

Versiline CUI 56990

Fights corrosion under insulation



Why Versiline CUI 56990?

Here at Hempel, we recognise the complex needs of process facilities and the hidden dangers caused by corrosion under insulation.

That's why we have spent our time addressing this problem, culminating in the launch of our latest CUI resistant product, Versiline CUI 56990.

Versiline CUI 56990 is a fibre-reinforced, single component, inert modified inorganic copolymer. It combines the ease of application associated with hydrocarbon resins with the high heat resistance of silicone.

Versiline CUI 56990 shows excellent resistance to heat and corrosion beneath insulation. This makes it an extremely flexible solution, allowing a wide range of operating temperatures to be covered with a single product.

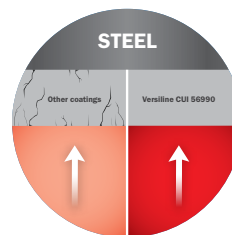
Improves on existing coating systems

Epoxy/epoxy phenolic – whilst offering excellent performance when operating in the CUI temperature range, process excursions that exceed its temperature resistance causes in degradation of the hydrocarbon polymer, resulting in micro-cracking and subsequent corrosion.

Thin film silicones – even though they are based on silicone resin, these schemes often undergo a significant transformation when exposed to heat. This results in extremely limited corrosion protection when they are no longer in hot and dry conditions, such as during process cycling.

Zinc silicates – whilst able to resist reasonable temperatures, typically up to 400°C, its sacrificial nature can cause rapid degradation when exposed to hot, wet CUI environments and its use here should be avoided.

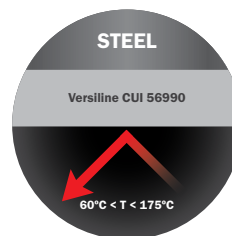
Heat



Versiline CUI 56990 has superior heat resistance

Resistant to a wide range of temperatures from -196°C to 650°C means you can have peace of mind that no matter what temperatures your facilities operate at, Versiline CUI 56990 will perform.

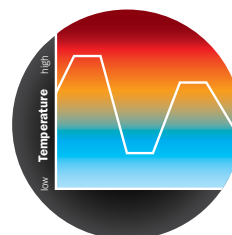
Corrosion



Coupled with corrosion protection

When your plant operates in the CUI temperature range, the barrier properties of Versiline CUI 56990 take over. Tested to a variety of recognised standards, you can be sure of long term corrosion protection.

Thermal cycles



Adding them both together

For processes that go through regular temperature cycles, or even the changes in temperature during plant shutdown and start-up operations, Versiline CUI 56990 is the perfect choice. Its resistance to thermal cycling, coupled with its heat and corrosion resistant properties eliminates coating breakdown.

How it works

Versiline CUI 56990 has unique resistance to micro-cracking. This means that even when exposed to high temperatures NO cracks form within the polymer film, which can affect its corrosion protection. The absence of micro-cracking results in a coating that offers excellent corrosion protection even if operating temperatures then change during process or infrequent cycling.

Products and performance

Versiline CUI 56990

Heat resistant from -196°C to 650°C and able to withstand corrosion under insulation and temperature cycling.

Single pack with high dft properties, combined with hardness and impact resistance make it the ideal choice for pre-fabricated items.

Complies with NACE SP0198 : 2010 categories SS-5, CS-6 and CS-8.

Extensively tested for peace of mind

Versiline CUI 56990 has been extensively tested both independently and through Hempel's testing, offering proven performance.

Product parameters

DFT range (min and max):	150–225 microns
Through dry:	1.5 hour(s) 20°C/68°F
Dry to handle:	16 hour(s) 20°C/68°F
Volume solids, %:	74 +/- 1
VOC content:	420 g/L
Pot life (20°C):	Unlimited
Maximum substrate temperature for application:	200°C
Application equipment:	Airless spray, air spray or brush
Shade nos/Colours:	Light and dark grey Aluminium
Surface preparation:	
New construction:	ISO 8501 SA2.5
Maintenance:	ISO 8501 ST2
Typical scheme dry film thickness (min):	
Insulated:	2 x 150 µ
Uninsulated:	2 x 225 µ
Over-coating/pipe identification:	Hempel's Silicon Acrylic 56940

Product parameters

Heat resistance (ASTM D2485):	✓ 650°C
CUI resistance (Houston pipe test):	No corrosion in CUI temperature range
CUI performance (cyclic test):	80 cycles
Immersion in hot water (NACE TM0174):	96°C (1 month)
Cryogenic exposure:	5 cycles to -196°C
Exposure to thermal shock under cyclic conditions:	30 cycles
Salt spray resistance (ISO 7253 / ASTM B117):	1440 hour(s)
Natural weathering C5M site (as per ISO 9226):	13 month(s)
NORSOK M-501 System 1 (when used with Galvosil 15700):	PASS
Leachable chloride:	< 20 p.p.m.

Full details of testing on Versiline CUI 56990 can be found on the laboratory test statement available from your Hempel representative.

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Since 1915 Hempel has been a world-leading coatings specialist, providing protection and inspiration to the world around us. Today we have over 5,500 people in 80 countries delivering trusted solutions in the protective, decorative, marine, container, industrial and yacht markets. This includes many recognised brands like Crown Paints, Schaeepman and Jones-Blair.

Hempel is proudly owned by the Hempel Foundation, which supports cultural, humanitarian and scientific causes across the world.

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