Protective & Marine Coatings

KEM CATI-COAT® HS
EPOXY FILLER/SEALER

PART A	B42W400	OFF WHITE
PART B	B42V401	HARDENER

Revised: May 9, 2022

PRODUCT INFORMATION

4.21

PRODUCT DESCRIPTION

KEM CATI-COAT HS EPOXY FILLER/SEALER is a high performance, interior/exterior, epoxy block filler. Designed for tenacious adhesion to masonry substrates while filling voids and crevices to smooth the surface. Excellent resistance to moisture, humidity, impact, and abrasion.

- Chemical resistant
- Long pot life
- Resurfaces spalled and deteriorated concrete

PRODUCT CHARACTERISTICS

Finish: Flat

Color: Off White

Volume Solids: 72% ± 2%, mixed

Weight Solids: 84% ± 2%, mixed

VOC (EPA Method 24): <250 g/L; 2.08 lb/gal, mixed

Mix Ratio: 2 components, 1:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**14.0** (350)	**28.0** (700)
Dry mils (microns)	**10.0** (250)	**20.0** (500)
~Coverage sq ft/gal (m^2/L)	**60** (1.48)	**115** (2.8)
Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft	**1152** (28.2)	

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

Drying Schedule @ 15.0 mils wet (375 microns):

	@ 55°F/13°C	@ 77°F/25°C *50% RH*	@ 100°F/38°C
To touch:	3 hours	1-3 hours	30 minutes
To recoat:			
minimum:	24 hours	18 hours	6 hours
maximum:	30 days	30 days	30 days
To cure:	4 days	1 day	12 hours
Pot Life:	12 hours	8 hours	2 hours
Sweat-in-time:	60 minutes	30 minutes	15 minutes

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

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

Shelf Life: 12 months, unopened. Store indoors at 40°F (4.5°C) to 100°F (38°C).

Flash Point: 103°F (39°C), PMCC, mixed

Reducer/Clean Up[1]: VOC Restricted Areas (<250 g/L): use Reducer R7K111 or Oxsol 100

[1]Other areas (<340 g/L): use R7K111, Oxsol 100, or Reducer #145 (R7K145) up to 12.5%. Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.

RECOMMENDED USES

Acceptable for use in immersion service with recommended topcoat.

For use over prepared concrete and masonry surfaces, in areas such as:

- Secondary containment
- Tunnels
- Prisons
- Nuclear Power Plants
- Nuclear fabrication shops
- Chemical plants
- Schools
- Equipment foundations
- DOE Nuclear Fuel Facilities
- DOE Nuclear Weapons Facilities
- Suitable for use in USDA inspected facilities
- 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.

Acceptable for use in Canadian Food Processing facilities (Confirm acceptance of specific part numbers/rexes with your SW Sales Representative).

PERFORMANCE CHARACTERISTICS

Substrate*: Concrete

Surface Preparation*: Clean, dry, sound

System Tested*:

1 ct. Kem Cati-Coat HS @ 15.0 mils (375 µ) dft

*unless otherwise noted below

Test Name	Test Method	Results
Adhesion	ASTM D3359, Method B	5B, 100% retention
Nuclear Decontamination	ASTM D4256/ ANSI N 5.12	98% Water Wash; 96% Overall
Direct Impact Resistance	TTC-555B, 4.4.4	Minimum resistance at 6 in. lbs.
Dry Heat Resistance	ASTM D2485	250°F (121°C), 275°F (135°C) intermittent
Flame Spread Rating	ASTM E-84 Tunnel Test	Class A on noncombustible surfaces
Flexibility (cold rolled steel)	TTC-555B, 4.4.3, 1" mandrel	Passes
Freeze/Thaw	ASTM D2246, 20 cycles	Passes
Humidity Resistance	ASTM D2247, 100°F (38°C), 1000 hours	Passes, no blistering or loss of adhesion
Radiation Tolerance	ASTM D4082 / ANSI 5.12	Pass at 40 mils (1000 microns)
Wind Driven Rain	TTC-555B, 4.4.7	Passes

Epoxy coatings may darken or yellow following application and curing.

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RECOMMENDED SYSTEMS

	Dry Film Thickness / ct. Mils	(Microns)
Concrete/Masonry:		
1-2 cts. Kem Cati-Coat HS Epoxy Filler/Sealer	10.0-20.0	(250-500)

as required to fill voids and provide a continuous substrate.
1-2 cts. Recommended topcoat

Recommended Topcoats:
Acrolon 218 HS Polyurethane
Pro Industrial DTM Acrylic Coating
Epo-Plex Multi-Mil Epoxy
Hi-Solids Polyurethane
Macropoxy HS Epoxy
Sher-Cryl HPA
Sherthane 2K Urethane
Tile-Clad HS Epoxy
Waterbased Catalyzed Epoxy
Waterbased Tile-Clad Epoxy

Recommended topcoats for secondary containment:
Cor-Cote E.N. 7000
Phenicon HS
Shelcote II

Recommended topcoats for immersion service:
(water and wastewater only)
Dura-Plate 235
Sher-Glass FF
Tank Clad HS
TarGuard Coal Tar Epoxy

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:
Concrete/Masonry: SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 3-5

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	-

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature:	45°F (7°C) minimum, 100°F (38°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:
Part A: 5 gallon (18.9L) containers
Part B: 5 gallon (18.9L) containers

Weight: 13.4 ± 0.2 lb/gal ; 1.6 Kg/L, mixed

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.

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.

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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.

Masonry and Block
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.

Concrete and Masonry
For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 3-5. 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 Kem Cati-Coat.

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.

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 3-5.

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:	45°F (7°C) minimum, 100°F (38°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/Clean Up[1] .....VOC Restricted Areas (<250 g/L): use Reducer R7K111 or Oxsol 100

[1]Other areas (<340 g/L): use R7K111, Oxsol 100, or Reducer #145 (R7K145) up to 12.5%. Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.

Airless Spray
Pump.....30:1
Pressure.....3000-3400 psi
Hose.....3/8" ID
Tip .....019" - .023"
Reduction.....As needed up to 12.5% by volume

Brush
Brush.....Natural Bristle
Reduction.....As needed up to 12.5% by volume

Roller
Cover .....3/8-1/2" woven with solvent resistant core
Reduction.....As needed up to 12.5% by volume

Squeegee
Reduction.....As needed up to 12.5% by volume

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

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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mixing Instructions: Mix contents of each component thoroughly with low speed power agitation. Make certain no pigment remains on bottom of can. Then combine 1 part by volume of part A with 1 part by volume of Part B. Thoroughly agitate the mixture. Allow material to sweat-in as indicated. Re-stir before using.

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

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**14.0** (350)	**28.0** (700)
Dry mils (microns)	**10.0** (250)	**20.0** (500)
~Coverage sq ft/gal (m^2/L)	**60** (1.48)	**115** (2.8)
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NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

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maximum:	30 days	30 days	30 days
To cure:	4 days	1 day	12 hours
Pot Life:	12 hours	8 hours	2 hours
Sweat-in-time:	60 minutes	30 minutes	15 minutes

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

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

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 #145, R7K145. Clean tools immediately after use with Reducer #145, R7K145. Follow manufacturer's safety recommendations when using any 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, overthinning, climatic conditions, and excessive film build.

Excessive reduction of material can affect film build, appearance, and adhesion.

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

Do not apply the material beyond recommended pot life.

Do not mix previously catalyzed material with new.

Depending on condition of substrate, more than one coat may be required.

Do not apply under 50 sq ft/gal or mudcracking may occur.

Not recommended for previously painted surfaces.

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

For best results, apply by airless spray and immediately back roll.

Do not apply over moisture, or below 45°F (7°C).

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

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