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PRODUCT BULLETIN

ATTAR-CF

Cleaner for Electronics and Ceramic Component Manufacturing

General Description

ATTAR-CF is a high-performance aqueous industrial cleaning concentrate developed for precision manufacturing environments where removal of organic processing residues is critical to product quality. The formulation combines a balanced system of high-efficiency nonionic surfactants, glycol-ether solvency, and controlled alkalinity to deliver rapid wetting, penetration, and emulsification of hydrophobic soils. This chemistry allows **ATTAR-CF** to effectively disperse and remove oils, greases, flux residues, and polymeric films that accumulate during manufacturing operations. The product was designed for use in demanding industrial cleaning processes where conventional aqueous detergents often struggle to remove resinous or hydrocarbon-based contaminants. By incorporating both surfactant and solvent functionality within a stable aqueous system, **ATTAR-CF** forms a highly effective micro-emulsion cleaning environment capable of dissolving and suspending difficult soils while maintaining excellent rinseability with water. The balanced formulation allows **ATTAR-CF** to function as a versatile process cleaner capable of addressing multiple residue types encountered in electronics and ceramic component fabrication. The product rinses readily with water, helping manufacturers achieve clean surfaces required for high-reliability components while minimizing the risk of residual films.

Applications

ATTAR-CF is designed for precision cleaning applications in **electronics manufacturing and advanced ceramic component production**, where removal of organic processing residues is required prior to assembly, firing, coating, or final packaging. The formulation combines high-performance nonionic surfactants with glycol-ether solvency to effectively remove **rosin flux residues, no-clean flux films, light greases, machining oils, and organic binders** commonly encountered during the fabrication of electronic and ceramic components.

The balanced surfactant system rapidly wets complex geometries and micro-features while dispersing hydrophobic residues into the aqueous phase, allowing contaminants to be rinsed away cleanly. The solvent component enhances removal of non-polar soils such as hydrocarbon films and resinous deposits that are often difficult to eliminate with conventional aqueous cleaners.

Because of this combination of **wetting, emulsification, and solvency**, **ATTAR-CF** is well suited for use in **immersion tanks, spray washers, ultrasonic systems, and other aqueous cleaning processes** used in electronics and ceramic component manufacturing environments.

Typical components that may benefit from cleaning with **ATTAR-CF** include:

- Printed circuit boards (PCB) and electronic assemblies
- Ceramic substrates and electronic packages
- Hybrid microelectronics components
- Ceramic capacitors and resistive elements
- Precision machined ceramic parts prior to firing or coating

The product is formulated to remove organic contamination while maintaining excellent rinseability with water, helping manufacturers achieve **clean, residue-free surfaces required for high-reliability electronic and ceramic components**.

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Environmental Information

The surfactant system used in **ATTAR-CF** is designed for industrial aqueous cleaning processes and provides effective soil removal without the use of chlorinated solvents or heavy metals. The product functions by emulsifying and dispersing organic contaminants into the aqueous phase so they can be removed during rinsing or wastewater treatment. Proper handling and disposal of spent cleaning solutions should follow applicable local, state, and federal regulations.

Directions for Use

ATTAR-CF is designed to be diluted with water prior to use in industrial cleaning systems. Typical operating concentrations range from approximately 5% to 20% by volume depending on soil load, cleaning method, and desired cleaning performance. The product can be used in immersion tanks, spray washers, ultrasonic cleaning systems, and other aqueous parts cleaning equipment. Operating temperatures may range from ambient to moderately elevated temperatures with 125F being optimum. Depending on the process requirements and soil characteristics slightly higher temperatures and agitation may enhance cleaning efficiency for heavy hydrocarbon or resinous residues. After cleaning, components should be thoroughly rinsed with clean water to remove dispersed soils and residual cleaning solution. Because manufacturing processes vary widely, users should evaluate **ATTAR-CF** under their specific operating conditions to determine the optimal dilution ratio, temperature, and contact time for their application.

Environmental Information

This product is formulated for use in industrial cleaning and processing applications and does not contain intentionally added heavy metals, chlorinated solvents, or ozone-depleting substances. The product functions by emulsifying and dispersing contaminants so they may be removed during rinsing or wastewater treatment operations. Spent solutions containing removed soils should be handled in accordance with applicable local, state, and federal environmental regulations. Users should evaluate their specific operating conditions and wastewater treatment capabilities to ensure proper handling and disposal of process effluent.

Physical Properties

Appearance:	Clear to slightly hazy liquid
Color:	Pale yellow to amber
Odor:	Mild amine / solvent odor
pH (concentrate):	~9 – 10
Density:	~8.6 – 8.8 lb/gal
Solubility in Water:	Completely miscible
Flash Point:	>200°F (closed cup, estimated)
Recommended Use Dilution:	5 – 20% in water

Availability

ATTAR-CF is available in UN approved 5-gallon pails, and 55-gallon drums and bulk quantities.

Handling

This product is intended for industrial and professional use only in manufacturing, maintenance, and industrial processing operations. Users should follow normal precautions for handling industrial chemicals. Avoid unnecessary contact with skin and eyes and avoid breathing vapors, mists, or spray. Use appropriate personal protective equipment and ensure adequate ventilation when handling or applying the product. Observe all warning labels and instructions provided on product containers and consult the Safety Data Sheet prior to use for detailed safety, health, and environmental information. This document is provided for technical guidance only and does not purport to address all safety concerns associated with the use of this product. It is the responsibility of the user to establish appropriate safety, health, and environmental practices and to determine the applicability of all relevant regulatory requirements prior to use.

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