

## WATER TREATMENT DEFOAMER & FLOCCULANTS

### DEFOAMERS/ANTIFOAM AGENTS

Defoamers / Antifoams are chemical additives that reduce and hinder the formation of foam in industrial processes thereby improving the production capacity. These additives are insoluble in the foaming medium and have surface active properties. Affinity of defoamer to air-liquid surface destabilizes the foam lamellas causing rupture of air bubble and breakdown of surface foam. Entrained air bubbles are agglomerated and the larger bubbles rise to the surface of the bulk liquid more quickly.

### RISKS RELATED TO EXCESSIVE FOAMING

- Uncontrolled excessive foaming
- Spillage of foam onto walkways and grating, slipping hazard
- Airborne Foam causing respiratory health issue
- Messy and hazardous foam deposits on nearby structures and equipment
- High labour and extra time to clean up
- Pump cavitations due to foam leading to premature pump failure, loss of process control

### FLOCCULANTS

Flocculants are polyelectrolytes having several polar groups in the molecular chain, it can form bridge among particles by absorbing suspended solid particles in wastewater and condense particle into big flocs by neutralizing charges. It can speed up sedimentation of particles in suspensions and excels in speeding up purification of solutions and promoting filtration.

Flocculating Polyelectrolytes are of various types with different molecular weights such as low molecular weight, medium molecular weight, high molecular weight and ultra-high molecular weight and ionic charges such as Anionic Polyelectrolyte, Cationic Polyelectrolyte and Non-Ionic Polyelectrolyte.

These polyelectrolytes are widely recommended for their application as

- Dewatering Polyelectrolyte(DWPE)
- Deoiling Polyelectrolyte(DOPE)



## SILICONE FREE DEFOAMERS

PRODUCT NAME	COMPOSITION	SOLID CONTENT	APPLICATION	PRODUCT NAME	COMPOSITION	SOLID CONTENT	APPLICATION
TRIOBAN E 27 D	A thick emulsion of organic fatty acid, glycols blended surfactants waxes, mineral	26%	To knockdown foam during Pulping, Brown Stock washing & Recycle of Waste water in Paper Mills & Waste Water Treatment General purpose.	TRIOBAN 2SDXL	An emulsion made from Mineral Oil and non ionic surfactants	20 ± 2 %	Defoamer used for Waste water treatment.
TRIOBAN EDCO 55	A Blend of oil with performance based additives & surfactants	50 ± 2%	Defoamer use for Waste Water Treatment.	TRIOBAN PC NSDL	A blend of mineral oil with fatty acid esters.	98-100 %	Effective defoamer for waste water treatment

## SILICONE BASED DEFOAMERS

PRODUCT NAME	COMPOSITION	SOLID CONTENT	APPLICATION	PRODUCT NAME	COMPOSITION	SOLID CONTENT	APPLICATION
TRIOBAN SD 08	Combination of Poly dimethyl siloxane with emulsifier surfactants &	8 ± 1%	Waste Water Treatment & various general chemical processing applications. It helps in maintaining regulatory compliance. Effective in many waste water systems and industrial processes.	TRIOBAN ULTRA 15	A combination of Siloxane with non-ionic emulsifier	15 ± 2 %	It is effective silicone defoamer catering multiple application in waste water treatment
TRIOBAN DS 20	A Proprietary blend of Polydimethyl Siloxane and Silica, Polyether Silicones, Surfactants.	20 ± 2%	It is a silicone based Defoamer catering to multiple applications in waste water treatment.	TRIOBAN SD 30	A proprietary blend of Polydimethyl Siloxane with non ionic surfactants Silica and Polyether Silicones.	28 ± 2%	Eliminates troublesome foaming conditions in a variety of application areas. Protects expensive process equipments where can lead to production and asset threatening issues.

## CATIONIC FLOCULANTS

PRODUCT NAME	COMPOSITION	SOLID CONTENT	APPLICATION	PRODUCT NAME	COMPOSITION	SOLID CONTENT	APPLICATION
TRIOFLOC 830P	Copolymer of acrylamide with cationic component	>90%	Polyacrylamide is used for sludge dewatering, treating industrial waste water, sewage and purifying water, filtering aid	TRIOFLOC PDC 340	PolyDADMAC	>40%	Sludge conditioning flocculant in the industrial sewage treatment, municipal sewage treatment and waste water treatment system. Especially in treating original sewage and disposing wastewater, food wastewater, fermentation
TRIOFLOC 1004F	Acrylamide copolymer	85-95%	Polyacrylamide is used for sludge dewatering, treating industrial waste water, sewage and purifying water, filtering aid	TRIOFLOC 811P	Cationic Polyacrylamide	>90%	It is used in almost every industry as a major flocculants for treating waste water
TRIOFLOC 810P	Cationic Polyacrylamide	>90%	It is used in almost every industry as a major flocculants for treating waste water				

## ANIONIC FLOCULANTS

PRODUCT NAME	COMPOSITION	SOLID CONTENT	APPLICATION	PRODUCT NAME	COMPOSITION	SOLID CONTENT	APPLICATION
TRIOFLOC 529P	Polyacrylamide	88%	Used for industrial solid-liquid separation process, including settlement, to clarify, concentrate and sludge dewatering processes, urban sewage treatment, paper, food processing, petrochemical, metallurgical processing, dyeing, sugar and all kinds of	TRIOFLOC 14039	Polyacrylamide	MINIMUM 90%	It is effective at very low dosage levels, and works over a wide pH range and does not alter pH in the system, larger and faster settling flocs are formed in gravity settling operations. Higher solids capture, increased clarity, and greater throughput are attained in centrifugation.
TRIOFLOC 1001 F	Sodium	MINIMUM 88%	Works effectively as a flocculation aid or sludge conditioning agent in numerous solid - liquid separation process.	TRIOFLOC H 279	Anionic polyacrylamide	MINIMUM 90%	It is used as flocculants in solid/liquid separation in all ETPs for primary clarification, sedimentation and thickening. As a de-watering agent in centrifuge, belt press and flocculation.
TRIOFLOC 1404	Polyacrylamide	MINIMUM 90%	It is effective at very low dosage levels, and works over a wide pH range and does not alter pH in the system, larger and faster settling flocs are formed in gravity settling operations. Higher solids capture, increased clarity, and greater throughput are attained				