CONTIPOXY 1699 (EP-999GF)
GLASS FLAKE EPOXY COATING

TYPE

The coating is based on amine cured epoxy resin with glass flake anti-corrosion pigment.

USES

Use for ship, bridges, tanks, pipelines, petrochemical plants and steel structures.

CHARACTERISTICS

- Sturdy film, with excellent abrasion resistance and suitable to loading grain.
- Excellent resistance to oil and chemicals, anti-corrosion and water resistance.
- Special formulation of anti-corrosion, both in excellent inhibitory and hiding performance of corrosive protection for steel.
- Can be applied to and top coated with a wide variety of coatings, depending on the service.
- In order to have an excellent anti-corrosion performance, use CONTIZINC 7770 or CONTIZINC 2701 as a primer and exceptional weather resistance top coat.

PRACTICAL INFORMATION

Color	Gray, and Brown
Gloss Level	Semi-gloss
VOC Values	2.39 lbs/gal (281 g/l), use CONTITHINNER 12 thinner to thin up 5% (2.77 lbs/gal = 326 g/l) or 10% (3.10 lbs./gal=365 g/l)
Volume Solids	78±2%
Theoretical Coverage	1 mils：1290 ft^2/gal (120 m^2/l) 4 mils：322.5 ft^2/gal (30 m^2/l)
Typical Thickness	DFT：4~8 mils　WFT：5.1~10.3 mils
Service Temperature	Continuous: 302℉ (90℃) Non-Continuous: 356℉ (120℃)
Preceding Coats	Inorganic Zinc Rich Primer, Epoxy Zinc Rich Primer, Epoxy Alloy Primer, One Pack Polyurethane Maintenance Primer, and Epoxy Aluminum Tripolyphosphate Primer.
Subsequent Coats	Epoxy, Polyurethane, and Fluorocarbon resin system.
Repair	Self-Repairing

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.

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SUBSTRATES & SURFACE PREPARATION

Steel

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

Primed Surfaces

CONTIPOXY 1699 should always be applied over a recommended anti-corrosive coating scheme. The primer surface should be dry and free from all contamination and CONTIPOXY 1699 must be applied within the overcoating intervals specified (consult the relevant product data sheet).

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 CONTIPOXY 1699.

PERFORMANCE DATA

Test Method	System	Results
ISO 4628-6-07 ISO 4624-02 Cyclic Corrosive Test	Blasted Steel 1 ct. IZ-01 (75 microns) 1 ct. EP-999GF (150 microns) 1 ct. UP-450 (60 microns)	Chalking rating: 0.5 Original adhesive strength: 5.2 MPa Percentage of adhesive strength retention after cyclic corrosive test: 62.9% (3.27 MPa)
ASTM D5894-96 ASTM D4541-09 Type V Cyclic Corrosive Test	Blasted Steel 1 ct. IZ-01 (75 microns) 1 ct. EP-999GF (150 microns) 1 ct. UP-450 (60 microns)	No cracking and peeling in appearance. Original adhesive strength: 8.0 MPa Percentage of adhesive strength retention after cyclic corrosive test: 69.6% (5.57 MPa).
ASTM D5894-96 ASTM D4541-09 Type V Cyclic Corrosive Test	Blasted Steel 1 ct. PU-700 (100 microns) 1 ct. EP-999GF (150 microns) 1 ct. UP-450F (60 microns)	No cracking and peeling in appearance Original adhesive strength: 8.0 MPa Percentage of adhesive strength retention after cyclic corrosive test: 97% (7.76 MPa)

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PERFORMANCE DATA

Test Method	System	Results
ASTM G8-96 B Cathodic Disbonding of Pipeline Coatings (60 days)	Blasted Steel 1 ct. 1027HZ (100 microns) 2 cts. EP-999GF (130 microns) 1 ct. UP-450F (60 microns)	No blistering, cracking and rusting
ASTM B117-11 Salt Spray	Blasted Steel 1 ct. 1027HZ (100 microns) 2 cts. EP-999GF (130 microns) 1 ct. UP-450F (60 microns)	No blistering, cracking and rusting after 2000 hours
ASTM G8-96 B Cathodic Disbonding of Pipeline Coatings (60 days)	Blasted Steel 1 ct. IZ-01R (60 microns) 1 ct. PU-700 (60 microns) 2 cts. EP-999GF (150 microns) 1 ct. No.54HB (60 microns)	No blistering, cracking and rusting
ASTM B117-11 Salt Spray	Blasted Steel 1 ct. IZ-01R (60 microns) 1 ct. PU-700 (60 microns) 2 cts. EP-999GF (150 microns) 1 ct. No.54HB (60 microns)	No blistering, cracking and rusting after 2000 hours
ASTM F963 Heavy Metals Test	1 ct. EP-999GF	N.d. (Sb、As、Cd、Cr、Pb、Hg、Ba、Se)

Test reports and additional data available upon written request.

CERTIFICATION

- Norsok M-501-04: Report number KV-12-08801XA-1 (SGS Taiwan Ltd.)

MIXING & THINNING

Mixing	Mix base and hardener according to the mixing ratio and stir thoroughly.
Thinning	Use Epoxy Thinner (CONTITHINNER 12) to thin up 5-10%
Mixing Ratio	Base: Hardener = 80: 20 (by weight)
Pot Life	4 hours at 77℉ (mixture, 25℃)

APPLICATION EQUIPMENT GUIDELINES

Spray Application	Avoid applying the paint in rainy weather or the relative humidity exceed 85%, particularly, a wet surface must be thoroughly dried. All equipment must be cleaned immediately after use. The usage of thinner will increase or decrease depending on the temperature of the coated surface, if the temperature is decreased the amount of thinner may have to be increased.

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APPLICATION EQUIPMENT GUIDELINES

Airless Spray
Pump ratio 45:1 or greater
Tip size: 0.025”~ 0.029”
Output PSI: 2800~4000

Brush
Application by brush is applicable. For special condition please consult with product manufacturer.

Roller
Application by roller is applicable. For special condition please consult with product manufacturer.

APPLICATION CONDITIONS

Condition	Coating	Surface	Environment	Humidity
Minimum	50℉ (10℃)	50℉ (10℃)	50℉ (10℃)	30%
Maximum	95℉ (35℃)	131℉ (55℃)	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℃)	16 hours	24 hours	7 days
59℉ (15℃)	8 hours	16 hours	7 days
77℉ (25℃)	4 hours	8 hours	7 days
95℉ (35℃)	3 hours	6 hours	5 days

OVERCOATING INTERVAL

Surface Temp. (50% Relative Humidity)	Minimum	Maximum (No direct exposure to sunlight)	Maximum (Directly exposure to sunlight)
68℉ (20℃)	2.5 hours	2 months	1 months
104℉ (40℃)	1 hours	14 days	10 days

CLEANER & SAFETY

Cleaner
Use Epoxy Thinner (CONTITHINNER 12) 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.

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PACKAGE, HANDLING & STORAGE

Shelf Life	Part A: Minimum 2 years under normal storage conditions Part B: Minimum 1 years under normal storage conditions
Shipping Weight	1 Gallon Kit – Part A：9.92 lbs (4.5 kg) Part B：1.98 lbs (0.9 kg) 5 Gallon Kit – Part A：49.6 lbs (22.5 kg) Part B：9.92 lbs (4.5 kg)
Storage Temperature &Humidity	41-95℉ (5-35℃) 0-90% Relative Humidity
Flash Point	Above 77℉ (25℃)
Storage	Store in cool ventilated place, do not exposed to the sun in outdoor to avoid affecting the quality.