks

▲ For curing at low temperatures, an alternative curing agent is available. See Product Characteristics for details.

● Refers to situations where immersion is likely to occur

† Refer to atmospheric service only

* See International Protective Coatings Definitions & Abbreviations

Maximum overcoating intervals are shorter when using polysiloxane topcoats. Consult International Protective Coatings for further details.

REGULATORY DATA

Flash Point (Typical)	Base (Part A) 36°C (97°F) Curing Agent (Part B) 56°C (133°F)	Mixed 33°C (91°F)
Product Weight	1.6 kg/l (13.3 lb/gal)	
VOC	114 g/kg	EU Solvent Emissions Directive (Council Directive 1999/13/EC)
	2.00 lb/gal (240 g/l)	EPA Method 24
	151 g/l	Chinese National Standard GB23985

Surface Tolerant Epoxy

SURFACE PREPARATION

The performance of this product will depend upon the degree of surface preparation. The surface to be coated should be clean, dry and free from contamination. Prior to paint application all surfaces should be assessed and treated in accordance with ISO 8504:2000.

Accumulated dirt and soluble salts must be removed. Dry bristle brushing will normally be adequate for accumulated dirt. Soluble salts should be removed by fresh water washing.

Abrasive Blast Cleaning

For immersion service, Interseal 670HS must be applied to surfaces blast cleaned to Sa2.5 (ISO 8501-1:2007) or SSPC-SP10. However, for atmospheric exposure best performance will be achieved when Interseal 670HS is applied to surfaces prepared to a minimum of Sa2.5 (ISO 8501-1:2007) or SSPC-SP6.

Surface defects revealed by the blast cleaning process, should be ground, filled, or treated in the appropriate manner.

A surface profile of 50-75 microns (2-3 mils) is recommended.

Hand or Power Tool Preparation

Hand or power tool clean to a minimum St2 (ISO 8501-1:2007) or SSPC-SP2.

Note, all scale must be removed and areas which cannot be prepared adequately by chipping or needle gun should be spot blasted to a minimum standard of Sa2 (ISO 8501-1:2007) or SSPC-SP6. Typically this would apply to C or D grade rusting in this standard.

Ultra High Pressure Hydroblasting/Abrasive Wet Blasting

May be applied to surfaces prepared to Sa2.5 (ISO 8501-1:2007) or SSPC-SP6 which have flash rusted to no worse than Grade HB2.5M (refer to International Hydroblasting Standards) or Grade SB2.5M (refer to International Slurry blasting Standards). It is also possible to apply to damp surfaces in some circumstances. Further information is available from International Protective Coatings.

Aged Coatings

Interseal 670HS is suitable for overcoating a limited range of intact, tightly adherent aged coatings. Loose or flaking coatings should be removed back to a firm edge. Glossy finishes may require light abrasion to provide a physical 'key'. See Product Characteristics section for further information.

APPLICATION

Mixing	Material is supplied in two containers as a unit. Always mix a complete unit in the proportions supplied. Once the unit has been mixed it must be used within the working pot life specified.			
	<ol style="list-style-type: none"> (1) Agitate Base (Part A) with a power agitator. (2) Combine entire contents of Curing Agent (Part B) with Base (Part A) and mix thoroughly with power agitator. 			
Mix Ratio	5.67 parts : 1.00 part by volume			
Working Pot Life	10°C (50°F)	15°C (59°F)	25°C (77°F)	40°C (104°F)
	5 hours	3 hours	2 hours	1 hour
Airless Spray	Recommended	Tip range 0.45-0.58 mm (18-23 thou) Total output fluid pressure at spray tip not less than 176 kg/cm ² (2,500 p.s.i.)		
Air Spray (Pressure Pot)	Recommended	Gun Air Cap Fluid Tip	DeVilbiss MBC or JGA 704 or 765 E	
Brush	Recommended	Typically 100-125 microns (4-5 mils) can be achieved		
Roller	Recommended	Typically 75-100 microns (3-4 mils) can be achieved		
Thinner	International GTA220 (or GTA415)	Thinning is not normally required. Consult the local representative for advice during application in extreme conditions. Do not thin more than allowed by local environmental legislation.		
Cleaner	International GTA822 (or GTA415)			
Work Stoppages	Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with International GTA822. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed units.			
Clean Up	Clean all equipment immediately after use with International GTA822. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays. All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.			

Surface Tolerant Epoxy

PRODUCT CHARACTERISTICS

For water immersion service, surface preparation to a minimum of Sa2.5 (ISO 8501-1:2007) or SSPC-SP10 followed by application of multi-coats of Interseal 670HS to a total minimum dry film thickness of 250 microns (10 mils) is required.

Colours derived from chromascan bases as the first coat of a specification for immersion service is not recommended.

Maximum film build in one coat is best attained by airless spray. When applying by methods other than airless spray, the required film build is unlikely to be achieved. Application by air spray may require a multiple cross spray pattern to attain maximum film build. Low or high temperatures may require specific application techniques to achieve maximum film build.

If salt water is used in the wet blast process the resulting surface must be thoroughly washed with fresh water before application of Interseal 670HS. With freshly blasted surfaces a slight degree of flash rusting is allowable, and is preferable to the surface being too wet. Puddles, ponding and accumulations of water must be removed.

Interseal 670HS may be applied to suitably sealed or primed concrete; contact International Protective Coatings for further advice on specification and primers.

Interseal 670HS is suitable for overcoating intact, aged alkyd, epoxy and polyurethane systems. However, this product is not recommended where thermoplastic coatings such as chlorinated rubbers and vinyls have previously been used. Please consult International Protective Coatings for alternative recommendations.

Surface temperature must always be a minimum of 3°C (5°F) above dew point.

Level of sheen and surface finish is dependent on application method. Avoid using a mixture of application methods whenever possible.

In common with all epoxies Interseal 670HS will chalk and discolour on exterior exposure. However, these phenomena are not detrimental to anti-corrosive performance.

Premature exposure to ponding water will cause a colour change, especially in dark colours.

Interseal 670HS can be used as a non-skid deck system by modification with addition of GMA132 (crushed flint) aggregate. Application should then be to a suitably primed surface. Typical thicknesses will be between 500-1,000 microns (20-40 mils). Preferred application is by a suitable large tip hopper gun (e.g. Sagola 429 or Air texture gun fitted with a 5-10 mm nozzle). Trowel or roller can be used for small areas. Alternatively, a broadcast method of application can be used. Consult International Protective Coatings for further details.

Interseal 670HS is certified to NSF/ANSI Standard 61 (selected colours only). Consult International Protective Coatings for further details. Certification is for tanks greater than 100 gallons (378.5 litres), for pipes which are 6 inches (15 cm) in diameter or greater and for valves which are 2 inches (5 cm) in diameter or greater.

Low Temperature Curing

A winter grade curing agent is also available to enable more rapid cure at temperatures less than 10°C (50°F), however this curing agent will give an initial shade variation and more rapid discoloration on weathering.

Interseal 670HS is capable of curing at temperatures below 0°C (32°F). However, this product should not be applied at temperatures below 0°C (32°F) where there is a possibility of ice formation on the substrate.

Temperature	Touch Dry	Hard Dry	Overcoating Interval Interseal 670HS with Self			Overcoating Interval with recommended topcoats		
			Min	Max •	Max †	Min	Max •	Max †
-5°C (23°F)	24 hours	72 hours	72 hours	12 weeks	Extended*	72 hours	84 hours	12 weeks
0°C (32°F)	16 hours	56 hours	56 hours	10 weeks	Extended*	42 hours	54 hours	10 weeks
5°C (41°F)	9 hours	36 hours	36 hours	8 weeks	Extended*	36 hours	48 hours	8 weeks
10°C (50°F)	5 hours	24 hours	24 hours	6 weeks	Extended*	16 hours	24 hours	6 weeks

• Refers to situations where immersion is likely to occur

† Refer to atmospheric service only

* See International Protective Coatings Definitions & Abbreviations

Touch dry times shown above are actual drying times due to chemical cure, rather than physical set due to solidification of the coating film at temperatures below 0°C (32°F).

Note: VOC values quoted are based on maximum possible for the product taking into account variations due to colour differences and normal manufacturing tolerances.

Low molecular weight reactive additives, which will form part of the film during normal ambient cure conditions, will also affect VOC values determined using EPA Method 24

SYSTEMS COMPATIBILITY

Interseal 670HS will normally be applied to correctly prepared steel substrates. However, it can be used over suitably primed surfaces. Suitable primers are:

- Intercure 200
- Interzinc 315
- Interplus 356
- Interplus 256
- Intergard 269

Where a cosmetically acceptable topcoat is required the following products are recommended:

- Intercryl 530
- Interfine 878
- Intergard 740
- Interthane 990
- Interfine 629HS
- Interfine 979
- Interthane 870

Other suitable primers/topcoats are available. Consult International Protective Coatings.

Surface Tolerant Epoxy

ADDITIONAL INFORMATION

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the following documents available at www.international-pc.com:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage

Individual copies of these information sections are available upon request.

SAFETY PRECAUTIONS

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Material Safety Data Sheet and the container(s), and should not be used without reference to the Material Safety Data Sheet (MSDS) which International Protective Coatings has provided to its customers.

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

In the event welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

If in doubt regarding the suitability of use of this product, consult International Protective Coatings for further advice.

PACK SIZE	Unit Size		Part A		Part B	
		Vol	Pack	Vol	Pack	
	20 litre	17 litre	20 litre	3 litre	3.7 litre	
	5 US gal	4.25 US Gal	5 US Gal	0.75 US Gal	1 US gal	

For availability of other pack sizes, contact International Protective Coatings

SHIPPING WEIGHT (TYPICAL)	Unit Size		Part A	Part B
	20 litre		30.8 kg	3.5 kg
	5 US gal		64.9 lb	6.8 lb

STORAGE	Shelf Life
	12 months minimum at 25°C (77°F). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition. Protect from frost.

Important Note

The information in this data sheet is not intended to be exhaustive; any person using the product for any purpose other than that specifically recommended in this data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at their own risk. All advice given or statements made about the product (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability at all for the performance of the product or for (subject to the maximum extent permitted by law) any loss or damage arising out of the use of the product. We hereby disclaim any warranties or representations, express or implied, by operation of law or otherwise, including, without limitation, any implied warranty of merchantability or fitness for a particular purpose. All products supplied and technical advice given are subject to our Conditions of Sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is liable to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to check with their local representative that this data sheet is current prior to using the product.

This Technical Data Sheet is available on our website at www.international-marine.com or www.international-pc.com, and should be the same as this document. Should there be any discrepancies between this document and the version of the Technical Data Sheet that appears on the website, then the version on the website will take precedence.

Copyright © AkzoNobel, 28/10/2015.

All trademarks mentioned in this publication are owned by, or licensed to, the AkzoNobel group of companies.

www.international-pc.com

Aliphatic Polyurethane

PRODUCT DESCRIPTION

A low VOC, two component modified acrylic polyurethane finish giving excellent durability and long-term recoatability, for use over correctly prepared primed surfaces. This product is also HAPS free and exempt solvent free.

International Paint also offers Interthane 990V in a mildew resistant, bright white finish. Contact your International Paint representative for additional information.

INTENDED USES

Suitable for use in both new construction and as a maintenance finish which can be used in a wide variety of environments including offshore structures, chemical and petrochemical plants, bridges, pulp and paper mills, and in the power industry.

PRACTICAL INFORMATION FOR INTERTHANE 990V

Color	Wide range via the Chromascan® system
Gloss Level	High Gloss
Volume Solids	71% ± 3%
Typical Thickness	2-3 mils (50-75 microns) dry equivalent to 2.8-4.2 mils (70-106 microns) wet
Theoretical Coverage	569 sq.ft/US gallon at 2 mils d.f.t and stated volume solids 14.20 m ² /liter at 50 microns d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors

Method of Application Air spray, Airless spray, Conventional Spray, Brush, Roller

Drying Time

Temperature	Touch Dry	Hard Dry	Overcoating Interval with recommended topcoats	
			Minimum	Maximum
50°F (10°C)	7.5 hours	14 hours	14 hours	Extended ¹
59°F (15°C)	5 hours	8 hours	8 hours	Extended ¹
77°F (25°C)	2.5 hours	4 hours	4 hours	Extended ¹
104°F (40°C)	45 minutes	1.5 hours	2 hours	Extended ¹

¹ See International Protective Coatings Definitions & Abbreviations

REGULATORY DATA **Flash Point (Typical)** Part A 97°F (36°C); Part B >212°F (>100°C) ; Mixed 97°F (36°C)

Product Weight 11.5 lb/gal (1.38 kg/l)

VOC 2.01 lb/gal (241 g/l) EPA Method 24
178 g/kg EU Solvent Emissions Directive (Council Directive 1999/13/EC)

See Product Characteristics section for further details

Protective Coatings

Aliphatic Polyurethane

SURFACE PREPARATION

All surfaces to be coated should be clean, dry and free from contamination. Prior to application, all surfaces should be assessed and treated in accordance with ISO 8504:2000.

Primed Surfaces

Interthane 990V should always be applied over a recommended anti-corrosive coating scheme. The primer surface should be dry and free from all contamination, and Interthane 990V must be applied within the overcoating intervals specified (consult the relevant product data sheet).

Areas of breakdown, damage etc., should be prepared to the specified standard (e.g. Sa2½ (ISO 8501-1:2007) or SSPC-SP6, Abrasive Blasting, or SSPC-SP11, Power Tool Cleaning) and patch primed prior to the application of Interthane 990V.

APPLICATION

Mixing	Material is supplied in two containers as a unit. Always mix a complete unit in the proportions supplied. Once the unit has been mixed, it must be used within the working pot life specified.			
	(1) Mix the Base (Part A) with a power agitator.			
	(2) Combine entire contents of Curing Agent (Part B) with Base (Part A) and mix thoroughly with power agitator.			
Mix Ratio	4 parts : 1 part by volume			
Working Pot Life	50°F (10°C) 6 hours	59°F (15°C) 4 hours	77°F (25°C) 3 hours	104°F (40°C) 1 hour
Airless Spray	Recommended	Tip Range 13-17 thou (0.33-0.43 mm) Total output fluid pressure at spray tip not less than 2204 psi (155 kg/cm ²)		
Air Spray (Pressure Pot)	Suitable	Gun Air Cap Fluid Tip	DeVilbiss MBC or JGA 704 or 765 E	
Air Spray (Conventional)	Suitable	Use suitable proprietary equipment.		
Brush	Suitable	Typically 2.0-3.0 mils (50-75 microns) can be achieved		
Roller	Suitable	Typically 2.0-3.0 mils (50-75 microns) can be achieved		
Thinner	International GTA028 International GTA123 International GTA056	Exempt solvent in USA Use of GTA056 will add small amounts of VOC and HAPS (Hazardous Air Polluting Solvents) Do not thin more than allowed by local environmental legislation		
Cleaner	International GTA123			
Work Stoppages	Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with International GTA123. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed units.			
Clean Up	Clean all equipment immediately after use with International GTA123. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays.			
	All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.			

Aliphatic Polyurethane

PRODUCT CHARACTERISTICS Level of sheen and surface finish are dependent on application method. Avoid using a mixture of application methods whenever possible. Best results in terms of gloss and appearance will usually be obtained by airless spray application.

In some colors, two coats of Interthane 990V may be required to give uniform coverage, especially when applying Interthane 990V over dark undercoats, and when using certain lead free bright colors such as yellows and oranges. Best practice is to use a color-compatible intermediate or anti-corrosive coating under Interthane 990V.

When overcoating after weathering, or aging, ensure the coating is fully cleaned to remove all surface contamination such as oil, grease, salt crystals and traffic fumes, before application of a further coat of Interthane 990V. Absolute measured adhesion of topcoats to aged Interthane 990V is less than that to fresh material, however, it is adequate for the specified end use.

Surface temperature must always be a minimum of 5°F (3°C) above dew point. When applying Interthane 990V in confined spaces, ensure adequate ventilation. Condensation occurring during or immediately after application may result in a matte finish and an inferior film.

Premature exposure to ponding water will cause color change, especially in dark colors and at low temperatures.

This product must only be thinned using the recommended International thinners. The use of alternative thinners, particularly those containing alcohols, can severely affect the curing mechanism of the coating.

This product is not recommended for use in immersion conditions. When severe chemical or solvent splashing is likely to occur, contact International Protective Coatings for information regarding suitability.

Note: VOC values are typical and are provided for guidance purpose only. These may be subject to variation depending on factors such as differences in color and normal manufacturing tolerances.

SYSTEMS COMPATIBILITY

The following primers/intermediates are recommended for Interthane 990V:

Intercure 200HS	Interplus 256
Intergard 251	Interplus 356
Intergard 345	Interseal 670HS*
Intergard 475HS	Interzinc 52
Intershield 300	Interzone 505
Intershield 300HS	Interzone 954
Intershield 300V	

Interthane 990V is designed to be topcoated with itself.

*Note: When overcoating Interseal 670HS, a 7 day maximum overcoating interval must be adhered to.

Aliphatic Polyurethane

ADDITIONAL INFORMATION

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the following documents available at www.international-pc.com:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage

Individual copies of these information sections are available upon request.

SAFETY PRECAUTIONS

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Material Safety Data Sheet and the container(s), and should not be used without reference to the Material Safety Data Sheet (MSDS) which International Protective Coatings has provided to its customers.

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

In the event welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

If in doubt regarding the suitability of use of this product, consult International Protective Coatings for further advice.

Warning: Contains isocyanate. Wear air-fed hood for spray application.

PACK SIZE	Unit Size	Part A		Part B	
		Vol	Pack	Vol	Pack
	5 US gal	4 US gal	5 US gal	1 US gal	1 US gal
	1 US gal	0.8 US gal	1 US gal	0.2 US gal	0.25 US gal
For availability of other pack sizes contact International Protective Coatings					
SHIPPING WEIGHT (TYPICAL)	Unit Size	Part A		Part B	
	5 US gal	51.4 lb		10.5 lb	
	1 US gal	10.4 lb		2.3 lb	
STORAGE	Shelf Life	12 months minimum at 77°F (25°C). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.			

Disclaimer

The information in this data sheet is not intended to be exhaustive; any person using the product for any purpose other than that specifically recommended in this data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at their own risk. All advice given or statements made about the product (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability at all for the performance of the product or for (subject to the maximum extent permitted by law) any loss or damage arising out of the use of the product. We hereby disclaim any warranties or representations, express or implied, by operation of law or otherwise, including, without limitation, any implied warranty of merchantability or fitness for a particular purpose. All products supplied and technical advice given are subject to our Conditions of Sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is liable to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to check with their local representative that this data sheet is current prior to using the product.

This Technical Data Sheet is available on our website at www.international-marine.com or www.international-pc.com, and should be the same as this document. Should there be any discrepancies between this document and the version of the Technical Data Sheet that appears on the website, then the version on the website will take precedence.

Copyright © AkzoNobel, 1/15/2016.

All trademarks mentioned in this publication are owned by, or licensed to, the AkzoNobel group of companies.

www.international-pc.com

Specification 2.1.B.1

Fully Blasted Exterior Coating System

Tnemec



PRODUCT PROFILE

GENERIC DESCRIPTION Aromatic Urethane, Zinc-Rich

COMMON USAGE A single-component, moisture-cured, zinc-rich primer for steel structures, including the interior and exterior of steel potable water tanks. Provides outstanding long-term corrosion resistance when used as a primer in conjunction with other Tnemec coatings. It cures quickly and offers rapid recoat at surface temperatures down to 35°F. **Note:** When used in conjunction with cathodic protection, anodes or impressed current systems should not provide current demand more negative than -1.05 volts relative to a copper-copper sulfate reference electrode half-cell.

COLORS Greenish-gray

ZINC PIGMENT 83% by weight in dried film

SPECIAL QUALIFICATIONS Certified (with or without 44-710 Urethane Accelerator) in accordance with **ANSI/NSF Std. 61** for use on interior potable water tanks of 400 gallons or greater. Topcoating with Std. 61 certified Tnemec coatings is recommended. Contact your Tnemec representative for specific recommendations. Meets zinc-rich primer requirements of **AWWA D102-11** Standard for **Inside System No. 3 & 5** and **Outside System No. 3, 4 & 6**. Series 94-H₂O uses a zinc pigment which meets the requirements of **ASTM D 520 Type III** and contains less than .002% lead. Reference "Search Listings" section of the NSF website at www.nsf.org for details on the maximum allowable DFT.

PERFORMANCE CRITERIA Extensive test data available. Contact your Tnemec representative for specific test results.

COATING SYSTEM

TOPCOATS **Interior:** Series 20, FC20, 22, FC22, L140, L140F, N140, N140F, V140, V140F, 141, 215, 406
Exterior: Series 27WB, 66, L69, L69F, N69, N69F, V69, V69F, 73, 115, 156, 161, 215, 1028, 1029, 1074, 1074U, 1075, 1075U, 1080, 1081. **Note:** Certain topcoat colors may not provide one-coat hiding depending on method of application. Contact your Tnemec representative. **Note:** Series 94-H₂O must be exterior exposed for three days prior to topcoating with Series 1028 or 1029. **Note:** Series 94-H₂O must be exterior exposed for one day prior to topcoating with Series 27WB.

SURFACE PREPARATION

Wet Interior: SSPC-SP10/NACE 2 Near-White Blast Cleaning with a minimum angular anchor profile of 2.0 mils.
Exterior or Dry Interior: SSPC-SP6/NACE 3 Commercial Blast Cleaning with a minimum angular anchor profile of 2.0 mils.

TECHNICAL DATA

VOLUME SOLIDS 62.0 ± 2.0% (mixed)

RECOMMENDED DFT 2.5 to 3.5 mils (65 to 90 microns) per coat.

CURING TIME Without 44-710

Temperature †	To Handle	To Recoat
75°F (24°C)	2 hours	8 hours
55°F (11°C)	4 hours	12 hours
35°F (2°C)	6 hours	16 hours

† 50% relative humidity. **Note:** Refer to product listings on www.nsf.org for specific potable water return to service information. Curing time will vary with surface temperature, humidity and film thickness. **Ventilation:** When used in enclosed areas, provide adequate ventilation during application and cure.
Note: For faster curing, low humidity and low-temperature applications, add No. 44-710 Urethane Accelerator (see separate product data sheet). **Note:** For cure times to immersion service, reference the specified Tnemec interior topcoat product data sheet.

VOLATILE ORGANIC COMPOUNDS **Unthinned:** 0.74 lbs/gallon (89 grams/litre)
Thinned 15% (No. 49 Thinner): 0.74 lbs/gallon (89 grams/litre)
Thinned 10% (No. 3 Thinner): 1.57 lbs/gallon (188 grams/litre)
Thinned 10% (No. 2 Thinner): 1.56 lbs/gallon (187 grams/litre)

HAPS **Unthinned:** 2.11 lbs/gal solids
Thinned 15% (No. 49 Thinner): 2.11 lbs/gal solids
Thinned 10% (No. 3 Thinner): 2.15 lbs/gal solids
Thinned 10% (No. 2 Thinner): 3.28 lbs/gal solids

THEORETICAL COVERAGE 996 mil sq ft/gal (24.4 m²/L at 25 microns). See APPLICATION for coverage rates.

NUMBER OF COMPONENTS One

PACKAGING 5 gallon (18.9L) pails (yielding 3 gallons) and 1 gallon (3.79L) cans.

NET WEIGHT PER GALLON 24.92 ± 0.60 lbs (11.30 ± .27 kg)

STORAGE TEMPERATURE Minimum 20°F (-7°C) Maximum 110°F (43°C)

TEMPERATURE RESISTANCE Dry (Continuous) 250°F (121°C) Intermittent 300°F (149°C)

SHELF LIFE 9 months at recommended storage temperature.

FLASH POINT - SETA 82°F (28°C)

HEALTH & SAFETY Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product.
Keep out of the reach of children.

HYDRO-ZINC® | SERIES 94-H₂O

APPLICATION

COVERAGE RATES

	Dry MILS (Microns)	Wet MILS (Microns)	Sq Ft/Gal (m ² /Gal)
Suggested	3.0 (75)	5.0 (125)	331 (30.8)
Minimum	2.5 (65)	4.0 (100)	398 (37.0)
Maximum	3.5 (90)	5.5 (140)	284 (26.4)

Allow for overspray and surface irregularities. Wet film thickness is rounded to the nearest 0.5 mil or 5 microns. Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating performance. Reference the "Search Listings" section of the NSF website at www.nsf.org for details on the maximum allowable DFT.

MIXING

Stir thoroughly making sure no pigment remains on the bottom of the can. Use an air-driven power mixer and keep material under constant agitation while mixing. Do not use material beyond pot life limits.

THINNING

For air spray, thin up to 15% or 1 1/4 pints (570 mL) per gallon with No. 49 Thinner or thin up to 10% or 3/4 pint (380 mL) per gallon with No. 2 or No. 3 Thinner. For brush or roller, thin up to 5% or 1/4 pint (190 mL) per gallon with No. 49 Thinner or thin up to 10% or 3/4 pint (380 mL) per gallon with No. 2 or No. 3 Thinner. Thinning is normally not required for airless spray. **Note:** No. 49 Thinner may be used where VOC restrictions apply. **Caution: Series 94-H₂O certification is based on thinning with No. 49, No. 2 or No. 3 Thinner. Use of any other thinner voids NSF/ANSI Std. 61 certification.**

POT LIFE

8 hours at 77°F (25°C) and 50% R.H.
Caution: This product cures with moisture acting as a catalyst. Incorporation of moisture or moisture laden air (humidity) during use will shorten pot life. Avoid continual agitation at high RPM. When feasible keep containers of mixed material covered during use.

APPLICATION EQUIPMENT

Note: When intermediate and finish coats are white or light colors, best hiding of this dark color primer can be achieved by spray application; or when roller applied, by using 1/4" nap covers.

Air Spray

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss JGA †	E	704 or 765	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	40-50 psi (2.8-3.4 bar)	10-20 psi (0.7-1.4 bar)

† (with heavy mastic spring) Low temperatures or longer hoses will require additional pressure. Use pressure pot equipped with an agitator and keep pressure pot at same level or higher than the spray gun. Compressed air must be dry.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.015"-0.019" (380-481 microns) Reversible Tip	3000-4000 psi (207-276 bar)	1/4" or 3/8" (6.4 or 9.5 mm)	60 mesh (250 microns)

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.

Roller: Use a 1/4" or 3/8" (6.4 mm or 9.5 mm) synthetic woven nap roller cover. Stir material frequently or keep under agitation to prevent settling.

Brush: Use high quality natural or synthetic bristle brushes.

SURFACE TEMPERATURE

Minimum 35°F (2°C) Maximum 140°F (60°C) Maximum for Brush & Roller 120°F (49°C)
 The surface should be dry and at least 5°F (3°C) above the dew point. **Note:** Series 44-710 Accelerator must be used if the surface temperature is 35°F to 60°F (2°C to 16°C) and 20% to 40% relative humidity. Please reference Technical Bulletin 98-14 for more information.

AMBIENT HUMIDITY

Minimum 20% Maximum 90%

CLEANUP

Flush and clean all equipment immediately after use with the recommended thinner or xylene or, when required by SCAQMD regulations, No. 49 Thinner.

CAUTION

Series 94-H₂O, with one-component configuration, prevents the product's ability to offer "dry-fall" characteristics.

WARRANTY & LIMITATION OF SELLER'S LIABILITY: Tnemec Company, Inc. warrants only that its coatings represented herein meet the formulation standards of Tnemec Company, Inc. THE WARRANTY DESCRIBED IN THE ABOVE PARAGRAPH SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. The buyer's sole and exclusive remedy against Tnemec Company, Inc. shall be for replacement of the product in the event a defective condition of the product should be found to exist and the exclusive remedy shall not have failed its essential purpose as long as Tnemec is willing to provide comparable replacement product to the buyer. NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, ENVIRONMENTAL INJURIES OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO THE BUYER. Technical and application information herein is provided for the purpose of establishing a general profile of the coating and proper coating application procedures. Test performance results were obtained in a controlled environment and Tnemec Company makes no claim that these tests or any other tests, accurately represent all environments. As application, environmental and design factors can vary significantly, due care should be exercised in the selection and use of the coating.



PRODUCT PROFILE

- GENERIC DESCRIPTION** Polyamide Epoxy
- COMMON USAGE** Versatile low-temperature coating ideally suited for steel fabrication and OEM applications. Also widely used as a field tie-coat. Provides fast curing and rapid handling capabilities. **Note:** Series 27 conforms with air pollution regulations limiting Volatile Organic Compounds (VOC) to a maximum of 340 grams/litre (2.8 lbs/gal).
- COLORS** Refer to Tnemec Color Guide. **Note:** Epoxies chalk with extended exposure to sunlight. Lack of ventilation, incomplete mixing, miscatalyzation or the use of heaters that emit carbon dioxide and carbon monoxide during application and initial stages of curing may cause yellowing to occur.
- FINISH** Flat
- PERFORMANCE CRITERIA** Extensive test data available. Contact your Tnemec representative for specific test results.

COATING SYSTEM

- PRIMERS** **Steel:** Self-priming or Series 1, 37H, 66, L69, L69F, N69, N69F, V69, V69F, 90, 94-H₂O, 135, 394, 530
Galvanized Steel and Non-Ferrous Metal: Self-priming, Series 66 or L69, L69F, N69, N69F, V69, V69F.
- TOPCOATS** Series 2H, 30, 66, 73, 113, 114, 115, 175, 700, V700, 701, V701, 1028, 1029, 1070, 1070V, 1071, 1071V, 1072, 1072V, 1074, 1075, 1077, 1078, 1078V. **Note:** Series 27 exterior exposed for 3 weeks or longer requires an epoxy intermediate coat or scarification prior to topcoating with Series 2H. When topcoating with Series 700, V700, 701, V701, 1070, 1070V, 1071, 1071V, 1072, 1072V, 1078, or 1078V over Series 27, a 14 day maximum recoat time applies. Refer to appropriate topcoat data sheet for additional information.

SURFACE PREPARATION

- STEEL** SSPC-SP6/NACE 3 Commercial Blast Cleaning
- GALVANIZED STEEL & NON-FERROUS METAL** Surface preparation recommendations will vary depending on substrate and exposure conditions. Contact your Tnemec representative or Tnemec Technical Services.
- OVERCOATING** For overcoat applications, reference Tnemec Technical Bulletin No. 98-10 and contact your Tnemec representative.
- ALL SURFACES** Must be clean, dry and free of oil, grease and other contaminants.

TECHNICAL DATA

- VOLUME SOLIDS** 58.0 ± 2.0% (mixed) †
- RECOMMENDED DFT** 2.0 to 6.0 mils (50 to 150 microns) per coat. **Note:** Number of coats and thickness requirements will vary with substrate, application method and exposure. Contact your Tnemec representative.

CURING TIME

Temperature	To Touch	To Handle	To Recoat
75°F (24°C)	1/2 hour	2 hours	3 hours
65°F (18°C)	3/4 hour	4 hours	5-6 hours
55°F (11°C)	1 hour	4-5 hours	6-8 hours
45°F (7°C)	1-2 hours	6-8 hours	9-12 hours
35°F (2°C)	2-3 hours	9-12 hours	12-15 hours

Curing time varies with surface temperature, air movement, humidity and film thickness.

VOLATILE ORGANIC COMPOUNDS

- Unthinned:** 2.36 lbs/gallon (282 grams/litre)
- Thinned 10% (No. 60 Thinner):** 2.83 lbs/gallon (339 grams/litre)
- Thinned 10% (No. 4 Thinner):** 2.83 lbs/gallon (339 grams/litre) †

HAPS

- Unthinned:** 2.59 lbs/gal solids
- Thinned 10% (No. 60 Thinner):** 2.59 lbs/gal solids
- Thinned 10% (No. 4 Thinner):** 3.54 lbs/gal solids

THEORETICAL COVERAGE

930 mil sq ft/gal (22.8 m²/L at 25 microns). See APPLICATION for coverage rates. †

NUMBER OF COMPONENTS

Two: Part A and Part B

PACKAGING

5 gallon (18.9L) pails and 1 gallon (3.79L) cans — Order in multiples of 2.

NET WEIGHT PER GALLON

14.22 ± 0.25 lbs (6.45 ± .11 kg) (mixed) †

STORAGE TEMPERATURE

Minimum 20°F (-7°C) Maximum 110°F (43°C)

TEMPERATURE RESISTANCE

(Dry) Continuous 250°F (121°C) Intermittent 275°F (135°C)

SHELF LIFE

24 months at recommended storage temperature.

FLASH POINT - SETA

Part A: 82°F (28°C) Part B: 80°F (27°C)

HEALTH & SAFETY

Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product.
Keep out of the reach of children.

F.C. TYPOXY® | SERIES 27

APPLICATION

COVERAGE RATES

	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m ² /Gal)
Suggested (1)	4.0 (100)	7.0 (180)	233 (21.6)
Minimum	2.0 (50)	3.5 (90)	465 (43.2)
Maximum	6.0 (150)	10.5 (265)	155 (14.4)

(1) Note: Roller or brush application requires two or more coats to obtain recommended film thickness. Allow for overspray and surface irregularities. Wet film thickness is rounded to the nearest 0.5 mil or 5 microns. Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating performance. †

MIXING

Power mix contents of each container, making sure no pigment remains on the bottom. Pour a measured amount of Part B into a clean container large enough to hold both components. Add an equal volume of Part A to Part B while under agitation. Continue agitation until the two components are thoroughly mixed. Do not use mixed material beyond pot life limits. **Note:** Both components should be above 50°F (10°C) prior to mixing. For applications to surfaces between 35°F to 50°F (2°C to 10°C), allow mixed material to stand thirty (30) minutes and restir before using. For optimum application properties, the material temperature should be above 60°F (16°C).

THINNING

Use No. 60 or No. 4 Thinner. For air spray, thin up to 10% or 3/4 pint (380 mL) per gallon. For airless spray, brush or roller, thin up to 5% or 1/4 pint (190 mL) per gallon.

POT LIFE

16 hours at 35°F (2°C) 2 hours at 77°F (25°C) 1/2 hour at 100°F (38°C)

APPLICATION EQUIPMENT

Air Spray

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss JGA	E	765 or 704	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	75-100 psi (5.2-6.9 bar)	25-35 psi (1.7-2.4 bar)

Low temperatures or longer hoses require higher pot pressure.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.015"-0.019" (380-485 microns)	4000-4800 psi (276-331 bar)	1/4" or 3/8" (6.4 or 9.5 mm)	60 mesh (250 microns)

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.

Note: Application over inorganic zinc-rich primers: Apply a wet mist coat and allow tiny bubbles to form. When bubbles disappear in 1 to 2 minutes, apply a full wet coat at specified mil thickness.

Roller: Roller application optional when environmental restrictions do not allow spraying. Use 3/8" or 1/2" (9.5 mm to 12.7 mm) synthetic woven nap covers.

Brush: Recommended for small areas only. Use high quality natural or synthetic bristle brushes.

SURFACE TEMPERATURE

Minimum 35°F (2°C) Maximum 135°F (57°C)

The surface should be dry and at least 5°F (3°C) above the dew point. Coating won't cure below minimum surface temperature.

CLEANUP

Flush and clean all equipment immediately after use with the recommended thinner or MEK.

†Values may vary with color.

WARRANTY & LIMITATION OF SELLER'S LIABILITY: Tnemec Company, Inc. warrants only that its coatings represented herein meet the formulation standards of Tnemec Company, Inc. THE WARRANTY DESCRIBED IN THE ABOVE PARAGRAPH SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. The buyer's sole and exclusive remedy against Tnemec Company, Inc. shall be for replacement of the product in the event a defective condition of the product should be found to exist and the exclusive remedy shall not have failed its essential purpose as long as Tnemec is willing to provide comparable replacement product to the buyer. NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, ENVIRONMENTAL INJURIES OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO THE BUYER. Technical and application information herein is provided for the purpose of establishing a general profile of the coating and proper coating application procedures. Test performance results were obtained in a controlled environment and Tnemec Company makes no claim that these tests or any other tests, accurately represent all environments. As application, environmental and design factors can vary significantly, due care should be exercised in the selection and use of the coating.

Tnemec Company Incorporated 6800 Corporate Drive Kansas City, Missouri 64120-1372 1-800-TNEMEC1 Fax: 1-816-483-3969 www.tnemec.com



ENDURA-SHIELD® II SERIES 1075U

PRODUCT PROFILE

GENERIC DESCRIPTION Aliphatic Acrylic Polyurethane

COMMON USAGE A coating highly resistant to abrasion, wet conditions, corrosive fumes and exterior weathering. High build quality combines with project specific primers for two-coat, labor saving systems. Contains a blend of ultraviolet (UV) light absorbers for enhanced color and gloss retention. Fast curing options are available; see Curing Time below. Product has some applications as a direct to metal finish. Contact your Tnemec representative for more details. NOT FOR IMMERSION SERVICE.

COLORS Refer to Tnemec Color Guide. **Note:** Certain colors may require multiple coats depending on method of application and finish coat color. When feasible, the preceding coat should be in the same color family, but noticeably different.

FINISH Semi-gloss

SPECIAL QUALIFICATIONS Series 1075U meets the requirements of SSPC-36 (level 3) Paint Standard.

PERFORMANCE CRITERIA Contact your Tnemec representative for specific test results.

COATING SYSTEM

PRIMERS **Steel:** Series 1, 20, FC20, 27, 66, L69, L69F, N69, N69F, V69, V69F, 90-97, 91-H₂O, 94-H₂O, 104, 135, L140, L140F, N140, N140F, V140, V140F, 141, 161, 394, 530
Galvanized Steel and Non-Ferrous Metal: Series 27, 66, L69, L69F, N69, N69F, 135, 161
Concrete: Series 66, L69, L69F, N69, N69F, 84, 104, 161
CMU: 54-660, 130. Intermediate coat required.
Note: Before topcoating with Series 1075U, Series 530 exterior exposed for more than 24 hours must first be scarified or receive an intermediate coat of Tnemec polyamide epoxy. Recoat windows for other primers may apply. See those data sheets for additional information.

SURFACE PREPARATION

ALL SURFACES Must be clean, dry and free of oil, grease and other contaminants. See primer product data sheet for surface preparation recommendation.

TECHNICAL DATA

VOLUME SOLIDS 71 ± 2.0% (mixed) †

RECOMMENDED DFT 2.0 to 5.0 mils (50 to 125 microns) per coat. **Note:** Number of coats and thickness requirements will vary with substrate, application method and exposure. Contact your Tnemec representative.

CURING TIME	Temperature	To Handle	To Recoat	Resist Moisture
	95°F (35°C)	4 hours	5 hours	3 hours
	75°F (24°C)	6 hours	8 hours	5 hours
	55°F (13°C)	12 hours	16 hours	9 hours
	35°F (2°C)	36 hours	48 hours	20 hours

Curing time varies with surface temperature, air movement, humidity and film thickness. If coating is exposed to moisture before the applicable cure parameters are met, dull, flat or spotty appearing areas may develop. **Note:** For faster curing and low-temperature applications, add No. 44-710 Urethane Accelerator; see separate product data sheet. Contact Tnemec Technical Services for force curing times and temperatures.

VOLATILE ORGANIC COMPOUNDS

EPA Method 24 †

Unthinned	Maximum 15% (No. 39 Thin.)	Max 15% (No. 42 Thin.)	Max 15% (No. 48 Thin.)	Max 15% (No. 56 Thin.)
2.16 lbs/gal (258 g/l)	2.70 lbs/gal (323 g/l)	2.75 lbs/gal (330 g/l)	2.83 lbs/gal (339 g/l)	2.27 lbs/gal (271 g/l)

HAPS

Unthinned	Maximum 15% (No. 39 Thin.)	Max 15% (No. 42 Thin.)	Max 15% (No. 48 Thin.)	Max 15% (No. 56 Thin.)
0.0 lbs/gal	0.0 lbs/gal	0.0 lbs/gal	0.0 lbs/gal	0.0 lbs/gal

THEORETICAL COVERAGE 1,132 mil sq ft/gal (27.8 m²/L at 25 microns). See APPLICATION for coverage rates. †

NUMBER OF COMPONENTS Two: Part A and Part B

MIXING RATIO By volume: Eight (Part A) to one (Part B)

PACKAGING

	PART A (Partially filled)	PART B (Partially filled)	When Mixed
3 Gallon Kit	5 gallon pail	1/2 gallon pail	3 gallons (11.4L)
1 Gallon Kit	1 gallon pail	1 pint can	1 gallon (3.79L)

NET WEIGHT PER GALLON 11.84 ± 0.25 lbs (5.37 ± .11 kg) †

STORAGE TEMPERATURE Minimum 20°F (-7°C) Maximum 110°F (43°C)

TEMPERATURE RESISTANCE (Dry) Continuous 250°F (121°C) Intermittent 275°F (135°C)

SHELF LIFE Part A: 24 months; Part B: 12 months at recommended storage temperature.

FLASH POINT - SETA Part A: 95°F (35°C) Part B: 135°F (57°C)

ENDURA-SHIELD® II | SERIES 1075U

HEALTH & SAFETY

Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product.
Keep out of the reach of children.

APPLICATION

COVERAGE RATES

Conventional Build (Spray, Brush or Roller)

	Dry Mills (Microns)	Wet Mills (Microns)	Sq Ft/Gal (m ² /Gal)
Suggested	2.5 (65)	3.5 (90)	456 (42.3)
Minimum	2.0 (50)	3.0 (75)	569 (42.9)
Maximum	3.0 (75)	4.0 (100)	380 (35.3)

High-Build (Spray Only)

	Dry Mills (Microns)	Wet Mills (Microns)	Sq Ft/Gal (m ² /Gal)
Suggested	4.0 (100)	5.5 (140)	285 (26.5)
Minimum	3.0 (75)	4.0 (100)	380 (35.3)
Maximum	5.0 (125)	7.0 (180)	228 (21.2)

Note: Can be spray applied at 3.0 to 5.0 mils (75 to 125 microns) DFT per coat when extra protection or the elimination of a coat is desired. Allow for overspray and surface irregularities. Wet film thickness is rounded to the nearest 0.5 mil or 5 microns. Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating performance. †

MIXING

Stir contents of the container marked Part A, making sure no pigment remains on the bottom. Add the contents of the can marked Part B to Part A while under agitation. Continue agitation until the two components are thoroughly mixed. When used with 44-710 Urethane Accelerator, first blend 44-710 into Part A under agitation; continue as above. Do not use mixed material beyond pot life limits. **Caution: Part B is moisture-sensitive and will react with atmospheric moisture. Unused material must be kept tightly closed at all times.**

THINNING

For air or airless spray, thin up to 15% or 1 1/4 pints (570 mL) per gallon with No. 42 Thinner if temperatures are below 80°F (27°C), use No. 48 Thinner for temperatures above 80°F (27°C). For brush and roller, thin 15% or 1 1/4 pints (570 mL) per gallon with No. 39. Where lower VOC is required for air or airless spray, brush or roller application, thin up to 15% or 1 1/4 pints (570 mL) per gallon with No. 56 Thinner. **Note:** Thinning is required for proper application. **Caution: Do not add thinner if more than 30 minutes have elapsed after mixing.**

POT LIFE

1 1/2 hours at 75°F (24°C) unthinned 2 hours at 75°F (24°C) thinned

APPLICATION EQUIPMENT

Air Spray

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss JGA	E	704 or 765	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	75-90 psi (5.2-6.2 bar)	10-20 psi (0.7-1.4 bar)

Low temperatures or longer hoses require higher pot pressure.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.009"-0.013" (230-330 microns)	3000-3500 psi (207-241 bar)	1/4" or 3/8" (6.4 or 9.5 mm)	100 mesh (150 microns)

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.

Roller: Use 1/4" or 3/8" (6.4 mm or 9.5 mm) synthetic woven nap roller covers. Do not use long nap roller covers. Two coats are required to obtain dry film thickness above 3.0 mils (75 microns).

Brush: Recommended for small areas only. Use high quality natural or synthetic bristle brushes. Two coats are required to obtain recommended film thickness above 3.0 mils (75 microns).

SURFACE TEMPERATURE

Minimum 35°F (2°C) Maximum 120°F (49°C)
 The surface should be dry and at least 5°F (3°C) above the dew point.

CLEANUP

Flush and clean all equipment immediately after use with the recommended thinner or MEK.

† Values may vary with color.

WARRANTY & LIMITATION OF SELLER'S LIABILITY: Tnemec Company, Inc. warrants only that its coatings represented herein meet the formulation standards of Tnemec Company, Inc. THE WARRANTY DESCRIBED IN THE ABOVE PARAGRAPH SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. The buyer's sole and exclusive remedy against Tnemec Company, Inc. shall be for replacement of the product in the event a defective condition of the product should be found to exist and the exclusive remedy shall not have failed its essential purpose as long as Tnemec is willing to provide comparable replacement product to the buyer. NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, ENVIRONMENTAL INJURIES OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO THE BUYER. Technical and application information herein is provided for the purpose of establishing a general profile of the coating and proper coating application procedures. Test performance results were obtained in a controlled environment and Tnemec Company makes no claim that these tests or any other tests, accurately represent all environments. As application, environmental and design factors can vary significantly, due care should be exercised in the selection and use of the coating.

Specification 2.1.B.1

Fully Blasted Exterior Coating System

Sherwin Williams



Protective
&
Marine
Coatings



COROTHANE® I GALVAPAC 2K ZINC PRIMER

PART A
PART F

B65G10
B69D210

BINDER
ZINC DUST

Revised: November 10, 2016

PRODUCT INFORMATION

5.11

PRODUCT DESCRIPTION

COROTHANE® I GALVAPAC 2K ZINC PRIMER is a two component, moisture curing urethane zinc-rich primer that contains micaceous iron oxide. Designed for low temperature application to blast cleaned or power tool cleaned steel surfaces.

- Low temperature application - down to 20°F (-7°C)
- Easy to apply and recoat
- Resistant to mudcracking
- Abrasion and chemical resistant
- Meets Class B requirements for Slip Coefficient and Creep Resistance, .54
- Enhanced coating strength and edge protection with micaceous iron oxide addition

PRODUCT CHARACTERISTICS

Finish:	Flat
Color:	Gray
Volume Solids:	67% ± 2%, mixed
Weight Solids:	91.7% ± 2%
VOC (calculated):	<340 g/L; 2.8 lb/gal, mixed
Mix Ratio:	2 components; premeasured 2.75 gallon mix

Zinc Content in Dry Film: 83% ± 2% by weight

Recommended Spreading Rate per coat:

	Standard		AWWA*	
	Min	Max	Min	Max
Wet mils (microns)	4.5 (112)	6.8 (170)	3.0 (75)	6.0 (150)
Dry mils (microns)	3.0 (75)	4.0 (100)	2.0 (50)	4.0 (100)
~Coverage sq ft/gal (m²/L)	268 (6.5)	358 (8.8)	268 (6.5)	536 (13)
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	1072 (26.2)			

*NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.
See Recommended Systems on Product Information page

Drying Schedule @ 5.0 mils wet (125 microns):

	@ 40°F/4.5°C	@ 77°F/25°C 50% RH	@ 100°F/38°C
To touch:	45 minutes	20 minutes	10 minutes
To recoat (min.): atmospheric service	8 hours	4-6 hours	1 hour
To recoat (min.): immersion service	24 hours	12 hours	10 hours
To recoat (max.):	12 months	12 months	12 months
To cure: atmospheric service	5 days	3 days	1 day
To cure: immersion service	14 days	7 days	5 days

*If maximum recoat time is exceeded, abrade surface before recoating.
Drying time is temperature, humidity, and film thickness dependent.
For potable water service, consult www.nsf.org for details on recoat and dry times at indicated temperature. Sterilize and rinse per AWWA C652.*

Shelf Life:	Part A - 12 months, unopened Part F - 24 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	94°F (34°C), PMCC
Reducer/Clean Up:	Reducer #15, R7K15

RECOMMENDED USES

- **Immersion Service - potable water:**
 - Meets NSF Standard 61 for use in potable water storage.
 - 250,000 gallon untopcoated
 - 20,000 gallon minimum topcoated
- Meets requirements of SSPC Paint Spec No. 40 for zinc rich moisture cure urethane primer
- As a primer in a urethane coating system for bridges, tanks, chemical, and marine structures
- Wind Towers - onshore and offshore
- Ideal for priming water assisted abrasive blasted surfaces where flash rusting or blooming limits the use of conventional zinc rich coatings
- Acceptable for use with cathodic protection with select topcoats
- Conforms to AWWA D102 Inside Coating System #3 (ICS-3), Inside Coating System #4 (ICS-4) Inside Coating System #5 (ICS-5), Outside Coating System #2 (OCS-2), Outside Coating System #3 (OCS-3), Outside Coating System #4 (OCS-4), and Outside Coating System #6 (OCS-6)
- A component of INFINITANK

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP5

System Tested*:

1 ct. Corothane I GalvaPac 2K Zinc Primer @ 3.5 mils (88 microns) dft

1 ct. Corothane I MIO-Aluminum @ 3.0 mils (75 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	45 mg loss
Adhesion (Zinc only)	ASTM D4541	1943 psi
Corrosion Weathering	ASTM D5984, 15 cycles, 5000 hours	Rating 10 per ASTM D610 Rusting (field); Rating 10 per ASTM D714 Blistering
Direct Impact Resistance (Zinc only)	ASTM D2794	160 in. lb.
Dry Heat Resistance	ASTM D2485	300°F (149°C) continuous, 350°F (177°C) intermittent
Flexibility	ASTM D522, 180° bend, 1/4" mandrel	Passes
Immersion (Galvapac/2 cts Macropoxy 646 NSF)	5 year potable water	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Moisture Condensation Resistance (Zinc only)	ASTM D4585, 100°F (38°C), 4000 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Pencil Hardness	ASTM D3363	2H (zinc only)
Salt Fog Resistance (Zinc only)	ASTM B117, 5000 hours	Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering
Slip Coefficient* (Zinc only)	AISC Specification for Structural Joints Using ASTM A325 or ASTM A490 Bolts	Class B, .54
Wet Heat Resistance	Non-immersion	190°F (88°C)

Complies with ISO 12944-5 C5I and C5M requirements.

*Refer to Slip Certification document



**Protective
&
Marine
Coatings**



COROTHANE® I GALVAPAC 2K ZINC PRIMER

**PART A
PART F**

**B65G10
B69D210**

**BINDER
ZINC DUST**

Revised: November 10, 2016

PRODUCT INFORMATION

5.11

RECOMMENDED SYSTEMS

	Dry Film Thickness / ct.	
	Mils	(Microns)
Immersion Service, AWWA, Steel:		
*AWWA D102 Inside Coating System No. 3		
minimum AWWA	22.0	(550)
1 ct. Corothane I GalvaPac 2K Zinc Primer	2.0	(50)
1 ct. SherPlate PW Epoxy	20	(500)
*AWWA D102 Inside Coating System No. 4		
minimum AWWA	32.0	(800)
1 ct. Corothane I GalvaPac 2K Zinc Primer	2.0	(50)
1 ct. SherFlex Elastomeric	30	(750)
*AWWA D102 Inside Coating System No. 5		
minimum AWWA	10.0	(250)
1 ct. Corothane I GalvaPac 2K Zinc Primer	2.0	(50)
2 cts. Macropoxy 646 PW	4.0	(100)
Immersion Service, Potable Water, Steel:		
1 ct. Corothane I GalvaPac 2K Zinc Primer	3.0-4.0	(75-100)
2 cts. Macropoxy 646 PW	5.0-10.0	(125-250)
Immersion Service (Non-Potable Water), Steel:		
1 ct. Corothane I GalvaPac 2K Zinc Primer	3.0-4.0	(75-100)
2 cts. Corothane I Coal Tar	5.0-7.0	(125-175)
Atmospheric Service, Steel:		
*AWWA D102 Outside Coating System No. 2		
minimum AWWA	6.5	(188)
1 ct. Corothane I GalvaPac 2K Zinc Primer	2.0	(50)
1 ct. Corothane Ironox B	3.0	(75)
1 ct. Corothane I HS	1.5	(40)
*AWWA D102 Outside Coating System No. 3		
minimum AWWA	7.5	(188)
1 ct. Corothane I GalvaPac 2K Zinc Primer	2.0	(50)
1 ct. DTM/SherCryl/SprayLastic	2.0	(50)
1 ct. Corothane I HS	2.0	(50)
*AWWA D102 Outside Coating System No. 4		
minimum AWWA	7.5	(188)
1 ct. Corothane I GalvaPac 2K Zinc Primer	2.0	(50)
1 ct. Acrolon 218HS/HS Polyurethane	3.0	(75)
1 ct. FluoroKem HS	2.0	(50)
*AWWA D102 Outside Coating System No. 6		
minimum AWWA	6.0	(150)
1 ct. Corothane I GalvaPac 2K Zinc Primer	2.0	(50)
1 ct. Macropoxy 646 PW	2.0	(50)
1 ct. Acrolon Ultra/HS Polyurethane	2.0	(50)
Steel, Rapid Return to Service:		
1 ct. Corothane I GalvaPac 2K Zinc Primer	3.0-4.0	(75-100)
1 ct. EnviroLastic 980 PA	6.0-9.0	(150-225)
ISO 12944 C5M System:		
1 ct. Corothane I GalvaPac 2K Zinc Primer	3.0-4.0	(75-100)
1 ct. EnviroLastic 980 PA	6.0-9.0	(150-225)

Acceptable for use over Zinc Clad PCP Ultra. Topcoat required.

The systems listed above are representative of the product's use, other systems may be appropriate.

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, 2 mil (50 micron) profile preferred

Immersion, with recommended topcoat:
 SSPC-SP10, 2 mil (50 micron) profile

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 3	-
Power Tool Cleaning	Rusted	C St 3	SP 3	-
Pitted & Rusted	D St 3	D St 3	SP 3	-

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature:
 air and surface: 20°F (-7°C) minimum
 120°F (49°C) maximum
 material: 45°F (7°C) minimum

Do not apply over surface ice

Relative humidity: 30% minimum, 99% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:
 Part A: 1.73 gallons (6.5L) in a 3 gallon (11.3L) container
 Part F: 60 lb zinc dust, 7.2 Kg/L
Weight: 28.5 ± 0.2 lb/gal, 3.42 Kg/L

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**



COROTHANE® I GALVAPAC 2K ZINC PRIMER

**PART A
PART F**

**B65G10
B69D210**

**BINDER
ZINC DUST**

Revised: November 10, 2016

APPLICATION BULLETIN

5.11

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.

Iron & Steel (immersion service)

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Remove all weld spatter and round all sharp edges by grinding. Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Iron & Steel (atmospheric service)

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6/NACE 3. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

APPLICATION CONDITIONS

Temperature:
air and surface: 20°F (-7°C) minimum
120°F (49°C) maximum
material: 45°F (7°C) minimum

Do not apply over surface ice

Relative humidity: 30% minimum, 99% maximum

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 Reducer #15, R7K15

Airless Spray

Pump.....30:1
Pressure.....1800-2000 psi
Hose.....1/4" ID
Tip......015" - .019"
Filter.....60 mesh
Reduction.....As needed up to 10% by volume

Conventional Spray

Unit.....	Graco	Binks
Gun.....	900	95
Fluid Nozzle.....	070	66/65
Air Nozzle.....	947	63PR
Atomization Pressure.....	60-70 psi	60-70 psi
Fluid Pressure.....	15-20 psi	15-20 psi
Reduction.....	As needed up to 10% by volume	

Brush

Brush.....Natural bristle
Reduction.....As needed up to 10% by volume

Roller

Cover.....3/8" natural or synthetic with
solvent resistant core
Reduction.....As needed up to 10% by volume

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

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	Rusted C St 2	C St 2	SP 2	-
Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted C St 3	C St 3	SP 3	-
Pitted & Rusted	D St 3	D St 3	SP 3	-



Protective
&
Marine
Coatings



COROTHANE® I GALVAPAC 2K ZINC PRIMER

PART A
PART F

B65G10
B69D210

BINDER
ZINC DUST

Revised: November 10, 2016

APPLICATION BULLETIN

5.11

APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Corothane I - GalvaPac Zinc Primer comes in 2 premeasured containers which when mixed provides 2.75 gallons (10.4L) of ready-to-apply material.

Mixing Instructions: Thoroughly agitate Binder Part A. Using continuous air driven agitation, slowly mix all 60 lbs. of Zinc Dust, B69D210, Part F into Binder Part A until mixture is completely uniform. After mixing, pour mixture through 30-60 mesh screen. Mixed material must be used within 8 hours. Do not mix previously mixed material with new.

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

Recommended Spreading Rate per coat:

	Standard		AWWA*	
	Min	Max	Min	Max
Wet mils (microns)	4.5 (112)	6.8 (170)	3.0 (75)	6.0 (150)
Dry mils (microns)	3.0 (75)	4.0 (100)	2.0 (50)	4.0 (100)
~Coverage sq ft/gal (m ² /L)	268 (6.5)	358 (8.8)	268 (6.5)	536 (13)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1072 (26.2)			

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

*See Recommended Systems on Product Information page

Drying Schedule @ 5.0 mils wet (125 microns):

	@ 40°F/4.5°C	@ 77°F/25°C	@ 100°F/38°C
	50% RH		
To touch:	45 minutes	20 minutes	10 minutes
To recoat (min.): atmospheric service	8 hours	4-6 hours	1 hour
To recoat (min.): immersion service	24 hours	12 hours	10 hours
To recoat (max.):	12 months	12 months	12 months
To cure: atmospheric service	5 days	3 days	1 day
To cure: immersion service	14 days	7 days	5 days

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

For potable water service, consult www.nsf.org for details on recoat and dry times at indicated temperature. Sterilize and rinse per AWWA C652.

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

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Reducer #15, R7K15. Clean tools immediately after use with Reducer #15, R7K15. 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.

PERFORMANCE TIPS

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

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, adhesion, and NSF 61 approval.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer #15, R7K15.

Pour a small amount of Reducer #15, R7K15 over the top of the paint in the can to prevent skinning or gelling.

Place a temporary cover over the pail to keep excessive moisture, condensation, fog, or rain from contaminating the coating.

Do not use continuous agitation.

It is recommended that partially used cans not be sealed/closed for use at a later date.

An intermediate coat is recommended to provide a uniform appearance of the topcoat.

Corothane I KA Accelerator is acceptable for use (except NSF applications). See data page 5.98 for details.

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

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

MACROPOXY® 646 FAST CURE EPOXY

PART A
PART B

B58-600
B58V600

SERIES
HARDENER

Revised: October 19, 2016

PRODUCT INFORMATION

4.53

PRODUCT DESCRIPTION

MACROPOXY 646 FAST CURE EPOXY is a high solids, high build, fast drying, polyamide epoxy designed to protect steel and concrete in industrial exposures. Ideal for maintenance painting and fabrication shop applications. The high solids content ensures adequate protection of sharp edges, corners, and welds. This product can be applied directly to marginally prepared steel surfaces.

- Low VOC
- Low odor
- Outstanding application properties
- Meets Class A requirements for Slip Coefficient, 0.36 @ 6 mils / 150 microns dft (Mill White only)
- Chemical resistant
- Abrasion resistant

PRODUCT CHARACTERISTICS

Finish:	Semi-Gloss
Color:	Mill White, Black and a wide range of colors available through tinting
Volume Solids:	72% ± 2%, mixed, Mill White
Weight Solids:	85% ± 2%, mixed, Mill White
VOC (EPA Method 24): mixed	Unreduced: <250 g/L; 2.08 lb/gal Reduced 10%: <300 g/L; 2.50 lb/gal
Mix Ratio:	1:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	7.0 (175)	13.5 (338)
Dry mils (microns)	5.0* (125)	10.0* (250)
~Coverage sq ft/gal (m²/L)	116 (2.8)	232 (5.7)
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	1152 (28.2)	

*May be applied at 3.0-10.0 mils (75-250 microns) dft in a multi-coat system. Refer to Recommended Systems and Performance Tips Sections.

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 7.0 mils wet (175 microns):

	@ 35°F/1.7°C	@ 77°F/25°C 50% RH	@ 100°F/38°C
To touch:	4-5 hours	2 hours	1.5 hours
To handle:	48 hours	8 hours	4.5 hours
To recoat:			
minimum:	48 hours	8 hours	4.5 hours
maximum:	1 year	1 year	1 year
To cure:			
Service:	10 days	7 days	4 days
Immersion:	14 days	7 days	4 days

If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent. Paint temperature must be at least 40°F (4.5°C) minimum.

Pot Life:	10 hours	4 hours	2 hours
Sweat-in-time:	30 minutes	30 minutes	15 minutes

When used as an intermediate coat as part of a multi-coat system:

Drying Schedule @ 5.0 mils wet (125 microns):

	@ 35°F/1.7°C	@ 77°F/25°C 50% RH	@ 100°F/38°C
To touch:	3 hours	1 hour	1 hour
To handle:	48 hours	4 hours	2 hours
To recoat:			
minimum:	16 hours	4 hours	2 hours
maximum:	1 year	1 year	1 year

PRODUCT CHARACTERISTICS (CONT'D)

Shelf Life:	36 months, unopened Store indoors at 40°F (4.5°C) to 110°F (43°C).
Flash Point:	91°F (33°C), TCC, mixed
Reducer/Clean Up:	Reducer, R7K15
In California:	Reducer R7K111 or Oxsol 100

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP10/NACE 2

System Tested*:

1 ct. Macropoxy 646 Fast Cure @ 6.0 mils (150 microns) dft
*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	84 mg loss
Accelerated Weathering-QUV¹	ASTM D4587, QUV-A, 12,000 hours	Passes
Adhesion	ASTM D4541	1,037 psi
Corrosion Weathering¹	ASTM D5894, 36 cycles, 12,000 hours	Rating 10 per ASTM D714 for blistering; Rating 9 per ASTM D610 per rusting
Nuclear Decontamination	ASTM D4256/ANSI N 5.12	99% Water Wash; 95% Overall
Direct Impact Resistance²	ASTM D2794 Modified	**120 in. lb.
Dry Heat Resistance	ASTM D2485	250°F (121°C)
Exterior Durability	1 year at 45° South	Excellent, chalks
Flexibility	ASTM D522, 180° bend, 3/4" mandrel	Passes
Fuel Contribution	NFPA 259	5764 btu/lb
Humidity Resistance	ASTM D4585, 6000 hours	No blistering, cracking, or rusting
Immersion	1 year fresh and salt water	Passes, no rusting, blistering, or loss of adhesion
Radiation Tolerance	ASTM D4082 / ANSI 5.12	Pass at 21 mils (525 microns)
Pencil Hardness	ASTM D3363	3H
Salt Fog Resistance¹	ASTM B117, 6,500 hours	Rating 10 per ASTM D610 for rusting; Rating 9 per ASTM D1654 for corrosion
Slip Coefficient, Mill White*	AISC Specification for Structural Joints Using ASTM A325 or ASTM A490 Bolts	Class A, 0.36
Surface Burning	ASTM E84/NFPA 255	Flame Spread Index 20; Smoke Development Index 35 (at 18 mils or 450 microns)
Water Vapor Permeance	ASTM D1653, Method B	1.16 US perms

Epoxy coatings may darken or discolor following application and curing.

*Refer to Slip Certification document

** Performed on 1/16 inch blasted steel

Footnotes:

¹ Zinc Clad II Plus Primer

² Two coats of Macropoxy 646 Fast Cure Epoxy

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.



Protective & Marine Coatings

MACROPOXY® 646 FAST CURE EPOXY

PART A
PART B

B58-600
B58V600

SERIES
HARDENER

Revised: October 19, 2016

PRODUCT INFORMATION

4.53

RECOMMENDED USES

- Marine applications
- Fabrication shops
- Pulp and paper mills
- Power plants
- Offshore platforms
- Nuclear Power Plants
- Nuclear fabrication shops
- Mill White and Black are acceptable for immersion use for salt water and fresh water, not acceptable for potable water
- Suitable for use in USDA inspected facilities
- Acceptable for use in Canadian Food Processing facilities, categories: D1, D2, D3 (Confirm acceptance of specific part numbers/boxes with your WS Sales Representative)
- Conforms to AWWA D102 OCS #5
- Conforms to MPI # 108
- This product meets specific design requirements for non-safety related nuclear plant applications in Level II, III and Balance of Plant, and DOE nuclear facilities*.
- * Nuclear qualifications are NRC license specific to the facility.
- Suitable for use in the Mining & Minerals Industry
- Acceptable for use over and/or under Loxon S1 and Loxon H1 Caulking

RECOMMENDED SYSTEMS

		Dry Film Thickness / ct.	
		Mils	(Microns)
Immersion and atmospheric:			
Steel:			
2 cts.	Macropoxy 646 Fast Cure Epoxy	5.0-10.0	(125-250)
Concrete/Masonry, smooth:			
2 cts.	Macropoxy 646 Fast Cure Epoxy	5.0-10.0	(125-250)
Concrete Block:			
1 ct.	Kem Cati-Coat HS Epoxy Filler/Sealer	10.0-20.0	(250-500)
<i>as needed to fill voids and provide a continuous substrate.</i>			
2 cts.	Macropoxy 646 Fast Cure Epoxy	5.0-10.0	(125-250)
Atmospheric:			
Steel:			
(Shop applied system, new construction, AWWA D102, can also be used at 3 mils / 75 microns minimum dft when used as an intermediate coat as part of a multi-coat system)			
1 ct.	Macropoxy 646 Fast Cure Epoxy	3.0-6.0	(75-150)
1-2 cts.	of recommended topcoat		
Steel:			
1 ct.	Recoat Epoxy Primer	4.0-6.0	(100-150)
2 cts.	Macropoxy 646 Fast Cure Epoxy	5.0-10.0	(125-250)
Steel:			
1 ct.	Macropoxy 646 Fast Cure Epoxy	5.0-10.0	(125-250)
1-2 cts.	Acrolon 218 Polyurethane	3.0-6.0	(75-150)
	or Hi-Solids Polyurethane	3.0-5.0	(75-125)
	or SherThane 2K Urethane	2.0-4.0	(50-100)
	or Hydrogloss	2.0-4.0	(50-100)
Steel:			
2 cts.	Macropoxy 646 Fast Cure Epoxy	5.0-10.0	(125-250)
1-2 cts.	Tile-Clad HS Epoxy	2.5-4.0	(63-100)
Steel:			
1 ct.	Zinc Clad II Plus	2.0-4.0	(50-100)
1 ct.	Macropoxy 646 Fast Cure Epoxy	3.0-10.0	(75-250)
1-2 cts.	Acrolon 218 Polyurethane	3.0-6.0	(75-150)
Steel:			
1 ct.	Zinc Clad III HS	3.0-5.0	(75-125)
	or Zinc Clad IV	3.0-5.0	(75-125)
1 ct.	Macropoxy 646 Fast Cure Epoxy	3.0-10.0	(75-250)
1-2 cts.	Acrolon 218 Polyurethane	3.0-6.0	(75-150)
Aluminum:			
2 cts.	Macropoxy 646 Fast Cure Epoxy	2.0-4.0	(50-100)
Galvanizing:			
2 cts.	Macropoxy 646 Fast Cure Epoxy	2.0-4.0	(50-100)
FIRETEX M89/02, M90, M90/02, and M93/02:			
Steel & Galvanized Substrates being primed for FIRETEX only:			
1 ct.	Macropoxy 646 Fast Cure Epoxy	2.0-5.0	(50-125)

The systems listed above are representative of the product's use, other systems may be appropriate.

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-SP2/3 or SSPC-SP WJ-2/NACE WJ-2L
Immersion: SSPC-SP10/NACE 2, 2-3 mil (50-75 micron) profile or SSPC-SP WJ-3/NACE WJ-3L

Aluminum:

SSPC-SP1

Galvanizing: SSPC-SP1; See Surface Preparations section on page 3 for application of FIRETEX intumescent coating systems

Concrete & Masonry

Atmospheric: SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 1-3

Immersion: SSPC-SP13/NACE 6-4.3.1 or 4.3.2, or

ICRI No. 310.2R, CSP 2-4

Surface Preparation Standards

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

TINTING

Tint Part A with Maxitones at 150% strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

Tinting is not recommended for immersion service.

APPLICATION CONDITIONS

Temperature: 35°F (1.7°C) minimum, 120°F (49°C) maximum (air and surface)
40°F (4.5°C) minimum, 120°F (49°C) maximum (material)
At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:
Part A: 1 gallon (3.78L) and 5 gallon (18.9L) containers
Part B: 1 gallon (3.78L) and 5 gallon (18.9L) containers

Weight: 12.9 ± 0.2 lb/gal ; 1.55 Kg/L
mixed, may vary by color

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

MACROPOXY® 646 FAST CURE EPOXY

PART A
PART B

B58-600
B58V600

SERIES
HARDENER

Revised: October 19, 2016

APPLICATION BULLETIN

4.53

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.

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.

Iron & Steel, Immersion Service:

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2-3 mils / 50-75 microns). Remove all weld spatter and round all sharp edges by grinding. Prime any bare steel the same day as it is cleaned.

Aluminum

Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1.

Galvanized Steel

Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1 (recommended solvent is VM&P Naphtha). When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned. In preparing galvanized steel substrates for the application of FIRE-TEX intumescent coating systems, Surface Preparation Specification SSPC-SP 16 must be followed obtaining a surface profile of minimum 1.5 mils (38 microns). Optimum surface profile will not exceed 2.0 mils (50 microns).

Concrete and Masonry

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, 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.

Concrete, Immersion Service:

For surface preparation, refer to SSPC-SP13/NACE 6, Section 4.3.1 or 1.3.2 or ICRI No. 310.2R, CSP 2-4.

Follow the standard methods listed below when applicable:

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 No. 310.2R Concrete Surface Preparation.

Previously Painted Surfaces

If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply 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. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

Surface Preparation Standards

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

APPLICATION CONDITIONS

Temperature:	35°F (1.7°C) minimum, 120°F (49°C) maximum (air and surface) 40°F (4.5°C) minimum, 120°F (49°C) maximum (material) At least 5°F (2.8°C) above dew point
Relative humidity:	85% maximum

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 Reducer R7K15
In California..... Reducer R7K111

Airless Spray

Pump.....	30:1
Pressure.....	2800 - 3000 psi
Hose.....	1/4" ID
Tip.....	.017" - .023"
Filter.....	60 mesh
Reduction.....	As needed up to 10% by volume

Conventional Spray

Gun.....	DeVilbiss MBC-510
Fluid Tip.....	E
Air Nozzle.....	704
Atomization Pressure.....	60-65 psi
Fluid Pressure.....	10-20 psi
Reduction.....	As needed up to 10% by volume
Requires oil and moisture separators	

Brush

Brush.....	Nylon/Polyester or Natural Bristle
Reduction.....	As needed up to 10% by volume

Roller

Cover.....	3/8" woven with solvent resistant core
Reduction.....	As needed up to 10% by volume

Plural Component Spray... Acceptable

Refer to April 2010 Technical Bulletin - "Application Guidelines for Macroxy 646 Fast Cure Epoxy & Recoatable Epoxy Primer Utilizing Plural Component Equipment"
If specific application equipment is not listed above, equivalent equipment may be substituted.



Protective & Marine Coatings

MACROPOXY® 646 FAST CURE EPOXY

PART A
PART B

B58-600
B58V600

SERIES
HARDENER

Revised: October 19, 2016

APPLICATION BULLETIN

4.53

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 one part 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 prior to application. 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:

	Minimum	Maximum
Wet mils (microns)	7.0 (175)	13.5 (338)
Dry mils (microns)	5.0* (125)	10.0* (250)
~Coverage sq ft/gal (m ² /L)	116 (2.8)	232 (5.7)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1152 (28.2)	

*May be applied at 3.0-10.0 mils (75-250 microns) dft in a multi-coat system. Refer to Recommended Systems and Performance Tips Sections.

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 7.0 mils wet (175 microns):

	@ 35°F/1.7°C	@ 77°F/25°C 50% RH	@ 100°F/38°C
To touch:	4-5 hours	2 hours	1.5 hours
To handle:	48 hours	8 hours	4.5 hours
To recoat:			
minimum:	48 hours	8 hours	4.5 hours
maximum:	1 year	1 year	1 year
To cure:			
Service:	10 days	7 days	4 days
Immersion:	14 days	7 days	4 days

If maximum recoat time is exceeded, abrade surface before recoating.

Drying time is temperature, humidity, and film thickness dependent.

Paint temperature must be at least 40°F (4.5°C) minimum.

Pot Life:	10 hours	4 hours	2 hours
Sweat-in-time:	30 minutes	30 minutes	15 minutes

When used as an intermediate coat as part of a multi-coat system:

Drying Schedule @ 5.0 mils wet (125 microns):

	@ 35°F/1.7°C	@ 77°F/25°C 50% RH	@ 100°F/38°C
To touch:	3 hours	1 hour	1 hour
To handle:	48 hours	4 hours	2 hours
To recoat:			
minimum:	16 hours	4 hours	2 hours
maximum:	1 year	1 year	1 year

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

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Reducer R7K15. Clean tools immediately after use with Reducer R7K15. In California use Reducer R7K111. Follow manufacturer's safety recommendations when using any solvent.

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, and adhesion.

Do not mix previously catalyzed material with new.

Do not apply the material beyond recommended pot life.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer R7K15. In California use Reducer R7K111.

Tinting is not recommended for immersion service.

Use only Mill White and Black for immersion service.

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.

Quik-Kick Epoxy Accelerator is acceptable for use. See data page 4.99 for details.

When coating over aluminum and galvanizing, recommended dft is 2-4 mils (50-100 microns).

Acceptable for Concrete Floors.

Can be used as a metalizing sealer. Consult Technical Bulletin - Sealers for Thermal Spray Metalizing, or your local Sherwin-Williams representative.

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

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.

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.

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

ACROLON™ ULTRA HIGH PERFORMANCE POLYURETHANE

PART A	B65W821	GLOSS EXTRA WHITE TINT BASE
PART A	B65WW825	GLOSS MR WHITE TINT BASE
PART A	B65T824	GLOSS ULTRADEEP TINT BASE
PART A	B65W831	SEMI-GLOSS EXTRA WHITE TINT BASE
PART A	B65T834	SEMI-GLOSS ULTRADEEP TINT BASE
PART B	B65V820	HARDENER

Revised Oct 18, 2016

PRODUCT INFORMATION

5.36

PRODUCT DESCRIPTION

ACROLON™ ULTRA is a high performance acrylic polyurethane available in gloss and semi-gloss sheens. It is specifically designed to provide long term UV protection for high visibility structures.

- Exceptional long term color and gloss retention
- Excellent resistance to corrosion and weathering
- Chemical resistant
- Resists film attack by mildew (Gloss MR White only)

PRODUCT CHARACTERISTICS

Finish:	Gloss, Semi-Gloss
Color:	Wide range of colors possible
Volume Solids:	57% ± 2% mixed, may vary by color
Weight Solids:	67% ± 2% mixed, may vary by color
VOC (EPA Method 24):	Unreduced: <340g/L; 2.80 lb/gal mixed
Mix Ratio:	4:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	3.5 (87.5)	5.5 (137.5)
Dry mils (microns)	2.0 (50)	3.0 (75)
~Coverage sq ft/gal (m²/L)	305 (7.5)	460 (11.3)

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 4.5 mils wet (112.5 microns):

	@ 40°F/4.5°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
To touch:	4 hours	2 hours	1 hour
To handle:	12 hours	6 hours	4 hours
To recoat:			
minimum:	12 hours	6 hours	4 hours
maximum:	120 days	120 days	120 days
To cure:	14 days	10 days	7 days

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

Pot Life:	8 hours	4 hours	2 hours
Sweat-in-Time:	None required		

Shelf Life:	
Part A:	36 months, unopened
Part B:	24 months, unopened
	Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	80°F (27°C), PMCC, mixed
Reducer:	R7K225 or R7K111
Clean Up:	Reducer #58

RECOMMENDED USES

Interior or exterior exposure where extreme weather durability is required.

- Water tanks
- Sports complexes
- Bridges
- Marine
- Municipal buildings
- Fascias
- Suitable for use in USDA inspected facilities
- Stadiums
- Storage tank exteriors
- Museums
- Schools
- High visibility structures

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP10

System Tested*:

- 1 ct. Zinc Clad 200 @ 3.0 mils (75 microns) dft
- 1 ct. Macropoxy 646 @ 5.0 mils (125 microns) dft
- 1 ct. Acrolon Ultra @ 2.0 mils (50 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1kg load	154 mg loss
Adhesion¹	ASTM D4541	1766 psi
Corrosion Weathering¹	ASTM D5894, 33 cycles, 12,531 hours	Rating 10 per ASTM D714 for blistering; Rating 10 per ASTM D610 for rusting
Direct Impact Resistance¹	ASTM D2794	176 in. lb.
Dry Heat Resistance	ASTM D2485	250°F (121°C)
Flexibility	ASTM D522, 180° bend, 1/8" mandrel	Passed
Fresh Water Resistance	ASTM D870, 30 Days	Passed
Moisture Condensation Resistance	ASTM D4585, 100°F (38°C), 4000 hours	No rusting, blistering, or delamination
Pencil Hardness	ASTM D3363	HB
Salt Fog Resistance¹	ASTM B117, 9000 hours	Rating 10 per ASTM D714 for blistering; Rating 10 per ASTM D610 for rusting
Salt Water Resistance	ASTM D870, 30 Days	Passed
Thermal Cycling	ASTM D2246, 10 cycles	Excellent

Footnote:

¹ Primer: Corothane I GalvaPac; Intermediate: Macropoxy 646; Topcoat: Acrolon Ultra
Meets the requirements of SSPC Paint No. 36, Level 3 for white and light colors.



Protective & Marine Coatings

ACROLON™ ULTRA HIGH PERFORMANCE POLYURETHANE

PART A	B65W821	GLOSS EXTRA WHITE TINT BASE
PART A	B65WW825	GLOSS MR WHITE TINT BASE
PART A	B65T824	GLOSS ULTRADEEP TINT BASE
PART A	B65W831	SEMI-GLOSS EXTRA WHITE TINT BASE
PART A	B65T834	SEMI-GLOSS ULTRADEEP TINT BASE
PART B	B65V820	HARDENER

Revised Oct 18, 2016

PRODUCT INFORMATION

5.36

RECOMMENDED SYSTEMS

		Dry Film Thickness / ct.	
		Mils	(Microns)
Steel, Epoxy Primer:			
1 ct.	Macropoxy 646	5.0-10.0	(125-250)
1-2 cts.	Acrolon Ultra	2.0-3.0	(50-75)
Steel, Epoxy Primer:			
1 ct.	Recoatable Epoxy Primer	4.0-6.0	(100-150)
1-2 cts.	Acrolon Ultra	2.0-3.0	(50-75)
Steel, Epoxy Mastic Primer:			
1 ct.	Epoxy Mastic Aluminum II	6.0	(150)
1-2 cts.	Acrolon Ultra	2.0-3.0	(50-75)
Steel, Inorganic Zinc Rich Primer:			
1 ct.	Zinc Clad II Plus	3.0-5.0	(75-125)
1 ct.	Macropoxy 646	5.0-10.0	(125-250)
1 ct.	Acrolon Ultra	2.0-3.0	(50-75)
Steel, Organic Zinc Rich Primer:			
1 ct.	Corothane I GalvaPac Zinc Primer	3.0-4.0	(75-100)
1 ct.	Macropoxy 646	5.0-10.0	(125-250)
1-2 cts.	Acrolon Ultra	2.0-3.0	(50-75)
Aluminum/Galvanizing:			
1 ct.	DTM Wash Primer	0.7-1.3	(17.5-32.5)
1-2 cts.	Acrolon Ultra	2.0-3.0	(50-75)
Concrete/Masonry:			
1 ct.	Kem Cati-Coat HS Epoxy	10.0-20.0	(250-500)
1-2 cts.	Acrolon Ultra	2.0-3.0	(50-75)

The systems listed above are representative of the product's use, other systems may be appropriate.

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: SSPC-SP6/NACE 3, 2 mil (50 micron) profile
 * Primer Required

Surface Preparation Standards

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

TINTING

Tint with Maxitoner Colorants only into Part A. Extra White tints at 100% tint strength. Ultradeep tints at 100% tint strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

APPLICATION CONDITIONS

Temperature: 40°F (4.5°C) minimum, 120°F (49°C) maximum (air, surface, and material)
 At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging: Fill levels will vary slightly by color

Part A: 4 gallon (15.14L) kits
 1 gallon (3.78L)

Part B: 1 gallon (3.78L) units
 1 quart (.95L) units

Weight:
 Gloss White: 10.11 ± 0.2 lb/gal ; 1.21 Kg/L
 Gloss Ultradeep: 9.62 ± 0.2 lb/gal ; 1.15 Kg/L
 Semi-Gloss White: 10.09 ± 0.2 lb/gal ; 1.21 Kg/L
 Mixed, may vary with color

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

ACROLON™ ULTRA HIGH PERFORMANCE POLYURETHANE

PART A	B65W821	GLOSS EXTRA WHITE TINT BASE
PART A	B65WW825	GLOSS MR WHITE TINT BASE
PART A	B65T824	GLOSS ULTRADEEP TINT BASE
PART A	B65W831	SEMI-GLOSS EXTRA WHITE TINT BASE
PART A	B65T834	SEMI-GLOSS ULTRADEEP TINT BASE
PART B	B65V820	HARDENER

Revised Oct 18, 2016

APPLICATION BULLETIN

5.36

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.

Iron & Steel

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6/NACE 3. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Aluminum

Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1. Primer required.

Galvanized Steel

Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1. When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned or before flash rusting occurs. Primer required.

Concrete and Masonry

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, 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.

Follow the standard methods listed below when applicable:

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 No. 310.2R Concrete Surface Preparation.

Surface Preparation Standards

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

APPLICATION CONDITIONS

Temperature:	40°F (4.5°C) minimum, 120°F (49°C) maximum (air, surface, and material) At least 5°F (2.8°C) above dew point
Relative humidity:	85% maximum

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:	R7K225 or R7K111
Clean Up:	Reducer #58

Airless Spray

Pressure.....	2500 - 2800 psi
Hose.....	3/8" ID
Tip.....	.013" - .017"
Filter.....	none
Reduction.....	As needed up to 10% by volume

Conventional Spray

Gun.....	Binks 95
Fluid Nozzle.....	63 B
Atomization Pressure.....	50 - 70 psi
Fluid Pressure.....	20 - 25 psi
Reduction.....	As needed up to 5% by volume

Brush

Brush.....	Natural bristle
Reduction.....	As needed up to 5% by volume

Roller

Cover.....	3/8" woven with solvent resistant core
Reduction.....	as needed up to 5% by volume

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



Protective & Marine Coatings

ACROLON™ ULTRA HIGH PERFORMANCE POLYURETHANE

PART A	B65W821	GLOSS EXTRA WHITE TINT BASE
PART A	B65WW825	GLOSS MR WHITE TINT BASE
PART A	B65T824	GLOSS ULTRADEEP TINT BASE
PART A	B65W831	SEMI-GLOSS EXTRA WHITE TINT BASE
PART A	B65T834	SEMI-GLOSS ULTRADEEP TINT BASE
PART B	B65V820	HARDENER

Revised Oct 18, 2016

APPLICATION BULLETIN

5.36

APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mix contents of each component thoroughly with power agitation. Make certain no pigment remains on the bottom of the can. Then combine 4 parts by volume of Part A with 1 part by volume of Part B. Thoroughly agitate the mixture with power agitation.

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

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	3.5 (87.5)	5.5 (137.5)
Dry mils (microns)	2.0 (50)	3.0 (75)
~Coverage sq ft/gal (m ² /L)	305 (7.5)	460 (11.3)

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 4.5 mils wet (112.5 microns):

	@ 40°F/4.5°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
To touch:	4 hours	2 hours	1 hour
To handle:	12 hours	6 hours	4 hours
To recoat:			
minimum:	12 hours	6 hours	4 hours
maximum:	120 days	120 days	120 days
To cure:	14 days	10 days	7 days
<i>If maximum recoat time is exceeded, abrade surface before recoating.</i>			
<i>Drying time is temperature, humidity, and film thickness dependent.</i>			
Pot Life:	8 hours	4 hours	2 hours
Sweat-in-Time:	None required		

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

CLEAN UP INSTRUCTIONS

Clean spills and splatters immediately with Reducer #58. Clean tools immediately after use with Reducer #58. 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.

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, and adhesion.

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 MEK R6K10.

Mixed coating is sensitive to water. Use water traps in all air lines. Moisture contact can reduce pot life and affect gloss and color.

Acceptable application maximum DFT 4.0 mils / 100 microns (7.0 mils / 175 microns WFT).

Quick-Thane Urethane Accelerator is acceptable for use. See data page 5.97 for details.

E-Z Roll Urethane Defoamer is acceptable for use. See data page 5.99 for details.

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

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.