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## Additive for Detergent

### Introduction

Detergent includes powder detergent and liquid detergents. There are some components two types detergents share in common, which are surfactant, scale inhibitor, chelating agents, optical brightener, water softener, enzyme, colorants, Biocide and anti-redeposition agent, all the additives original are China and are analogue to brand manufacturers like BASF with same CAS and same content.

### Surfactant for detergent

Surfactants are one of key additives that make up a detergent and are classified into four groups below

1. Anionic detergents
2. Cationic detergents
3. Non-ionic detergents
4. Amphoteric detergents

Baoxu chemical offers broad range of surfactants in detergent as table 1 below,

Table 1 surfactants in detergent

Category	Item name	CAS number
Surfactant	BX SLES 70	68891-38-3
	BX 10EO	68439-49-6

	BX LAB	67774-74-7
	BA CAB	61789-40-0
	BA DMA14	68439-70-3
	BA AEO9	68439-50-9
	BX Esterquat	91995-81-2
	BX MES	40754-59-4
	BX Tween	9005-65-6

### Scale inhibitor for detergent

Limescale Inhibitors are used in areas of hard water where limescale build up can create a fur fouling in plumbing or electrical appliances such as kettles, boilers, washing machines, dishwashers and showers. Baoxu chemical offer inhibitor agents in detergent as table 2 below

Table 2 chelating agents in detergent

Category	Item name	CAS number
Inhibitor agents	BX DTPMP 7NA	22042-96-2, 68155-78-2
	BX HEDP 4NA	29329-71-3, 3794-83-0

### Chelating agents for detergent

Chelating agents are used to surround unwanted metal ions found in cleaning solutions. Tetrasodium Glutamate Diacetate GLDA-4Na and Tetrasodium EDTA 4Na are the most commonly used chelating agent in detergent.

Table 3 Cheating agent in detergent

Category	Item name	CAS number
Cheating agents	BX GLDA 4NA	51981-21-6
	BX EDTA 4NA	13235-36-4, 64-02-8.

### Optical brightener for detergent

Optical brighteners are colorless to weakly colored organic compounds. When present on a substrate, optical brighteners absorb primarily invisible ultraviolet light in the 300-400 nanometer (nm) range and re-emit in the visible violet-to-blue fluorescent light to yield a brighter, fresher appearance. They are designed to brighten colors or mask yellowing in plastics, lacquers, paints, inks, detergent and paper. Baoxu chemical offer optical brightener agents in detergent as table 4 below

**Table 4 optical brightener agent in detergent**

Category	Item name	CAS number
optical brightener	BX OBA CBS-X	27344-41-8
	BX OBA DMA-X	16090-02-1
	BX OBA DMS-X	16090-02-1

### **Water softener for detergent**

Sodium citrate is used to balance pH levels and as a water softener. It is also used in cosmetics such as make-up and lipstick, in baby products like wipes, in soaps and, of course, laundry detergents. Trisodium citrate is used as an alternative to trimer sodium phosphate in the production of detergents and liquid detergents that do not contain phosphorus. Baoxu chemical water softener in detergent as table 5 below

**Table 5 water softener in detergent**

Category	Item name	CAS number
water softener	BX Trisodium Citrate	6132-4-3
	BX Sodium triphosphate	7758-29-4

### **Enzyme for detergent**

Enzymes are catalysts that increase the rate of chemical reactions occurring in a variety of biological processes including digestion and growth. In the detergent industry, commercial enzymes are used to provide a higher degree of stain removal, whiteness, fabric and color care and overall cleaning performance.

Proteases, lipases, amylases are the major class of detergent enzymes, each provides specific benefits for application in laundry and automatic dishwashing. Baoxu chemical water enzymes in detergent as table 6 below

**Table 6 enzymes in detergent**

Category	Item name	CAS number
Enzyme	BX multienzyme 3G	Protease 9014-01-1
		Amylase 9000-90-2
		Lipase 9001-62-1
	BX multienzyme 5G	Protease 9014-01-1
		Amylase 9000-90-2
		Pectinase 9032-75-1
	Cellulase 9012-54-8	
	Mannanase 37288-54-3	

## Colorants for detergent

Colorants gives color to detergent, titanium dioxide are the most common white pigments. We, baoxu chemical offer the most comprehensive titanium dioxide made in china, in original packages. Baoxu chemical water colorants in detergent as table 7 below.

Table 7 colorants in detergent

Category	Item name	CAS number
colorants	Dyes for polymers	many
	Titanium dioxide	13463-67-7

## Biocide for detergent

Detergents with a biocidal action include disinfectants, sanitisers, antimicrobials, antibacterials and any detergents with biocidal activity. Detergents that contain biocidal active substances must comply with the Biocidal Products Regulation in addition to complying with the Detergent Regulation. Baoxu Chemical offer MBS and CIT/MIT biocide for detergent as table 8 below.

Table 8 Biocide in detergent

Category	Item name	CAS number
Biocide	BX MBS 5050	2634-33-5,2682-20-4
	BX CIT/MIT	26172-55-4

## Anti-redeposition agent for detergent

Polyvinylpyrrolidone and Carboxy methyl cellulose are typical Anti re-deposition agent in detergent and Polyvinylpyrrolidone is also typical anti dye-transfer agent.

Category	Item name	CAS number
anti-redeposition agent	Carboxy methyl cellulose	9004-32-4
	Polyvinylpyrrolidone K90	9003-39-8

## Bleaching agent for detergent

Category	Item name	CAS number
Bleaching Agent	Sodium Percarbonate	15630-89-4