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ALTERNATE
CORROSION
PREVENTION
SYSTEMS



Allter-Guard™ 590 GF

PRODUCT DATA SHEET

Selection and Specification Data

Generic Type	Two component, high solids glassflake reinforced epoxy coating
Product Description	Allter-Guard™ 590 GF is a self-priming high performance two-component epoxy coating which provides excellent abrasion and impact resistance to atmospheric, immersed and buried steel and concrete. The coating system can be used for new constructions as well for maintenance and has excellent barrier properties and corrosion resistance. Application examples are steel and concrete substrates in corrosive services including splash zone areas, offshore structures, piles, lock gates, decks, pulp and paper mills, pipelines, bridges, chemical plants and other immersed and buried services where a durable impact and abrasive resistant coating is required.
Features	<ul style="list-style-type: none">• Excellent impact and abrasive resistance• Excellent barrier properties• High-Solids coating, Low VOC content• Complies to ISO 12944 (C4/C5 and Im1/Im2/Im3)• Self-priming on carbon and concrete substrates• Service temperature from -40up to 120°C (-40 up to 248°F)• Can be applied with Airless and brush & roller• Application and curing down to 10°C (50°F)• Can be used for in shop (OEM) as well maintenance applications• Compatible with cathodic protection systems
Color	Black, Grey and Oxide red (other limited colors on request)
Finish	Eggshell
Primer	Self-priming
Dry Film Thickness	150-250micron (6-10 mils) per coat. Two coats are recommended for maximum system performance.
Volume Solids	90% ±2%

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Theoretical Coverage Rate	6.0m ² /l at 150micron DFT (244.5 ft ² /gal at 6 mils) 3.6m ² /l at 250micron DFT (146.7 ft ² /gal at 10 mils)
VOC	121g/l (1.009 lbs/gal)
Temperature Resistance	-40 up to 120°C (-40 up to 248°F)
Topcoats	Can be topcoated for extra UV resistance (consult Allter)

Substrate and Surface Preparation

General	Remove all dirt, grease, mill scale, loose rust and any other contaminants that can reduce adhesion according to SSPC-SP1 solvent cleaning, followed by the recommended substrate preparation as listed below.
Carbon steel	For maximum system performance, abrasive blasting according to Sa2½ (ISO 8501-1), SSPC-SP10, NACE 2 with a 50-75micron (2-3mils) surface profile (Rz). Minimum substrate preparation St2/St3/SSPC-SP2/SP3 for Touch-up and Spot repair.
Concrete	Concrete must be at least 28 days cured at 24°C (75°F). Leaks and water infiltrations must be eliminated. Remove free-standing water, repair excessive cracks and resurface exposed aggregate and small voids with a suitable high-strength, fast curing, non-shrinking product. Check concrete on moisture content. Maximum acceptable residual water content is 5%. For maximum system performance, prepare according to SSPC-SP13/NACE 6 guidelines. The surface profile may be evaluated by comparing the profile of the prepared concrete surface with the ICRI Guideline No. 310-2 concrete surface profile (CSP) chips. For nominal 500micron DFT, this will be CSP3 up to max. CSP5.

Mixing and Thinning

Mixing	Allter-Guard™ 590 GF has a 3:1 mixing ratio (in volume). Both components must be minimum 10°C (50°F) in temperature before starting mixing. Agitate Part A (base) with a power mixer. Add Part B (curing agent) and mix thoroughly with a power mixer until uniform in colour. Use low speed mechanical mixing equipment.
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Thinning		10-20°C (50-68°F)	20-30°C (68-86°F)
	Airless:	0-5% Thinner 63	0-5% Thinner 10
	Brush/roller:	0-10% Thinner 63	0-10% Thinner 10

Pot Life	45 minutes at 20°C (68°)
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Application Equipment

General	The following information can be used as a guideline to apply the coating system. Site conditions may require modifications in spray pressure and tip sizes.
Airless spray	A minimum 45:1 pump ratio, with a minimum 3/8" ID material hose, 0.019-0.024" tip size and 200-220 bar (2900-3190 psi) pressure. Remove all filters.
Brush and roller	Use a natural bristle brush and apply the material in full strokes. Avoid re-brushing. If rolled, use a short nap roller with solvent resistant core. Avoid re-rolling.

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Application Conditions

	Condition	Material	Surface	Ambient	Rel. Humidity
	Minimum	10°C (50°F)	10°C (50°F)	10°C (50°F)	0%
	Maximum	30°C (86°F)	50°C (122°F)	50°C (122°F)	85%
	This material requires the substrate temperature to be 3°C (5°) above dew point				

Curing Schedule					
	Temperature	Touch dry	Dry to recoat	Dry to handle	Final Cure
	10°C (50°F)	12 hours	24 hours	3 days	7 days
	15°C (59°F)	8 hours	16 hours	2 days	5 days
	20°C (68°F)	4 hours	12 hours	1 day	3 days
	30°C (86°F)	3 hours	10 hours	12 hours	2 days
	Note: Drying times can vary upon different environmental conditions. Material should be applied within the supplied parameters to ensure drying and recoat times are respected. This material has an unlimited recoat time, even after exposure at elevated temperatures.				

Cleanup and Safety Information

Cleanup Use Thinner 63

Safety This material is for professional use only. Please observe the precautionary information on the safety data sheets (SDS) and label on the containers before using this material. Use of this material must be kept in compliance with local health, safety and environmental conditions and regulations.

Packaging, Handling and Storage

Shelf life Minimum 12 months at 23°C (73°F)

Storage temperature and humidity 4 - 50°C (39-122°F).
85%.

Storage Material should be stored indoors, well ventilated and away from sources of heat and ignition.

Shipping weight 20 litres (26.8 kg) 5.28 Gallon (59 lbs)

Flash point (ISO 1523) Part A: 45°C
Part B: >70°C

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DATE: January 2020

DISCLAIMER: Allter Coatings warrants that the product(s) represented within conform(s) to its/their chemical and physical description and is appropriate for the use as stated on the respective technical data sheet when used in compliance with Allter Coatings written instructions. Since many installation factors are beyond the control of Allter Coatings the user is obligated to determine the suitability of the products for the intended use and assume all risks and liabilities in connection herewith. Allter Coatings liability is stated in the standard terms and conditions of sale. Allter Coatings makes no other warranty either expressed or implied. All information contained in the respective technical data sheet(s) should be used as a guide and is subject to change without notice. This document supersedes all previous revisions. Please see revision date on the left. Allter® is a registered trademark.