

3M™ Fluorosurfactant FC-5120

Introduction

3M™ Fluorosurfactant FC-5120 is an anionic fluorochemical surfactant supplied as a 25 wt% solution in a water/ isopropanol blend.

3M fluorosurfactant FC-5120 contributes excellent wetting, spreading and leveling properties to a variety of waterborne coating systems.

3M fluorosurfactant FC-5120 offers:

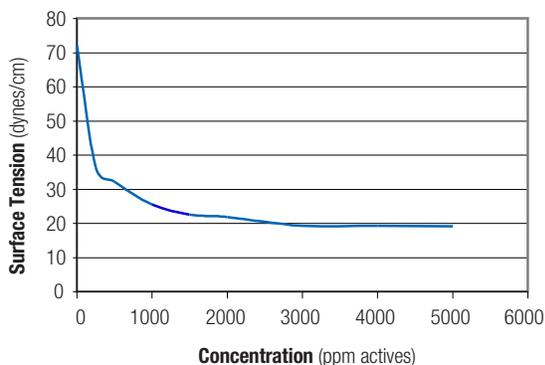
- Improved wetting and leveling
- Good compatibility in aqueous systems
- Effective at low concentration
- Low foaming
- Compatible and effective in a variety of resin systems such as polyurethane and acrylic dispersions

Typical Physical Properties

Properties	Typical Values
Appearance	Slightly yellow liquid
Specific gravity	1.05 g/ml (8.70 lbs/gal)
Solids	25%
Solubility in water	Miscible in all proportions
Flash point (Closed cup, °C)	25
pH	7–9
Viscosity (cP @ 25°C / 77°F)	< 50 cP
Type	Anionic
Composition	25% ammonium fluoroalkylsulfonate 25% isopropyl alcohol 50% water
Freeze/thaw stability	Protect from freezing*
Shelf Life	Two years from date of manufacture

* If 3M fluorosurfactant FC-5120 freezes, warm it to room temperature or higher until it becomes a fluid. Freezing will not change physical properties or adversely affect performance.

Static Surface Tension in DI Water



Note: Not for specification purposes
All values determined at 77°F (25°C) unless otherwise specified

Notice:
This product is not intended for use in any consumer products. Industrial spray applications are acceptable with proper personal protective equipment and/or adequate ventilation.

Ross-Miles Foam Volume (ml) at 25°C (77°F) using 0.1% active ingredient

	Initial	3 min	5 min	10 min
DI Water	50	0	0	0

Surface Tension Reduction in Resin Systems

Resin	Control (dynes/cm)	0.3% Active FC-5120 (dynes/cm)	0.3% Active Competitive FC (dynes/cm)	1.0% Active Hydrocarbon Surfactant (dynes/cm)
Duragreen™ 4373 (Acrylic)	36.0	21.50	25.79	28.53
Duraplus™ 3 (Acrylic)	30.92	18.74	19.40	26.75
NeoCryl® A-633 (Acrylic)	46.25	21.95	26.75	38.25
NeoRez® R-961 (PUD)	35.2	19.45	24.25	29.25

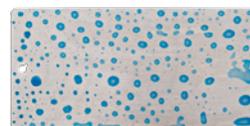
Waterborne Acrylic Coating on Aluminum Panel*



0.25% Solids FC-5120



0.25% Solids Competitive FC



Control – No added surfactant



1% Solids Hydrocarbon Surfactant

*Simulated silicone contamination: Untreated aluminum panels were sprayed with silicone lubricant prior to coating.

Packaging

3M fluorosurfactant FC-5120 is currently available in:

- 8 lb. pails
- 40 lb. pails
- 250 lb. drums



Regulatory Summary

- All components of 3M™ Fluorosurfactant FC-5120 are fully compliant with the chemical regulations of TSCA. FC-5120 contains a PFBS-based fluorosurfactant that was notified to the U.S. EPA under a low volume exemption (LVE). The use of FC-5120 as a surfactant in permanent industrial paints and coatings is allowed. Proper exposure control can be managed by use of personal protective equipment (PPE) as suggested in the Material Safety Data Sheet (MSDS).
- PFBS and PFBS-based surfactants are not included in the U.S. EPA's PFAS Final Significant New Use Rule (SNUR) (67 Fed. Reg. 72854).
- Detailed environmental, health, safety and regulatory data on this product is available from 3M.

Product Safety and Handling

3M fluorosurfactant FC-5120 is intended for use in non-dispersive applications.

3M does not recommend this product for use in applications involving repeated exposure through skin contact, inhalation, or ingestion. It is not intended for food, cosmetic, medical or pharmaceutical usage.

Neither 3M nor the U.S. Food and Drug Administration has evaluated or reviewed this product for food, cosmetic, medical or pharmaceutical applications.

It is the user's responsibility to determine whether a coating containing this product is durable and properly cured for the end use. Any used or unused material for disposal should be incinerated in an industrial or commercial facility in the presence of a combustible material. Combustion products will include hydrofluoric acid. Facility must be capable of handling halogenated materials. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

For additional product safety and handling information, please read the product label and Material Safety Data Sheet before using this product.

3M Resources

To request a sample, place an order or request additional information, please contact your local 3M representative, an authorized 3M distributor or call 1 800 367 8905.

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