

HEAT-FLEX® CUI-MITIGATION COATINGS

PRODUCT SYSTEMS GUIDE



The background of the top section is a photograph of an industrial facility, possibly a refinery or chemical plant. It features large cylindrical storage tanks, complex piping, and structural steel frameworks. A prominent vertical pipe in the foreground shows signs of corrosion and peeling material. A semi-transparent grid pattern is overlaid on the entire image. The title text is centered over this background.

HEAT-FLEX[®] CUI-MITIGATION COATINGS

DESIGNED TO WITHSTAND HARSH CONDITIONS BEFORE AND DURING SERVICE

On average, 60 percent of all insulation in service for more than 10 years contains corrosion-inducing moisture, which results in corrosion under insulation (CUI). In fact, studies show that traditional protective coatings in CUI service last only five to 13 years.

Traditional CUI coatings fail prematurely under insulation, as they have limitations handling the service and pre-service environments. In the service environment, water, alkali, chlorides and elevated temperatures lead to highly corrosive environments, while improper coating thickness may lead to insufficient barrier protection or cracking. In the pre-service environment, shipping, handling, construction and exposure to highly corrosive environments can prematurely deteriorate a coating.

With that in mind, Sherwin-Williams Protective & Marine developed a new line of Heat-Flex CUI-mitigation coatings to best mitigate the dangerous condition of CUI.

This next-generation CUI portfolio is comprised of four products, all of which passed extensive lab testing, showing good to excellent performance in a variety of tests.



INTRODUCING A COMPLETE CUI-MITIGATION PRODUCT RANGE THAT CAN EXTEND COATINGS LIFE

MIO-Enhanced

- Heat-Flex 650
- Heat-Flex 750
- Heat-Flex 1200 Plus

Solvent Free Advanced CUI Epoxy

- Heat-Flex ACE



NATURES DEFENSE AGAINST CUI

MIO-Enhanced Coatings

To better meet the needs of current CUI-mitigation specifications, we enhanced three formulations by adding micaceous iron oxide (MIO) reinforcements. Each coating features a minimum concentration of 25 percent MIO pigment by weight in the dried coating film, helping to extend the life of the coatings and reducing risk by addressing typical CUI failure mechanisms experienced while in service and during shipping and construction.

MIO HELPS ADDRESS CUI FAILURE ISSUES

- Long-term corrosion protection
- Mechanical damage resistance
- Heat and UV erosion protection
- Application and user friendliness



HEAT-FLEX 650®/EPO-PHEN™ FF HS

MIO-Enhanced Epoxy Novolac Phenolic

- Next-generation Epo-Phen FF HS
- Suitable for CUI temperatures ranging from -196°C (321°F) to 205°C (401°F)
- Improved crack resistance
- Excellent UV erosion resistance
- High solids
- Low VOCs

HEAT-FLEX 750

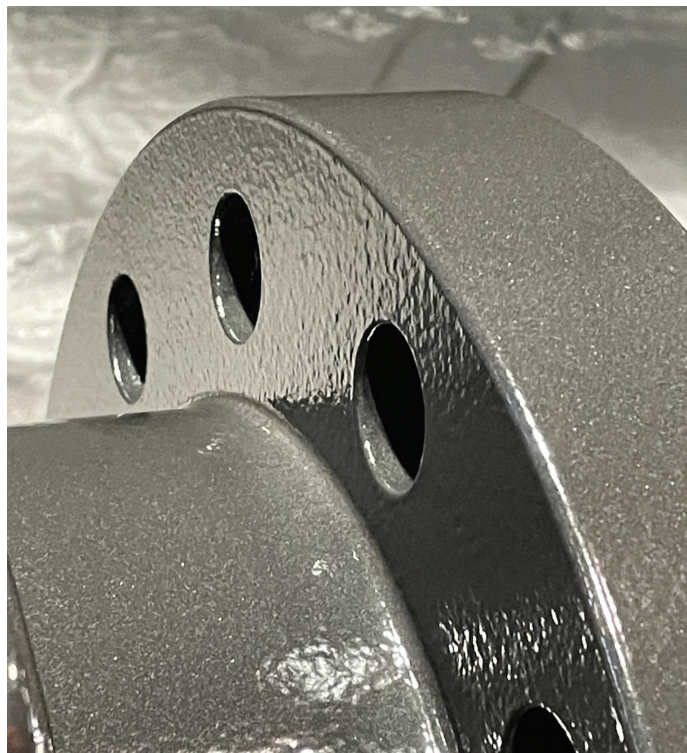
MIO-Enhanced Alkylated Amide Epoxy

- Suitable for CUI temperatures ranging from insulated 205°C (401°F) to uninsulated 232°C (450°F)
- Superior corrosion protection in CX environments
- Excellent UV erosion resistance
- Unrivalled crack resistance at elevated and cryogenic temperatures
- High solids
- Low VOCs

HEAT-FLEX 1200 PLUS

MIO-Enhanced Multi-Polymeric Matrix Coating

- Suitable for CUI insulated and uninsulated up to 650°C (1200°F)
- Superior corrosion protection in CX environments without heat or zinc
- Excellent hardness vs. inorganic copolymers
- Improved mechanical resistance
- Unrivalled crack resistance
- Short recoat window
- Low VOCs



NEXT-GENERATION SOLVENT-FREE EPOXY SOLUTION FOR CUI

Our revolutionary Heat-Flex ACE coating was developed with a functional chemical enhancement, allowing it to have excellent heat resistance, excellent barrier properties and excellent chemical resistance without the need for platy barrier pigmentation.

HEAT-FLEX ACE

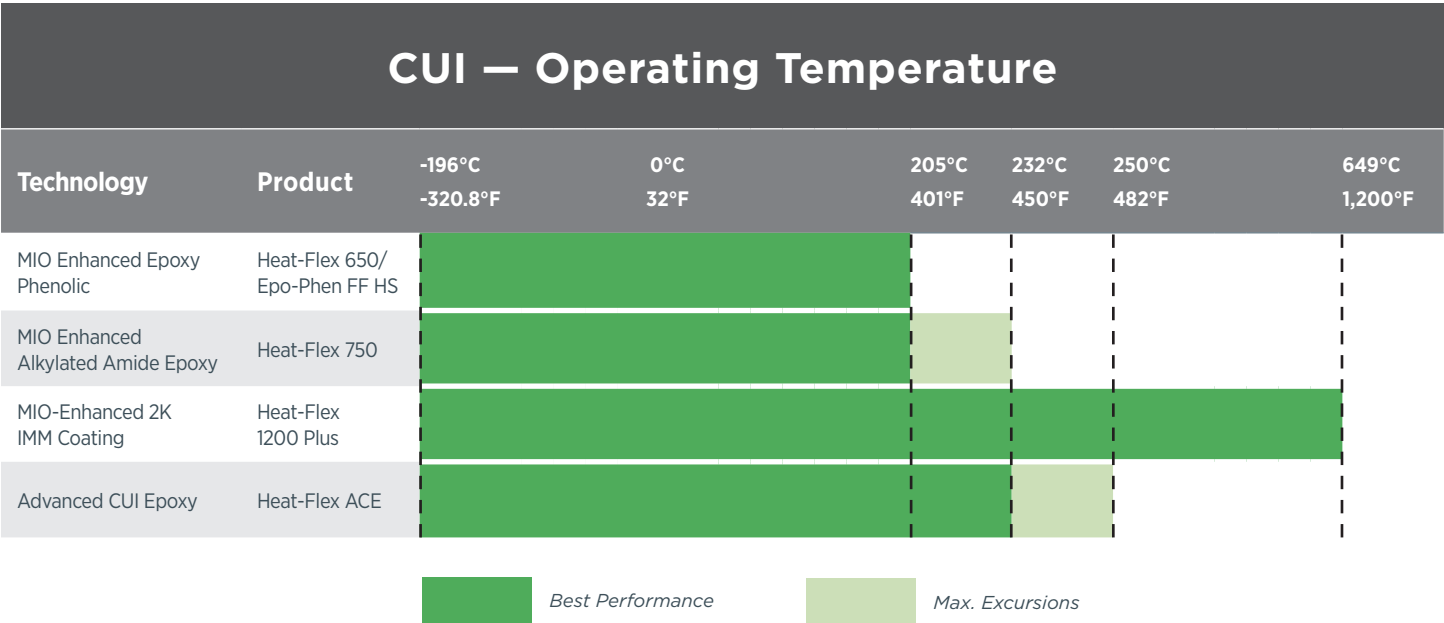
Advanced CUI Epoxy (ACE)

Superior Product Performance

- 100% solids CUI epoxy novolac
- For CUI service up to 232°C (450°F) with max. excursions to 250°C (480°F)
- Excellent UV erosion protection
- Excellent corrosion protection in CX environments
- Superior resistance to CUI chemical environments

Application & User Friendliness

- One- or two-coat application
- Wide DFT range from 12 to 20 mils single coat
- Film forming at low DFT
- Compatible with holiday inspection methods
- Reduce carbon footprint, solvent free





COMPREHENSIVE COVERAGE WHEN AND WHERE YOU NEED IT

Sherwin-Williams delivers materials when and where you need them with same- or next-day delivery for in-stock products from over 5,000 company-owned distribution points. That way you can continue coating cars, while reducing your in-house material inventory and its associated costs.



TECHNICAL SERVICE FOR OPTIMAL APPLICATIONS

Our technical service team brings extensive technology and product knowledge, as well as manufacturer equipment training, to ensure proficiency throughout the entire coatings process.

FOR MORE INFORMATION

Contact your local Sherwin-Williams representative or send us a message at swprotective@sherwin.com.

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At Sherwin-Williams Protective & Marine, our commitment to be the customer's trusted resource extends across industries — and across borders.

With our rapidly growing global footprint, we're always focused on the most important thing: our customers. That means our world-class segment expertise and unmatched technical, specification and commercial service — as well as a targeted, industry-leading solutions portfolio — are where our customers need us, no matter the geography.

We follow customers where their worldwide operations or projects take them and address critical regional and local application needs with our Global Core Portfolio. These high-performance coatings can be written into specification or maintenance programs throughout the world without concern of formulation quality or consistency.

Whether you're a global specifier or an asset owner anywhere in the world, count on Sherwin-Williams Protective & Marine to provide you with consistent performance and quality across your project's global scope. Contact us to get the conversation started.

THE SHERWIN-WILLIAMS DIFFERENCE

Sherwin-Williams Protective & Marine delivers world-class industry subject matter expertise, unparalleled technical and specification service, and unmatched regional commercial team support to our customers around the globe. Our broad portfolio of high-performance coatings and systems that excel at combating corrosion helps customers achieve smarter, time-tested asset protection. We serve a wide array of markets across our rapidly growing international distribution footprint, including Energy, Water & Wastewater, Bridge & Highway, Steel Fabrication, Flooring, Manufacturing & Processing, Fire Protection, Marine, Rail and Power.