Protective & Marine Coatings

FLUOROKEM® HS 100

Part A	**B65-1560** *and B65-560*	**Satin** *Satin*
Part A	**B65-1570** *and B65-570*	**Semi-Gloss** *Semi-Gloss*
Part A	**B65-1580** *and B65-580*	**Gloss** *Gloss*
Part B	**B65V1580** **B65V00012**	**Hardener** **Accelerator**

Revised: April 17, 2023

PRODUCT INFORMATION

5.39

PRODUCT DESCRIPTION

FLUOROKEM HS 100 is a premium, ultra-durable ambient cured high solids fluoropolymer urethane finish. It provides unparalleled color and gloss performance.

- Superior exterior durability
- Fast dry
- Less than 100 g/l VOC
- Chemical and abrasion resistant
- Airless, conventional spray, and brush and roll application
- Ambient temperature cure
- Graffiti resistant

PRODUCT CHARACTERISTICS

Finish:	Gloss, Semi-Gloss, Satin
Color:	Wide range of colors available
Volume Solids:	61% ± 2%, mixed, may vary by color
Weight Solids:	71% ± 2%, mixed, may vary by color
Mix Ratio:	4:1 by volume
VOC (unreduced):	<100 g/l ; 0.83 lb/gal, mixed, may vary by color

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**3.0** (75)	**5.0** (125)
Dry mils (microns)	**2.0** (50)	**3.0** (75)
~Coverage sq ft/gal (m^2/L)	**325** (8.0)	**490** (12)
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**978** (24)	

Drying Schedule @ 4.0 mils wet (100 microns):

	@ 30°F/-1°C	@ 40°F/4°C	@ 50°F/10°C *50% RH*	@ 77°F/25°C	@ 120°F/49°C
To touch:	8 hours[2]	8 hours[1]	8 hours	2 hours	1 hour
To handle:	24 hours[2]	24 hours[1]	24 hours	5 hours	2 hours
To recoat:					
minimum:	24 hours[2]	24 hours[1]	24 hours	5 hours	2 hours
maximum:			45 days	45 days	45 days
To cure:			10 days	7 days	5 days
Pot Life:	2 hours[2]	2 hours[1]	2.5 hours	2 hours	<1 hour
Sweat-in-Time:	None required				

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

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

[1]40°F/4°C data above is with 1 oz./gal of B65V00012 accelerator**

[2]30°F/-1°C data above is with 2 oz./gal of B65V00012 accelerator**

**VOC Restricted Areas (<100 g/L): Do not use the accelerator above 75°F (24°C) if reducing with R7K77.

PRODUCT CHARACTERISTICS (CONT'D)

Shelf Life:	24 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	40°F (4.5°C), PMCC or SETA, mixed
Reducer:	
Below 75°F (24°C):	R7K111 (up to 15% by volume)
Between 75°F (24°C) and 90°F (32°C):	R7K77 (up to 5%-10% by volume)
Above 90°F (32°C):	R7K77 (up to 15% by volume)
Clean Up*:	VOC Restricted Areas (≤25 g/L, or ≤3%): use Oxsol 100 or High Solids Compliant Thinner #1 - Fast.

*Other areas (>25 g/L, or >3%): use Oxsol 100, High Solids Compliant Thinner #1 – Fast, or Reducer #15 (R7K15). Choose a solvent that is compliant in your area. Confirm compliance with state and local air quality rules before use.

RECOMMENDED USES

Interior or exterior exposure where extreme weather durability is required.

- Water tanks
- Storage tank exteriors
- Bridges
- Marine
- Municipal building
- Fascias
- Iconic structures
- Stadiums
- Sports complexes
- Museums
- Schools
- High visibility areas
- Logos

PERFORMANCE CHARACTERISTICS

Substrate*: Blasted Steel

Surface Preparation*: SSPC-SP10/NACE 2

System Tested*:

Corothane I GalvaPac 1K Zinc Primer @ 2.5 mils (63 microns) dft
Acrolon 218 HS @ 2.0 mils (50 microns) dft
Fluorokem HS 100 @ 2.0 mils (50 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Adhesion	ASTM D4541	2,655 psi
Corrosion Resistance	ASTM B117	3,000 hours
Direct Impact Resistance	ASTM G14	80 in. lb.
Dry Heat Resistance	ASTM D2485	200°F (93°C)
EMMAQUA	ASTM D4141	Pass
Flexibility	ASTM D522, 180° bend, 1/8" mandrel	Pass
Humidity Resistance	ASTM D4585	3,000 hours
Pencil Hardness	ASTM D3363	F

continued on back

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Revised: April 17, 2023

PRODUCT INFORMATION

5.39

RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
Steel, Atmospheric:			
1 ct.	Corothane I GalvaPac	3.0-4.0	(75-100)
1 ct.	Acrolon 218 HS	3.0-6.0	(75-150)
or	Hi-Solids Polyurethane 250	3.0-5.0	(75-125)
or	Sher-Loxane 800	4.0-6.0	(100-150)
1-2 cts.	FluoroKem HS 100	2.0-3.0	(50-75)
1 ct.	Dura-Plate 235	4.0-8.0	(100-200)
or	Macropoxy 646 Fast Cure	5.0-10.0	(125-250)
or	Epoxy Mastic Aluminum II	4.0-6.0	(100-150)
1 ct.	Acrolon 218 HS	3.0-6.0	(75-150)
or	Hi-Solids Polyurethane 250	3.0-5.0	(75-125)
1-2 cts.	FluoroKem HS 100	2.0-3.0	(50-75)
1 ct.	Macropoxy 646 Fast Cure	5.0-10.0	(125-250)
1-2 cts.	FluoroKem HS 100*	2.0-3.0	(50-75)

*For full coverage and performance, Sherwin-Williams recommends applying 2 coats of FluoroKem HS 100 over Macropoxy 646 Fast Cure primer.

NOTE: AWWA D102 does not recommend a Zinc/Epoxy/Fluoropolymer system, but instead recommends a Zinc/Aliphatic Urethane/Fluoropolymer system for external water tanks.

Concrete/Masonry - Smooth:			
1 ct.	Macropoxy 646 Fast Cure	5.0-10.0	(125-250)
1 ct.	Acrolon 218 HS	3.0-6.0	(75-150)
or	Hi-Solids Polyurethane 250	3.0-5.0	(75-125)
1-2 cts.	FluoroKem HS 100	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.

Minimum recommended surface preparation:

*Iron & Steel: SSPC-SP6/NACE 3

*Concrete & Masonry: SSPC-SP13/NACE 6 or ICRI No. 310.2R, CSP 1-3

*Prime with recommended primers as needed.

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

TINTING

Do not tint. Custom color matches are available through the Rapid Response Program. Contact your Sherwin-Williams representative for additional information.

APPLICATION CONDITIONS

Temperature*:	30°F (-1°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

*reference the Drying Schedule tables on pages 1 and 4

ORDERING INFORMATION

Packaging:

Part A:	1 gallon (3.78L) and 5 gallon (18.9L) containers
Part B:	Quart (0.94L) and 1 gallon (3.78L) containers
Weight (varies by color):	10.3-12.8 ± 0.2 lb/gal ; 1.23-1.53 Kg/L

SAFETY PRECAUTIONS

Refer to the SDS 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.

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Part A	**B65-1580** *and B65-580*	**Gloss** *Gloss*
Part B	**B65V1580** **B65V00012**	**Hardener** **Accelerator**

Revised: April 17, 2023

APPLICATION BULLETIN

5.39

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 (2-3 mils / 50-75 microns). Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

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	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	-

APPLICATION CONDITIONS

Temperature*:	30°F (-1°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

*reference the Drying Schedule tables on pages 1 and 4

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:
Below 75°F (24°C):.....Reducer #111 (R7K111), up to 15% by volume
Between 75°F (24°C) and 90°F (32°C):.....R7K77, up to 5%-10% by volume
Above 90°F (32°C): .....R7K77, up to 15% by volume

Clean Up*: .....VOC Restricted Areas (≤25 g/L, or ≤3%): use Oxsol 100 or High Solids Compliant Thinner #1 - Fast.

*Other areas (>25 g/L, or >3%): use Oxsol 100, High Solids Compliant Thinner #1 – Fast, or Reducer #15 (R7K15). Choose a solvent that is compliant in your area. Confirm compliance with state and local air quality rules before use.

Airless Spray
Pump.....45:1 at 1gpm or greater
Pressure.....1500-2500 psi
Hose.....1/4" ID
Tip .....013" - .017"
Filter.....60 mesh
Reduction.....see Reducer options above

Brush
Brush.....Natural Bristle
Reduction.....see Reducer options above

Roller
Cover..... 3/8" woven with solvent resistant core
Reduction.....see Reducer options above

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

continued on back

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Revised: April 17, 2023

APPLICATION BULLETIN

5.39

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 4 parts by volume of Part A with 1 part by volume of Part B. Thoroughly agitate the mixture with slow speed power agitation for 2-3 minutes.

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)	**3.0** (75)	**5.0** (125)
Dry mils (microns)	**2.0** (50)	**3.0** (75)
~Coverage sq ft/gal (m^2/L)	**325** (8.0)	**490** (12)
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**978** (24)	

Drying Schedule @ 4.0 mils wet (100 microns):

	@ 30°F/-1°C	@ 40°F/4°C	@ 50°F/10°C *50% RH*	@ 77°F/25°C	@ 120°F/49°C
To touch:	8 hours²	8 hours¹	8 hours	2 hours	1 hour
To handle:	24 hours²	24 hours¹	24 hours	5 hours	2 hours
To recoat:					
minimum:	24 hours²	24 hours¹	24 hours	5 hours	2 hours
maximum:			45 days	45 days	45 days
To cure:			10 days	7 days	5 days

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

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

Pot Life:	2 hours²	2 hours¹	2.5 hours	2 hours	<1 hour
Sweat-in-Time:	None required				

¹40°F/4°C data above is with 1 oz./gal of B65V00012 accelerator**

²30°F/-1°C data above is with 2 oz./gal of B65V00012 accelerator**

**VOC restricted areas (<100 g/L): Do not use the accelerator above 75°F (24°C) if reducing with R7K77.

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), R7K111, or Oxsol 100. Clean tools immediately after use with Reducer #15 (R7K15), Reducer #111 (R7K111), or Oxsol 100. Follow manufacturer's safety recommendations when using solvent.

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PERFORMANCE TIPS

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, over thinning, climate 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 down time with Reducer #15 (R7K15), Reducer #111 (R7K111), or Oxsol 100.

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

Always test adhesion by applying a test patch of 2-3 square feet. Allow to dry one week before checking adhesion.

This product is moisture sensitive. Avoid moisture contamination.

Temperatures above 77°F (25°C) will shorten pot life.

NOTE: AWWA D102 does not recommend a Zinc/Epoxy/Fluoropolymer system, but instead recommends a Zinc/Aliphatic Urethane/Fluoropolymer system for external water tanks.

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

SAFETY PRECAUTIONS

Refer to the SDS sheet before use.

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WARRANTY

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