



Protective & Marine Coatings

HEAT-FLEX® HI-TEMP 1200 COATING UNDER INSULATION

B59A225

B59A226

B59V405*

GRAY

DARK GRAY

OPTIONAL CURING ADDITIVE

*SEE PERFORMANCE TIPS ON PAGE 4

Revised: November 17, 2023

PRODUCT INFORMATION

7.10

PRODUCT DESCRIPTION

HEAT-FLEX® HI-TEMP 1200 is the next generation single-component inert multipolymeric matrix coating that outperforms alternatives in combating corrosion under insulation (CUI) and in high heat applications.

- Resists corrosion under insulation
- Resists stress corrosion cracking
- Application surface temperatures from ambient to 500°F (260°C)
- Operating surface temperatures from -321°F (-196°C) to 1200°F (649°C)
- Self priming, single component
- No maximum recoat time
- Confirms to NACE SP0198:2017 CUI System CS-6 and SS-5

PRODUCT CHARACTERISTICS

Finish:	Low Sheen
Color:	Gray and Dark Gray
Volume Solids:	57% ± 2% (calculated)
Weight Solids:	81% ± 2%
VOC (EPA Method 24):	<375 g/L; 3.2 lb/gal

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	8.0 (200)	10.0 (250)
Dry mils (microns)	5.0 (125)	6.0 (150)
~Coverage sq ft/gal (m²/L)	152 (3.7)	182 (4.5)
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	912 (22.3)	

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

Drying Schedule @ 8.0 mils wet (200 microns):

	@ 50°F/10°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
To touch:	30 minutes	20 minutes	10 minutes
To tack free:	90 minutes	60 minutes	30 minutes
To recoat:	3 hours	2 hours	1 hour
To handle:	24 hours*	24 hours	24 hours

*Higher film build effects cure speed and increases ship time at lower temperatures.

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

Shelf Life:	12 months, unopened at 77°F (25°C) Store indoors at 40°F (4.5°C) to 100°F (31°C)
Flash Point:	87°F (31°C) SETA
Reducer:	Not normally recommended*
Clean Up:	Xylene, R2K4

*Please see Performance Tips section

RECOMMENDED USES

- Direct to steel or stainless steel
- As a coating under insulation
- Cyclic service up to 1200°F (649°C)
- For use over properly prepared steel surfaces, either insulated or uninsulated:
 - Power Plants
 - Refineries
 - Chemical Facilities
 - Offshore/Marine
 - Pulp & Paper



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RECOMMENDED SYSTEMS

Dry Film Thickness / ct.
Mils (Microns)

Carbon Steel or Stainless Steel - Atmospheric:

Ambient or Hot Steel up to 500°F/260°C* :

2 cts. Heat-Flex Hi-Temp 1200	5.0-6.0	(125-150)
or		
1 ct. Heat-Flex Hi-Temp 1200	5.0-6.0	(125-150)
1 ct. Heat-Flex Hi-Temp 1000HA***	2.0-2.5	(50-62)

Carbon Steel or Stainless Steel - Insulated Service:

Ambient or Hot Steel up to 500°F/260°C* :

2 cts. Heat-Flex Hi-Temp 1200	5.0-6.0	(125-150)
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Carbon Steel or Stainless Steel - Atmospheric:

Ambient up to 120°F/49°C* :

2 cts. Heat-Flex Hi-Temp 1200	5.0-6.0	(125-150)
or		
1 ct. Heat-Flex Hi-Temp 1200	5.0-6.0	(125-150)
1 ct. Heat-Flex Hi-Temp 500***	2.0-2.5	(50-62)
or		
1 ct. Heat-Flex Hi-Temp 1200	5.0-6.0	(125-150)
1 ct. Heat-Flex Hi-Temp 1000***	1.5-2.0	(37-50)

*During application to hot steel, apply coating in several thin passes to allow solvent to escape and to prevent blistering. Allow at least 15-20 minutes between each coat.

***Apply mist coat and allow 10 minute flash off and follow with a full coat.

Do not exceed maximum recommended DFT. May affect adhesion.

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: Preferred:	SSPC-SP6, 1.5-2.5 mil (40-63 micron) profile
Acceptable:	SSPC-SP11, 1.0-2.5 mil (25-63 micron) profile Or SSPC-SP12/NACE No. 5 - WJ-2/L with existing surface profile
Stainless Steel*:	SSPC-SP1, Do not use chlorinated solvents for cleaning

*For optimum performance, abrasive blast per SSPC-SP16 to achieve a profile of 1-2 mils (25-50 microns) using a chloride-free, non-metallic abrasive

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

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature:	50°F (10°C) minimum, 500°F (260°C) maximum
surface	50°F (10°C) minimum, 120°F (49°C) maximum
air 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:	1 gallon (3.78L) in a gallon (3.78L) container and 3 gallons (11.34L) in a 5 gallon (18.9L) container.
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Weight:	16.1 ± 0.3 lb/gal ; 1.93 Kg/L
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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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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.

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. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (1.5-2.5 mils / 40-63 microns maximum). If SSPC-SP6/NACE 3 is not possible, Power Tool Cleaning to Bare Metal per SSPC-SP11 is also acceptable (1.0-2.5 mil / 25-63 micron profile maximum). Hand Tool Cleaning per SSPC SP 2 or Power Tool Cleaning per SSPC SP 3 are acceptable* preparation methods when SSPC SP 6 or SSPC SP 11 are not possible. SSPC-SP12 NACE No. 5 can also be utilized, though not the preferred method. All surfaces to be coated shall be cleaned in accordance with WJ-2/L standards. Pre-existing profile should be approximately 1.5 mils (37 microns). Remove all weld spatter and round all sharp edges. Coat any bare steel the same day as it is cleaned or before flash rusting occurs. On stainless steel, clean per SSPC-SP1. For optimum performance, abrasive blast per SSPC-SP16 to achieve a profile of 1-2 mils (25-50 microns) using a chloride-free, non-metallic abrasive Aluminum Oxide grit is also acceptable for use. Do not use chlorinated solvents for cleaning stainless steel. Product performance is relative to the surface preparation achieved.

*Where SSPC SP 2 or SP 3 are used the Dry Temperature Resistance is recommended to a maximum 1000°F, continuous and peak.

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:	
surface	50°F (10°C) minimum, 500°F (260°C) maximum
air and material	50°F (10°C) minimum, 120°F (49°C) maximum
	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.

ReductionNot recommended*

Clean UpXylene, R2K4

Airless Spray

Unit.....	30:1 Pump
Pressure.....	2700 - 3000 psi
Hose.....	3/8" ID
Tip017-.019
Filter	60 mesh
Reduction.....	Not recommended

Conventional Spray

Gun	Graco 700N
Fluid Tip045" - .055"
Air Nozzle.....	20 cfm
Atomization Pressure.....	50 psi
Fluid Pressure.....	20 - 30 psi
Reduction.....	Not recommended

Brush

Brush.....	China bristle
Reduction.....	Not recommended

Roller

Cover	1/2" woven with solvent resistant core,
Reduction.....	Not recommended

*Please see Performance Tips section

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 paint thoroughly with low speed power agitation before use. Obtain a uniform consistency. Additional mixing during application may be necessary due to heavy consistency. Do not incorporate air.

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	8.0 (200)	10.0 (250)
Dry mils (microns)	5.0 (125)	6.0 (150)
~Coverage sq ft/gal (m ² /L)	152 (3.7)	182 (4.5)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	912 (22.3)	

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

Drying Schedule @ 8.0 mils wet (200 microns):

	@ 50°F/10°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
To touch:	30 minutes	20 minutes	10 minutes
To tack free:	90 minutes	60 minutes	30 minutes
To recoat:	3 hours	2 hours	1 hour
To handle:	24 hours*	24 hours	24 hours

*Higher film build effects cure speed and increases ship time at lower temperatures.

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 Xylene, R2K4. Clean tools immediately after use with mineral spirits. 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.

No reduction of material is recommended as it can affect film build, appearance, and adhesion.

***If reduction is required for application to hot steel, use MAK, R6K30 up to a maximum of 5% by volume.**

During application to hot steel, apply coating in several thin passes to allow solvent to escape and to prevent blistering. Allow at least 15-20 minutes between each coat. If blistering does occur, brush out immediately with a china bristle brush.

If an adhesion test is required for a project, carry this out by applying a test patch of 2-3 square feet. Allow one week to dry before checking adhesion using ASTM D6677 or similar standard.

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

Minor color change may be exhibited in exposed service, but will not affect performance.

Topcoating: If applying a topcoat, apply a mist coat of the topcoat. Allow 10 minutes flash off and follow with a full coat.

An optional curing additive (B59V405) may be added up to 2 oz/gal to increase film hardness development. Once accelerator is added, pot life of the mixed material is 24 hours.

Overspray dries to a removable dust at heights ≥ 9 feet at 77°F (25°C) and 50% relative humidity. Results will vary based on environmental conditions.

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

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