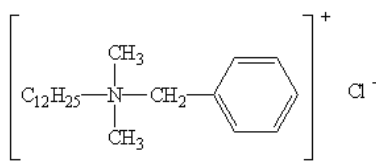


## Dodecyl Dimethyl Benzyl Ammonium Chloride (Benzalkonium Chloride) (DDBAC/BKC)

### CAS NO.

8001-54-5 or 63449-41-2, 139-07-1

### STRUCTURAL FORMULA



### PROPERTIES

DDBAC/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.

DDBAC/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. DDBAC/BKC can be also used as anti-mildew agent, antistatic agent, emulsifying agent and amendment agent in woven and dyeing fields.

### APPLICATION AREAS

Items	Index
Oil & Gas	Pipeline corrosion inhibitor. Prevents formation of sulphurous gases. De-emulsifier/sludge breaker for enhanced oil extraction.
Manufacture of Detergent-Sanitisers	BKC 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 BKC leads to use in Various Topical and Ocular Products as a Preservative and to optimise Emolliency and Substantivity
Polymer & Coatings	BKC is widely used as an Anti-Static, Emulsifier & Preservative in the Coatings Industry (Paints, Wood Treatment, Electronics)
Chemical Industry	BKC has diverse applications in the Chemical Industry as Precipitant, Phase Transfer Catalyst, Emulsifier/De-Emulsifier, etc.

Water Treatment	BKC is used in Water & Effluent Treatment Formulations and Algaecides for Swimming Pools		
Food & Beverage Industry	On account of its non-toxic, non-corrosive, non-tainting, non-staining characteristics, BKC is widely used in the Formulation of Cleaner-Sanitiser for:		
	Dairy Industry	Fisheries	Food Storage Tanks
	Slaughter Houses	Bottling Plants	Milk Storage Tanks
	Breweries	Catering Industry	Cold Storage plants
Aquaculture	BKC 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 BKC in Wood Protection. It displays excellent fungicidal and algaecidal properties, and is highly effective against other organisms in combination formulations.		
Pulp & Paper Industry	BKC is used as a General Microbicide for Slime Control & Odour Management, and improves Paper Handling (Imparts Strength & Antistatic properties)		
Textile Industry	BKC solutions are used as Moth Repellents, Permanent Retarders in Dyeing of Acrylic Fibres with Cationic Dyestuffs.		
Leather Industry	BKC inhibits growth of Mould & Mildew on Hides. Facilitates Leather Softening, Wetting & Dyeing.		
Horticulture & Household	BKC 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		

## **SPECIFICATION**

Items	Index	
Appearance	Yellowish transparent liquid	Yellowish transparent liquid
Active content %	48-52	78-82
Amine salt %	4.0 max	4.0 max
pH	6.0~8.0	6.0-8.0

## **BIOCIDE ACTIVITY**

Strain	MBC
Staphylococcus aureus ATCC 6538	< 12 ppm
Candida albicans ATCC 10231	< 12 ppm
Pseudomonas aeruginosa ATCC 15442	50 - 100 ppm

Escherichia coli ATCC 10536	< 12 ppm
Enterococcus hirae ATTC 10541	< 12 ppm
Salmonella choleraesuis ATCC 4161	< 12 ppm
Aspergillus niger ATCC 16404	< 12 ppm

## **USAGE**

As nonoxidizing biocide, 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. **BKC** can be used together with other fungicidal such as isothiazolinones, glutaraldehyde, 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.

## **PACAGE**

- 200 L plastic drum
- 1000 L IBC

## **STORAGE**

Storage for one year in shady and dry place.

## **SAFETY PROTECTION**

A little smell of almond, no visible stimulation to skin.

When contacted, flush with water.

## **SYNONYMS**

Benzalkonium Chloride; BKC; Dodecyl Dimethyl Benzyl ammonium Chloride; Lauryl dimethyl benzyl ammonium chloride; Benzyl-Lauryl dimethyl ammonium chloride, бензалкония хлорид (додецил диметил бензил хлорида аммония)

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