Alkyl Dimethyl Benzyl Ammonium Chloride (Benzalkonium Chloride) (ADBAC/BKC) C12:C14:C16=4:5:1





CAS No.	68424-85-1	EINECS No.	270-325-2
Molecular Formula	C _{n+9} H _{2n+14} NCI (n=12,14,16)	Molecular Weight	≈360.0

Structural Formula

$$R = C_{12}H_{25}, C_{14}H_{29} \text{ or } C_{16}H_{33}$$

Product Features

ADBAC/BKC contains the active substance C12-14 alkyl dimethyl benzyl ammonium chloride (ADBAC). The active substance is a cationic molecule offering good surfactant properties and can be formulated together with nonionic and/or amphoteric surfactants. Barquat® MB-80 is used in several applications, such as food processing, institutional, veterinary, healthcare, and medical device disinfectants.

ADBAC/BKC is one of the Quaternary ammonium class of Cationic surfactants, belonging to nonoxidizing biocide. It is widely used as a disinfectant in the Hospital, Livestock and Personal Hygiene sectors. Dual biocidal and detergency properties ensure high efficacy against Bacteria, Algae and Fungi and enveloped Viruses at exceptionally low ppm concentrations. ADBAC/BKC also has dispersing and penetrating properties, with advantages of low toxicity, no toxicity accumulation, soluble in water, convenient in use, unaffected by water hardness. ADBAC/BKC can be also used as anti-mildew agent, antistatic agent, emulsifying agent and amendment agent in woven and dyeing fields.



Technical Specification

Items	Index		
Appearance	Pale yellow transparent liquid	Pale yellow transparent liquid	
Active content, %	50 min	80 min	
Amine salt, %	1.0 max	1.0 max	
рН	6.0~8.0(as it)	6.0-8.0(1% water solution)	

Applications & Usage

Items		Index		
Oil & Gas	Pipeline corrosion inhibitor. Prevents formation of sulphurous gases. De-emulsifier/sludge breaker for enhanced oil extraction.			
Manufacture of Detergent-Sanitisers	Benzalkonium chloride safely incorporates both Microbicidal & Detergency Properties into Products for Soil Penetration & Disinfection, which makes it ideal for Formulation of Hygiene Products for Personal Hygiene, Hospital, Livestock and Food & Dairy use.			
Pharmaceuticals & Cosmetics	Safety Factor of Benzalkonium Chloride leads to use in Various Topical and Ocular Products as a Preservative and to optimise Emolliency and Substantivity			
	On account of its non-toxic, non-corrosive, non-tainting, non-staining characteristics, Benzalkonium Chloride(DDBAC/BKC) is widely used in the Formulation of Cleaner-Sanitisers for:			
Food & Beverage Industry	Dairy Industry	Slaughter Houses	Breweries	
	Fisheries	Bottling Plants	Catering Industry	
	Food Storage Tanks	Milk Storage Tanks	Cold Storage plants	
Polymer & Coatings	Benzalkonium Chloride is widely used as an Anti-Static, Emulsifier & Preservative in the Coatings Industry (Paints, Wood Treatment, Electronics)			
Chemical Industry	Benzalkonium Chloride has diverse applications in the Chemical Industry as Precipitant, Phase Transfer Catalyst, Emulsifier/De-Emulsifier, etc.			
Water Treatment	Benzalkonium Chloride is used in Water & Effluent Treatment Formulations and Algaecides for Swimming Pools			
Aquaculture	Benzalkonium Chloride reduces the requirement of harmful Antibiotics in Aquaculture through improved hygiene. Used for Water Treatment, General Site Disinfection, Fish Parasite Removal, Prevention of Infectious Disease In Fish & Shellfish.			
Timber Protection	Global environmental concern has led to increasing replacement of chlorinated			



	biocides with safer, biodegradable Benzalkonium Chloride in Wood Protection. It displays excellent fungicidal and algaecidal properties, and is highly effective against other organisms in combination formulations.
Pulp & Paper Industry	Benzalkonium Chloride is used as a General Microbicide for Slime Control & Odour Management, and improves Paper Handling (Imparts Strength & Antistatic properties)
Textile Industry	Benzalkonium Chloride solutions are used as Moth Repellents, Permanent Retarders in Dyeing of Acrylic Fibres with Cationic Dyestuffs.
Leather Industry	Benzalkonium Chloride inhibits growth of Mould & Mildew on Hides. Facilitates Leather Softening, Wetting & Dyeing.
Horticulture & Household	Benzalkonium chloride is highly effective against Mould, Mildew, Moss, Fungi & Algae and is used for cleaning and preparation of all types of Surfaces: Greenhouses, Roofing, Paths, Wooden decking, Sheds, Masonry

As nonoxidizing boicide, dosage of 50-100mg/L is preferred; as sludge remover, 200-300mg/L is preferred, adequate organosilyl antifoaming agent should be added for this purpose. ADBAC/BKC can be used together with other fungicidal such as isothiazolinones, glutaraldegyde, dithionitrile methane for synergism, but cannot be used together with chlorophenols. If sewage is appeared after thrown of this product in circulating cool water, the sewage should be filtered or blown off in time to prevent their deposit in bottom of collecting tank after froth disappearance. No blending with anion surfactant.

Package & Storage



Hazard & Safety Precaution





Alternative Name / Synonyms

- Alkyl Dimethyl Benzyl Ammonium Chloride
- Benzalkonium Chloride
- ADBAC/BKC