CONTITHERM 2566 (NO.1566)
INORGANIC COPOLYMER PRIMER/FINISH

TYPE

Two components. Moisture curing coating based on inorganic copolymer and silicon resin to provide a corrosion resistance barrier, when used to protect steelwork under thermal insulation in areas subjected to wet and dry cycling. Typically, applied direct to metal about 12 mils (300μm). Particularly, effective in maintenance situations, when used to mitigate the damaging effects of corrosion under insulation (CUI). It offers a sufficient protective barrier on carbon and stainless steel to temperatures ranging up to 1202℉ (650℃) and for cryogenic service to -320℉ (-196℃).

USES

Use for metal structures such as steel pipes, steam pipes, hot oil pipes and plant facilities.

CHARACTERISTICS

- Excellent high heat and cold resistance, can withstand heat up to 1200℉ (650℃), cold-resistant to -320℉ (-196℃).
- Excellent adhesion, prevent corrosion and anti-corrosion for thermal shocking structures.
- The moisture curing crosslinking mechanism allows multiple coats can be applied without heat curing.
- Can be sprayed directly to high temperature carbon steel, corrosive alloy steel, galvanized steel, austenitic/duplex stainless facilities when the surface temperature up to 428℉ (220℃).
- Offers exceptional barrier and resistance to wet/dry cycling at elevated temperatures and thermal shock environment.
- For CUI condition, 3 coats and total DFT 12 mils (300μm) are required.

PRACTICAL INFORMATION

Color	Iron-Gray, Silver-Gray, and Brown
Gloss Level	Matt
VOC Values	3.66 lbs/gal (430 g/l); Use CONTITHINNER 64 thinner to thin up 5% (4.00 lbs/gal=470 g/l).
Volume Solids	53±3%
Theoretical Coverage	1 mils：1140.8 ft^2/gal (106 m^2/l) 4 mils：285.2 ft^2/gal (26.5 m^2/l)
Typical Thickness	DFT：4~6 mils WFT：7.5~11.3 mils
Service Temperature	-321℉ (-196℃) ～1202℉ (650℃)
Preceding Coats	Self-Priming
Subsequent Coats	CONTITHERM 2569 Heat-Resisting Top Coat
Repair	Self-Repairing

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SUBSTRATES & SURFACE PREPARATION

General

Remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating. Surfaces must be clean and dry. Moisture, grease, sludge, dust, corrosive salt must be thoroughly cleaned from substrate.

Steel

Surface preparation standards can use SSPC-SP10 or Sa2 1/2 (ISO 8501-1:2007).

Stainless & Galvanized

The galvanized or stainless steel must be sand blasted to SSPC- SP16 before application. Dense angular for stainless and galvanized steel surface requires above 1 mils.

Areas of Breakdown and Damage

Should be prepared to the specified standard (Sa2 1/2 (ISO 8501-1:2007) or SSPC-SP6, Abrasive Blasting or SSPC-SP11, Power Tool Cleaning) and patch primed prior to the application of CONTITHERM 2566.

PERFORMANCE DATA

Test Method	System	Results
CNS 2949-1986 Heat-Resistance	3 cts. 1566 3 cts. 1566	Pass: Impact resistance test 12.5mmx 300g x 500mm, Heat -Resistance：**1202**℉ (**650**℃) Cold Test： **-321**℉ (**-196**℃)
ASTM D2485, Heat Resistance	3 cts. 1566	150℃, 230℃, 450℃/ 24 hours No damage can be observed visually
ISO 20340 Corrosion Resistance	3 cts. 1566	Carbon steel: below 0.9mm rust creepage Stainless steel: No rust creepage
ISO 4628-6-07 ASTM D610-08 Anti-aging	3 cts. 1566	Chalking rating: 0.5 Rust grade: 10
ASTM D3359 Adhesion	3 cts. 1566	5A scale adhesion rating（means no peeling or coating removal）
ASTM F963 Soluble Heavy Metals Test	1 ct. 1566	N.d.
ASTM B117-11 Salt Spray	3 ct. 1566	No blistering, cracking and rusting after 5000 hours

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PERFORMANCE DATA

Test Method	System	Results
Taiwan FPC CUI Coating Test	3 ct. 1566	PASS-Step1：752℉ (400℃) thermal shock PASS-Step2：ASTM B117-11 Salt Spray 5000 hours

Test reports and additional data available upon written request.

CERTIFICATION

- CNS2949-1986: Report number KV-12-05477Z (SGS Taiwan Ltd)
- NORSOK M-501-04: Report number KV-13-04546X (SGS Taiwan Ltd)
- NORSOK M-501-04: Report number KV-13-04546X (SGS Taiwan Ltd)
- Taiwan Formosa Plastics Specification FGES-T-UPA12 (CSI-20 CHP-07 SHP-06)

MIXING & THINNING

Mixing	Thoroughly mix to a uniform consistency prior to use.
Thinning	Substrate temperature at room temperature～212℉ (100℃) ：Use CONTITHINNER 64X to be thinner. Substrate temperature at 212℉ (101℃) ～428℉ (220℃) ：Use CONTITHINNER 64S to be thinner.
Mixing Ratio	Base: Hardener = 99.2: 0.8 (by weight); 99.2: 0.8 (by volume)
Pot Life	8 hours at 77℉ (25℃); 5 hours at 104℉ (40℃)

APPLICATION EQUIPMENT GUIDELINES

Spray Application	Rough surface of paint film may be caused by prompt evaporation of thinner, when sprayed on high temperature substrate. Avoid applying the paint in rainy day or the relative humidity exceed 85%. particularly, a wet surface must be thoroughly dried. Applying temperature of substrates up to 428℉ (220℃).
Airless Spray	Pump ratio: 45:1 or greater Tip size: 0.021”~0.025” Output PSI: 2800~4500 PSI
Brush	Brush is applicable only for hot surface under 140℉ (60℃)
Roller	Not recommended

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APPLICATION CONDITIONS

Condition	Coating	Surface	Environment	Humidity
Minimum	50℉ (10℃)	50℉ (10℃)	50℉ (10℃)	30%
Maximum	113℉ (45℃)	428℉ (220℃)	113℉ (45℃)	85%

Industry standards are for substrate temperatures to be 5℉ (3℃) above the dew point. The product simply requires the substrate temperature to be above the dew point.

CURING SCHEDULE

Surface Temp. (50% Relative Humidity)	Touch Dry	Hard Dry	Dry to Handle
50℉ (10℃)	2 hours	24 hours	7 days
59℉ (15℃)	2 hours	16 hours	7 days
77℉ (25℃)	1 hour	8 hours	7 days
95℉ (35℃)	1 hour	6 hours	5 days

1. CONTITHERM 2566 needs 7 days to final cure at 77℉ (25℃) ambient temperature.
2. These data are based on a 12 mils (300μm) dry film thickness. Higher film thickness, lower temperatures or insufficient ventilation need a longer cured time and can cause solvent entrapment in the coating film.

CLEANER & SAFETY

Cleaner

Use Thermal Thinner (CONTITHINNER 64X) to clean. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

Safety Ventilation

Please read and follow all caution statements on this product data sheet and MSDS for this product.
Proper ventilation and protective measures must be provided during application and drying to keep solvent vapor concentrations within safe limits and to protect against toxic or oxygen deficient hazards.

PACKAGE, HANDLING & STORAGE

Shelf Life

Minimum 18 months under 30℃ environment temp.

Shipping Weight

1 Gallon Kit – Part A： 0.99 Gallon (4.9 Kg)
Part B： 0.01 Gallon (0.04 Kg)
5 Gallon Kit – Part A： 4.95 Gallon (24.5 Kg)
Part B： 0.05 kg Gallon (0.2 Kg)

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PACKAGE, HANDLING & STORAGE

Storage Temperature &Humidity	41-95°F (5-35℃) 0-90% Relative Humidity
Flash Point	77°F (25°C)
Storage	Store in cool ventilated place, do not exposed to the sun in outdoor to avoid affecting the quality.