

FLEX 200-GFCU

(EPA 1032024, PATENT PENDING 18/626,558)

Glass Filled Fouling Resistant Coating

PRODUCT DESCRIPTION

FLEX 200-GFCU is a 100% solids, 3-part copper-infused epoxy matrix engineered to eliminate microbiologically influenced corrosion (MIC). Utilizing a 7% passivated elemental copper matrix, it achieves total surface remediation—100% elimination of aggressive "metal-breathing" bacteria—matching the efficacy of pure copper foil while maintaining an EPA-compliant leach rate

INTENDED USES

FLEX 200-GFCU is engineered for high-performance protection across a broad spectrum of submerged and heavy-industrial applications, specifically targeting the mitigation of Microbiologically Influenced Corrosion (MIC) in critical infrastructure. Its primary application includes the internal and external protection of ship cooling and storage systems, ballast tanks, and underwater risers, pipes, and structures. The coating is uniquely suited for the high-risk environments of hydrocarbon exploration, transportation, and storage, including oil storage tanks and pipelines where acid-producing and electroactive bacteria drive rapid structural degradation. Additionally, it is an ideal solution for industrial cooling towers and air conditioning systems, where recirculating water promotes the inevitable formation of corrosive biofilms. By combining superior anti-corrosive barrier properties with active fouling resistance, it provides a "total remediation" solution for offshore platforms, seawater distribution systems, and maritime cooling loops where stagnant water would otherwise lead to localized pitting and EMIC-driven failure.

PRODUCT INFORMATION

Part A (Resin)	209
Finish/Sheen	Gloss
Part B (Curing Agent)	222
Part C	Copper flake
Volume Solids	100% (Wet mils = Dry mils) (ISO 3233:1998)
Typical Density	1.7 +/- 0.1
Mix Ratio	8 Part A to 4.5 Part B to 1 Part C
Film Thickness	6 Mils wet (152 microns)
Theoretical Coverage	6.56 m ² /litre (267 /Gall) at 6 Mils
Method of Application	Brush, Roller, Airless Spray
Flash Point (Typical)	Part A >100°C; Part B >100°C; Mixed >100°C



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Drying Information		10°C	15°C	25°C	35°C			
Touch Dry [ISO 9117/3:2010]		24 hrs	12 hrs	8 hrs	5 hrs			
Hard Dry [ISO 9117-1:2009]		36 hrs	24 hrs	18 hrs	8 hrs			
Pot Life		no data	90 mins	60 mins	45 mins			
Substrate Temperature								
		10°C	15°C	25°C	35°C			
Overcoated By	Min	Max	Min	Max	Min	Max	Min	Max
FLEX 200-GFCU	30 hrs	unltd.	18 hrs	unltd.	12 hrs	unltd.	4 hrs	unltd.

SURFACE PREPARATIONS

This topcoat has been specifically designed to be coated over Prime 200-MF or itself. Refer to Prime 200-MF for overcoat window. All surfaces must be clean and free from contamination. Remove all grease, oil and soluble contaminants prior to coating.

PERFORMANCE

Adhesion Pull Tests	ASTM D4541	2 mil blasted cold rolled
Prime 200MF + Flex 200-GFCU	Dry	1,308 PSI
Prime 200MF + Flex 200-GFCU	Seawater Immersion	1,117 PSI

MIXING

Material is supplied in a Uni-Pak container. Always mix a complete unit in the proportions supplied. Once the unit has been mixed it must be used within the working pot life specified.

(1) Combine entire contents of Curing Agent (Part B) with Base (Part A) and mix thoroughly with power agitator.

THINNER

Not recommended.

AIRLESS SPRAY

Tip Range 0.53-0.58 mm (21-23 thou)

Total output fluid pressure at spray tip not less than 211 kg/cm² (3000 p.s.i.)

Mixed material temperatures should be between 30-35°C (86 - 95F) for optimum spraying.



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CONVENTIONAL SPRAY

Application by conventional spray is not recommended.

BRUSH AND ROLLER

Application by brush or roller is recommended.
Multiple coats may be required to achieve specified film thickness.

CLEANER

Methyl Ethyl Ketone (CAS # 78-93-3)

WORK STOP / CLEANUP

Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with Cleaner. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed material.

Clean all equipment immediately after use with cleaner. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays. Do not exceed pot life limitations. All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.

WELDING

In the event welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

PACKAGING SIZE

16 kg UniPak Pail

UN SHIPPING

Dangerous Goods

SHELF LIFE

36 Months



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LIMITATIONS

At ambient temperatures below 25°C paint lines must be lagged. In-line heaters should not be used unless absolutely necessary. For maximum performance the curing temperature should be kept below 35°C. Particular care should be taken to avoid exceeding this in localized areas when artificial heating is introduced. The climatic conditions within the tank must be controlled to maintain a maximum relative humidity of 50% at temperatures between 10-15°C, and a maximum relative humidity of 60% at temperatures of 16°C and above. The drying times and overcoating intervals may alter due to various on-site factors such as tank configuration and ventilation rates.

IMPORTANT NOTE

The information contained in this data sheet is to the best of our knowledge true and accurate; but all recommendations or suggestions are made without guarantee, since the conditions of use are beyond our control. Each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate. We hereby disclaim any warranties or representations, express or implied, by operation of law or otherwise, including, without limitation, any implied warranty of merchantability or fitness for a particular purpose.

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