

AEROSOL[®] LF4

surfactants

Type:	Anionic
Chemical:	Proprietary sulfosuccinate blend
Molecular Weight:	400 (average)
FDA Status:	All components approved under 21 CFR 178.3400 for indirect food contact

AEROSOL LF-4 is a wetting & leveling agent, dispersant and emulsifier specially designed for coatings (eg. OPV, PSA) that require good dynamic wetting and levelling performance coupled with low & unstable foam. It is also a very good co-emulsifier for producing latexes requiring low surface tension for applications such as adhesives, paint binders, printing ink binders, floor polish systems, etc.

SURFACE ACTIVE PROPERTIES

cmc	: 0.01-0.05 % aq. solution
Surface tension @ cmc	: 23 dynes/cm
Wetting Time (Draves Test)	: 1 sec (1% aq.soln.)

FOAM TEST - Ross Miles (1.0% aq.solution)

Time:	0 min.	60 secs.
Foam vol.(ml):	180	0

EQUILIBRIUM SURFACE TENSION (0.5% aq. Soln.)

AEROSOL LF4	: 23 dyn/cm
AEROSOL OT	: 26 dyn/cm

DYNAMIC SURFACE TENSION (dyn/cm; 1% aq. Soln.)

	<u>3 B/s</u>	<u>6 B/s</u>
AEROSOL LF4	28	30
AEROSOL OT	27	29

NOTE: A bubble tensiometer was used to generate this data. B/s is bubbles/second. A higher B/s number translates to faster coating speeds.

APPLICATIONS IN EMULSION POLYMERIZATION

- Produces latexes with very low surface tension suitable for adhesives, paints, inks & other coatings
- Reduces or eliminates the need for post-added wetting and leveling agents in the final formulation
- Very effective in producing latexes with very low particle size and narrow PSD for high-gloss systems, at low usage levels
- Can produce high solids latexes @ manageable viscosity
- Provides latexes with good mechanical and electrolyte stability and very low coagulum levels
- Produces latexes with lower foam than sulfates and sulfonates, and other sulfosuccinates
- In combination with Aerosol A-102 or Aerosol 22 surfactants, gives latexes with excellent adhesion

APPLICATIONS AS A POST-ADD

PRINTING INK / OVERPRINT VARNISH SYSTEMS

Improved Wetting and leveling. Improved adhesion, gloss and color resolution

TEXTILE AND PAPER

Excellent wetting and leveling. Can control penetration with usage level

ADHESIVE SYSTEMS

Improved adhesion due to better wetting. Used in both adhesive formulations and to precoat substrates

PAINT SYSTEMS

Improved wetting and leveling on difficult-to-wet substrates. Better penetration and adhesion

COATINGS ON HYDROPHOBIC SUBSTRATES

Improved adhesion due to deeper equilibrium wetting

CYTEC

Technology ahead of its time™

CYTEC INDUSTRIES INC.

Surfactants & Specialty Monomers
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West Paterson, NJ 07424-3360
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AEROSOL[®] LF4

surfactants

PHYSICAL AND CHEMICAL PROPERTIES

Type	: Anionic
Chemical	: Proprietary blend
Appearance	: Slightly hazy, Viscous liquid
Solids, % by weight	: 80 ₊₃
Color, APHA, maximum (50% solids in 1-1 Alcohol-water)	: 50 ₋
Specific gravity, 25 °C	: 1.08-1.1
Viscosity, cps @ 25 °C	: 300 - 600 cps
Flash Point	: > 100 F
pH, 10% solution	: 5-7.5
Acid number, as is	: 2.0 max.
Iodine value, as is	: 0.5 max.
Solubility-Organic polar solvents -	: Excellent
Solubility-Organic nonpolar solvents	: Good
Acetone	: soluble
Benzene	: soluble
Carbon tetrachloride	: soluble
Ethanol	: soluble
2-ethyl hexanol	: soluble
Isopropanol	: soluble
Kerosene	: soluble
MEK	: soluble
Oleic acid	: soluble
Propylene glycol	: soluble

ELECTROLYTE TOLERANCE:

At 0.05% solids: > 2250 ppm Calcium tolerance
At 0.5% solids : > 2250 ppm Calcium tolerance

HEALTH AND SAFETY

Before handling this material, read the corresponding Cytec Industries Inc. Material Safety Data Sheet (#10117) for safety, health and environmental data.

Based on toxicity tests, AEROSOL LF4 surfactant is not expected to present any significant hazards to health in ordinary industrial handling. Direct contact with this material may cause moderate eye and mild skin irritation.

STORAGE AND HANDLING

AEROSOL LF4 surfactant should be stored above 41 deg.F (5 C) over prolonged periods to prevent gelation.

Aerosol LF4 surfactant may be stored and used in a wide variety of containers or reaction vessels. Stainless steel, aluminum and Monel alloy are recommended for reaction and storage vessels; glass and rubber are suitable lining materials. Some of the sprayed resinous coatings are satisfactory in stationary tanks in which the coating can be built more heavily than is customary in drums. In permanent installations, however, the added expense of aluminum, stainless steel or clad-steel is frequently justified.

The efficacy of AEROSOL LF4 surfactant is not impaired by freezing or thawing. However, if a freeze-thaw cycle occurs, it is recommended that the entire contents of the container be agitated prior to use.

REGULATORY INFORMATION

This product is manufactured in compliance with all provisions of the Toxic Substance Control Act, 15. U.S.C. (TSCA). All components of this product are included on the European Inventory of Existing Chemical Substances (EINECS), the Australian Inventory of Chemical Substances (AICS), the Japan Inventory (ENCS), the Korea Inventory (ECL), and the Philippines (PICS) Inventory.

SHELF LIFE

This surfactant has a recommended shelf life of 6 months for optimal wetting and low-foam performance.

IMPORTANT NOTICE

The information and statements herein are believed to be reliable but users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. **NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE OR IMPLIED.** Nothing herein is to be taken as permission, inducement or recommendation to practice any patented invention without a license.

TECHNICAL ASSISTANCE

Latex recipes with Aerosol LF4 for paint binders, PSA's, industrial coatings, floor polish systems, etc. can be obtained by contacting Technical Service or through your local sales representative.

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