

# **FIRETEX® M89/02 SYNTACTIC EPOXY INSULANT**

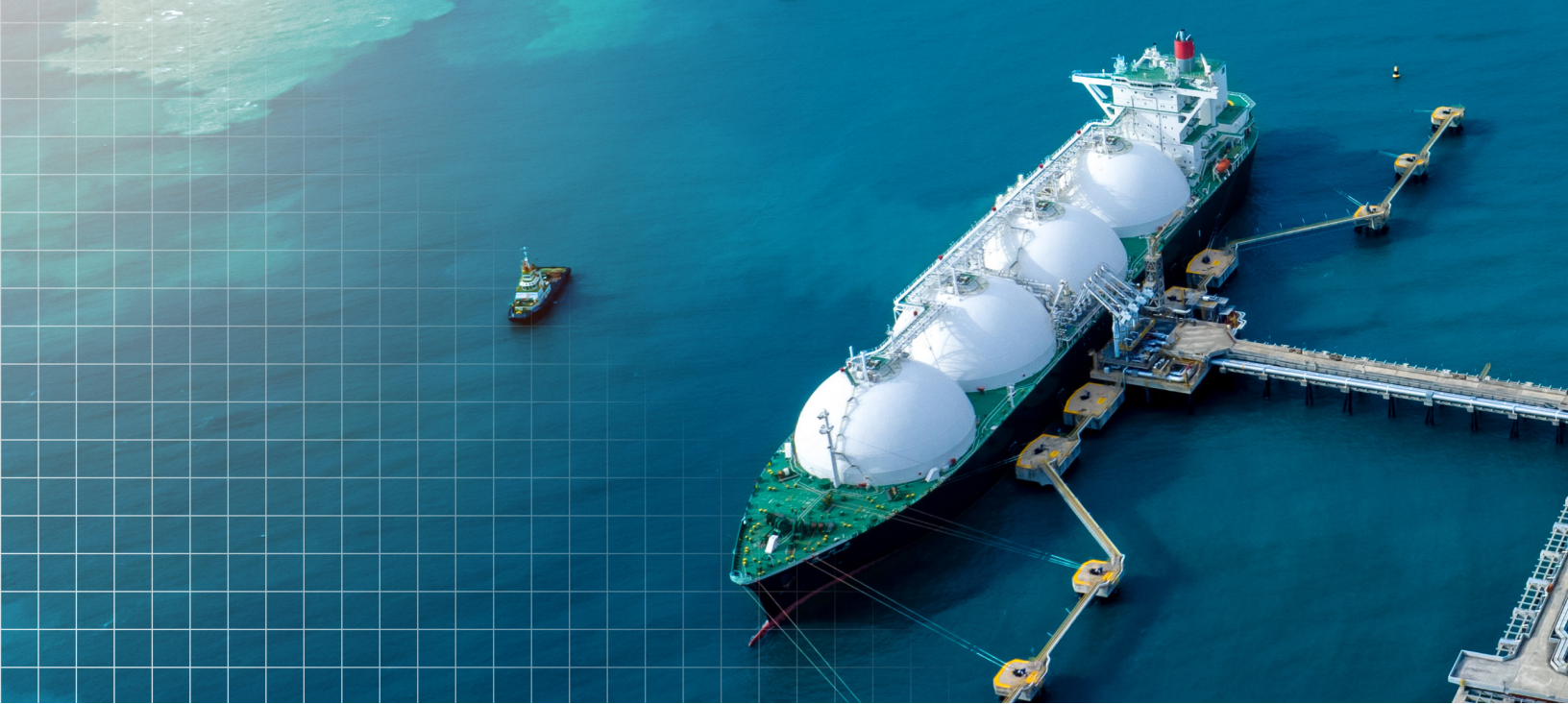
PROTECTIVE THERMAL INSULATION BARRIER



**FROM SPEC TO PROTECT**

3-19-24\_acc  
[Accessibility Statement](#)

[protective.sherwin.com](https://protective.sherwin.com)  
[swprotective@sherwin.com](mailto:swprotective@sherwin.com)



## FIRETEX<sup>®</sup> M89/02 SYNTACTIC EPOXY INSULANT

### PROTECTIVE THERMAL INSULATION BARRIER

Effectively mitigating fire risks often becomes a challenge, given that select critical equipment within refineries and chemical processing plants operate at elevated temperatures, resulting in heat transfer onto skirts, saddles, and legs. When heat exposure is combined with moisture and a corrosive atmosphere, degradation of select industry passive fire protection (PFP) materials often occurs, along with corrosion under fireproofing (CUF). Equipment and structural steel members must be suitably protected against adverse impacts from fire, corrosion, and chemical attacks.





Within liquefied natural gas (LNG) facilities, there is also the challenge of mitigating potential cryogenic releases, either in the form of a cryogenic spill or cryogenic jet release. Carbon steel, when subjected to cryogenic exposure, may produce cold-induced brittle fracture, or embrittlement. As the LNG vaporizes, there is also risk of explosion and fire. To appropriately mitigate catastrophic structural failure, careful consideration must be given to several key aspects including, but not limited to, the type of cryogenic release, time duration of the release, critical low limiting temperature for the steel alloy used, ambient temperature range for the geographical location, and fire protection requirements.

Within the Sherwin-Williams FIRETEX line of high-performance coatings used to mitigate fire and cryogenic spill risks, FIRETEX M89/O2 Syntactic Epoxy Insulant is used as an individual coating solution, or in unison within a FIRETEX M90 series fireproofing system where fire risks are present. FIRETEX M89/O2 Syntactic Epoxy Insulant is a durable, lightweight, corrosion resistant, 100% solids two-component epoxy coating, designed to create a protective thermal insulation barrier on steel members and equipment. FIRETEX M89/O2 allows FIRETEX M90 Series intumescent fireproofing systems to be applied when the continuous operating temperature of the steel substrate ranges between the dry heat resistance temperature of the intumescent coating and 302°F (150°C). It has also been tested in accordance with ISO 20088 for its capability to provide protection to steelwork against the effects of cryogenic release.





## FEATURES

- Plural component PFP spray and hand trowel application
- Suitable for onsite and offsite application
- Ultra-high wet film build
- Lightweight (density 0.46g/cm<sup>3</sup>)
- Extremely thermal efficient (thermal conductivity [K Value] 0.088 W/mk at 68°F (20°C))
- Tested to NORSOK M501, Rev 6, System 5A
- In service temperature range from -103°F (-75°C) to 302°F (150°C), with intermittent spikes to 365°F (185°C)
- Tested to NFPA 58 Hose Stream testing as a duplex system
- Tested to ISO 20088 Cryogenic Exposure Testing
- 100% volume solids
- Convenient kit sizes available

## BENEFITS

- Expedited application for all project sizes
- Can be effectively applied in operating plants or in shops
- Typically applied in a single coat
- Ultra-lightweight, saving on transportation, handling and construction requirements.
- Best-in-class thermal insulation properties, requiring lower dry film thicknesses (DFT)
- Durable and corrosion-resistant in the harshest environments.
- Suitable for a wide range of in-service temperatures, allowing the use of anticorrosive intumescent coating systems where other PFP technologies would likely degrade or allow CUF.
- Exhibits durability in a fire when applied within a FIRETEX M90 series fireproofing system, maintaining a low steel core temperature
- Effectively maintains steel integrity and prevents embrittlement
- Extremely low VOC





**FIRETEX® M89/O2 is suitable to use when protective thermal insulation is required on steel substrates within refineries, chemical process plants, LNG facilities and terminals. Typical steel structures include:**

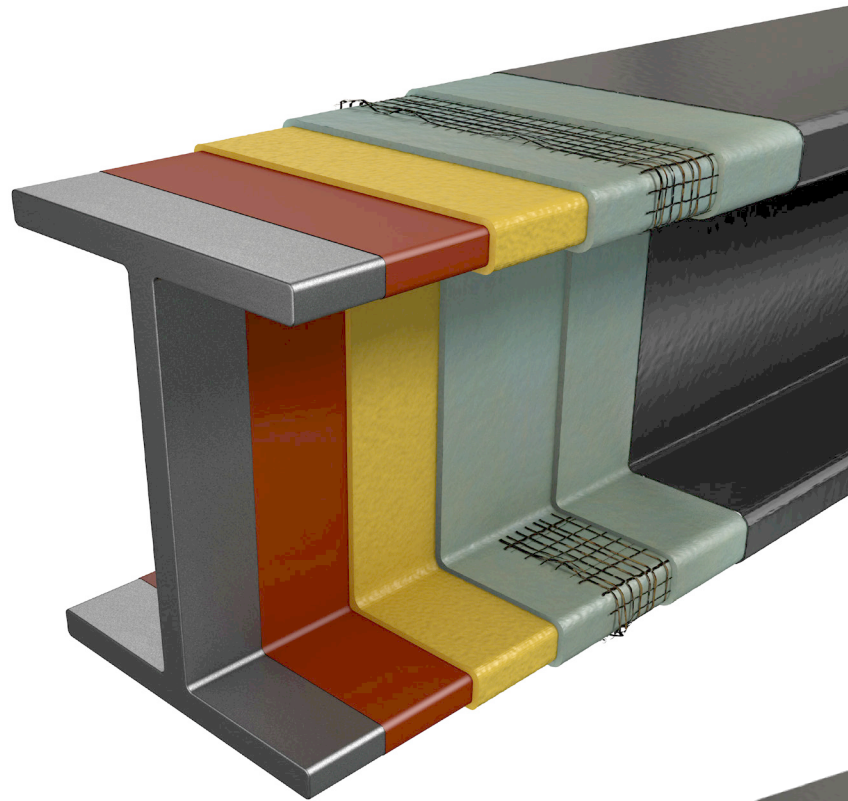
- Columns
- Beams
- Steel troughs
- Vessel skirts
- Vessels
- Tanks

**FIRETEX M89/O2 is used as an effective means to insulate steel structures to:**

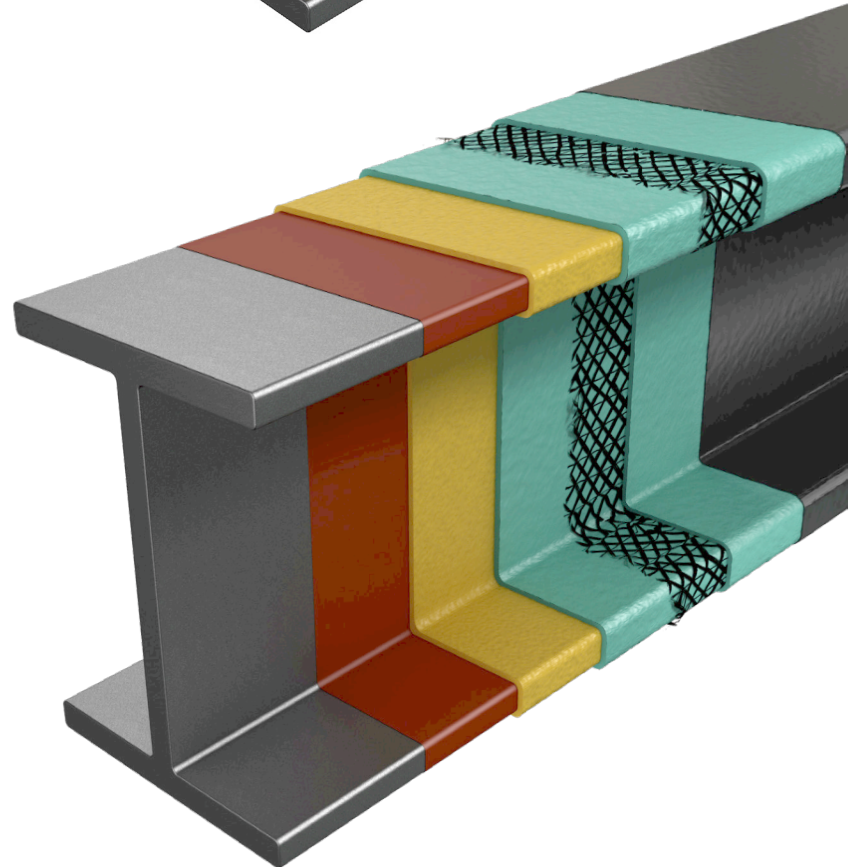
- Allow equipment support structures that operate at elevated temperatures to be fireproofed with an anticorrosive intumescent coating system.
- Prevent thermal shock damage during an accidental cryogenic release.
- Thermally insulating equipment to prevent Corrosion Under Insulation (CUI).
- Provide a thermal barrier, blocking radiant heat exposure to the outer surface of an intumescent coating system.
- Prevent the degradation of an intumescent coating system when used as a finish coat in localized areas subject to steam exposure.
- Fill voids, inhibiting moisture penetration and development of corrosion.

# FIRETEX® M89/02 SYNTACTIC EPOXY INSULANT

- Topcoat (optional): full range available from Sherwin-Williams
- Thermal insulator (if specified) **FIRETEX M89/02**
- ▣ Scrim cloth (per certification): **FIRETEX® H240 mesh** (limited use requirement for up to four hours)
- Primer: full range available from Sherwin-Williams
- Carbon steel: **Blast clean to SSPC-SP 10**
- Intumescent: **FIRETEX M90/03**



- Topcoat (optional): full range available from Sherwin-Williams
- Thermal insulator (if specified) **FIRETEX M89/02**
- ▣ Scrim cloth: **FIRETEX® J220 mesh**
- Primer: full range available from Sherwin-Williams
- Carbon steel: **Blast clean to SSPC-SP 10**
- Intumescent: **FIRETEX M90/02** range (up to 4-hour fire rating)



# FIRETEX<sup>®</sup> M89/02 SYNTACTIC EPOXY INSULANT

PROTECTIVE THERMAL INSULATION BARRIER

## 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.



Unparalleled  
distribution network



Global  
industry expertise



Most extensive sales  
organization coverage



Unmatched technical  
and specification service

United States & Canada  
[protective.sherwin.com](https://protective.sherwin.com)  
[swprotective@sherwin.com](mailto:swprotective@sherwin.com)

**SHERWIN-WILLIAMS<sup>®</sup>**

©2024 The Sherwin-Williams Company  
Protective & Marine Coatings  
PM-1397067-BR 3/24