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Product Bulletin

ANTIMICROBIALS

Product Name Chemical Structure

BTC® 835 SERIES

 $R = 50\% C_{14}, 40\% C_{12}, 10\% C_{16}$

Chemical Description

EPA Registration No.

PCP

Registration No.

Applications

n-Alkyl Dimethyl Benzyl Ammonium Chloride (CAS Registry No. 68424-85-1)

BTC 835 1839-32 BTC 835 BTC 835 BTC 835

21339

21820

The BTC 835 products are cationic material only for formulation into antimicrobial products for use in agricultural/farm premises, structures, buildings, and equipment; dairy farm milk handling facilities, equipment, storages rooms, houses and sheds; food processing plant, food handling, food distribution equipment and premises; mushroom houses/empty premises and equipment; egg handling equipment and rooms, egg washing treatment; poultry processing plant equipment/premises, meat processing plant/equipment, eating establishment premises and equipment; commercial, institutional, and industrial premises and equipment (floors, walls, storage areas); domestic dwellings, food handling areas, bathroom premises (hard surfaces), indoor premises; medical, institutional, critical care and noncritical care premises and laundry. For formulation into antimicrobial products for use in air conditioner/refrigeration condensate water systems, air washer and industrial scrubbing systems, once-through and recirculating industrial/commercial cooling water systems, pulp/paper mill water systems, swimming pools, golf/commercial turf/lawns, greenhouses/nurseries, fountains/water displays/decorative ponds/standing water, sewage treatment systems, spas, gas/oil drilling muds/packer fluids, gas/oil recovery injection water systems, gas/oil pipeline maintenance and gas/oil fracturing fluid systems. For formulation into wood preservation and wood preservative-seasoned wood pressure/thermal treatment and non-pressure treatment (joinery/remedial) and sapstain treatment; materials preservative, paper (stored) and papermaking (nonfood contact). Formulators using this product are responsible for providing data for the EPA registration of their formulated products.

Composition

Typical Properties

Active Ingredients, %	BTC 835	BTC 8358
n-Alkyl (50% C ₁₄ , 40% C ₁₂ , 10% C ₁₆) Dimethyl Benzyl Ammonium Chloride	50	80
Inert Ingredients, %	50	20
Total, %	100	100
Appearance at 25°C		Clear liquid
pH, 10% aqueous	8.0	8.5
Free amine and amine hydrochloride	1.0 max	1.6 max
Color, APHA	130 max	150 max
Viscosity, cps at 25°C	80	1000
Viscosity, cps at 60°C	20	50
Flash Point, PMCC, °C (°F)		32 (89)
Density, g/ml (lbs/U.S. gal)	0.96 (8.0)	0.94 (7.8)
RVOC, U.S. EPA, % Ethanol	9	12

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BTC® is a registered trademark of Stepan Company.



Environmental Effects

Health Effects

Storage & Handling

BTC products are biodegradable. Additional information is available upon request.

BTC 835 products are moderately toxic orally (LD $_{50}$ is between 50 and 500 mg/kg) at 5% active and they cause moderate skin and extreme eye irritation at 5% active.

Handle liquid BTC products with care; use away from sparks and open flame. Use in well ventilated area. Avoid contact with eyes, nose or prolonged skin contact. Gloves, protective clothing, safety goggles and face shield should be worn when handling BTC products. Wash thoroughly after handling material.

Standard Packaging: BTC products are available in 55-gallon drums and in bulk quantities.

It is recommended that BTC products be stored in sealed containers and kept in a cool, dry place. If material is frozen it should be heated gently and stirred to ensure it is homogeneous before use.

<u>Bulk Storage Information</u>: BTC quaternaries can be stored in vessels of 316 stainless steel or fiberglass with a corrosion liner. Contact between quaternaries and anionic materials must be avoided. At use dilution, BTC quaternaries are non-corrosive to most plastics, natural rubber, stainless steel, monel metal, iron, brass, aluminum, lead and tin; however, BTC quaternaries as supplied, may be corrosive to the materials listed above.

Liquid BTC products should be stored between 85 - 120°F. An internal hairpin coil of 316 stainless steel with low pressure steam (under 50 psig) should be used if heating is required. Mild agitation is recommended while storing to maintain homogeneity. Pumps, pipes and transfer lines should be 316 stainless steel. Rubber hoses with Teflon cross-linked polyethylene with 316 S.S. fittings are recommended for loading and unloading.

Occupational exposure can occur primarily through skin contact or via inhalation of vapors and mists. Engineering controls, personal protective equipment, and other workplace practices should be used to control these exposures.

The international inventories (country clearances) of BTC 835 quaternaries can be found in Section 15 of the Safety Data Sheet (SDS). It is the responsibility of the formulator to review the chemical control regulations for each country where the end product is intended to be sold or used. If you have any further questions regarding inventories, please contact North America Technical Service at techserv@stepan.com.

BTC 835 quaternaries are cleared under 40CFR180.940 tolerance exemptions for active and inert ingredients for use in antimicrobial formulations (food contact surface sanitizing solutions).

The BTC 835 series is available as Kosher Certified.

In the U.S., all products used on inanimate surfaces which are sold and claimed to be bacteriostatic, germicidal, algaecidal or to kill or inhibit organisms in any way are required to be registered with the U.S. Environmental Protection Agency. Formulators are responsible for any additional data which may be required by local, state or country agencies.

This product bulletin has been written in accordance with ACC's Product Stewardship guidelines.

A Safety Data Sheet is available upon request.

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Workplace Exposure

Clearances

Registration

Stewardship Additional

Product

Additional Safety Information

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