TRATAMIENTO DE AGUA RESIDUAL

ANIONIC FLOCCULANT

Characteristics	**Process Name**	**Description / Key Features**	**Operation parameters** (dosage of application)	**Ecology**
Anionic Powder Polymer 100% active polymer Charge density: 40%	OMEGA AP-2040	Flocculation of Neutralized Solids. Maximum use-cost applications	Prepare at a 0.12% solution. 5 to 25 ppm	Less packaging material, less transport cost
Anionic Liquid Polymer A Hydrated solution 'Ready-to-use' Charge density: 40%	OMEGA AP-2140	Flocculation of Neutralized Solids Ready-to-use formula for small systems	Prepare at a 10% to 100% solution. 100 to 200 ppm	
Anionic Liquid Polymer Emulsion concentrate Charge density: 32%	OMEGA AP-2210	Flocculation of Neutralized Solids For large systems	Prepare at a 0.1% Solution. 0.5 to 15 ppm	Less packaging material, less transport cost

ANTIFOAM

Characteristics	**Process Name**	**Description / Key Features**	**Operation parameters** (dosage of application)	**Ecology**
Silicone with dispersant for maximum foam kill	OMEGA SAF-10	A multi-purpose application foam control agent	Apply at full strength or at any desirable dilution. 20 to 100 ppm	Silicone base provides minimal organic loading. A low contribution to BOD*/COD*
All organic formulation of a non-silicone and non-hydrocarbon nature	OMEGA OAF-88	For use when silicone and/or hydrocarbons are prohibited in use	Apply at full strength. 100 to 200 ppm	All organic in composition, no hydrocarbons Low contribution to BOD*/COD*
All organic hydrocarbon based formulation	OMEGA OAF-100	Ideal for large systems requiring a rapid foam removal	Apply at full strength. 25 to 200 ppm	

BCCHEMICAL

INORGANIC COAGULANT - CATIONIC POLYMER BLEND

Characteristics	**Process Name**	**Description / Key Features**	**Operation parameters** (dosage of application)	**Ecology**
Coagulant inorganic A mixed chloride based solution	OMEGA C-3112	Multiple cation-based formulation neutralizes a wide range of wastewater solutions	Applied to wastewater collection and neutralization tanks. 50 to 1000 ppm.	High affinity for phosphorus removal
Coagulant inorganic A reacted aluminum solution with proprietary metal precipitant	OMEGA C-3114	Metal Finishing and Metal Processing wastewaters. Highly effective for both metal and organic removal	Applied to wastewater collection and neutralization tanks. 50 to 1000 ppm	THE product of choice for systems required to meet toxicity criteria.
Coagulant inorganic A reacted aluminum – calcium solution	OMEGA C-3115	Metal Finishing and Metal Processing wastewaters. Excellent for organic acid neutralization and treatment of trivalent passivates	Applied to wastewater collection and neutralization tanks. 100 to 1000 ppm	

CATIONIC POLYMER

Characteristics	**Process Name**	**Description / Key Features**	**Operation parameters** (dosage of application)	**Ecology**
Medium molecular weight EPI-DMA based polymer (quaternary amine) Charge density: high	OMEGA CP-1154	Improves solids neutralization and density	Usually diluted to a 10% solution before application. Metal finishing application dosage: 20 to 100 ppm	Can be used to split oil from cleaners extending cleaner life.

BCCHEMICAL

INORGANIC COAGULANT - CATIONIC POLYMER BLEND

Characteristics	Process Name	Description / Key Features	Operation parameters (dosage of application)	Ecology
Iron – cationic polymer blend Ferric form with cationic polymer	OMEGA BP-4123	For metallic, organic, and suspended solids control. Excellent for rapid solids neutralization and conditioning. Produces a dense and rapidly settled floc formation	Usually applied at full strength. Can also be diluted. 50 to 1000 ppm	High affinity for phosphorus and oil & grease removal.
Aluminum – cationic polymer blend Alum form with cationic polymer	OMEGA BP-4145	For metallic, organic, and suspended solids control.	Usually applied at full strength but can be diluted. 50 to 1000 ppm	
Aluminum, Calcium and cationic polymer blend Chloride form	OMEGA BP-4188	For metallic, organic, and suspended solids control.	Apply at full strength. 50 to 1000 ppm	High affinity for phosphorus and oil & grease removal.

CATIONIC POLYMER

Characteristics	Process Name	Description / Key Features	Operation parameters (dosage of application)	Ecology
Medium molecular weight EPI-DMA based polymer (quaternary amine) Charge density: high	OMEGA CP-1154	Improves solids neutralization and density	Usually diluted to a 10% solution before application. Metal finishing application dosage: 20 to 100 ppm	Can be used to split oil from cleaners extending cleaner life.
High molecular weight Polyamine based polymer Charge density: high	OMEGA CP-1162	Surfactant neutralization of wastewaters	Applied at full strength but can be diluted as required. Metal finishing application dosage: 50 to 100 ppm	Surfactants can be denatured in some applications lowering BOD*/COD* effluent demand.
Very high molecular weight Polyamine based polymer Charge density: very high	OMEGA CP-1169	A strong charge neutralizer for aggressive wastewaters	A viscous material – always dilute to a 5% to 10% solution before use. Metal finishing application dosage: 50 to 100 ppm	

BCCHEMICAL

METAL PRECIPITANT

Characteristics	Process Name	Description / Key Features	Operation parameters	Ecology
DMTC-based Dimethyldithio-carbamate based metal precipitant	OMEGA MP-5140	Metal sulfide formation to assist in metal precipitation Metal reduction to <1.0 ppm range High affinity for copper and nickel ions. Use at any pH range.	Applied at pH levels of 1 to 12 for metal complexing. Reaction time of 30 minutes is desired	
Specialty blend: Inorganic sulfide-DMTC mixture	OMEGA MP-5152	Specialty blend for enhanced metal precipitation Metal reduction to <0.5 ppm range High affinity for zinc and nickel ions. Must be applied above pH 8.0 in application Excellent for Zn/Ni alloy applications	Applied at pH levels of 7 to 12 for metal complexing. Reaction time of 30 minutes is desired	
Inorganic sulfide-based Inorganic sulfide buffered with an alkaline base	OMEGA MP-5165	Metal sulfide formation to assist in metal precipitation Metal reduction to <0.5 ppm range High affinity for zinc and chrome ions. Must be applied above pH 8.0 in application	Applied at pH levels of 8 to 12 for metal complexing. Reaction time of 30 minutes is desired	

*** BOD: Biological Oxygen Demand / COD: Chemical Oxygen Demand**

GUIDE OF APPLICATION: NEUTRALIZATION

The following should be used as a 'general guideline' of product affinity for various types of General Metal Finishing (GMF) and Metal Processing (MF) applications.

Product affinity	Passivates	Zn	Ni	Cu	Enhanced metal removal	Phosphate	Surfactants	Improved solids agglomeration	Chelated solutions
C-3112	X					X		X	
C-3114	X	X	X		X		X	X	X
C-3115	X			X		X			X
BP-4123		X	X		X	X		X	
BP-4145				X	X			X	
BP-4188	X	X		X	X	X	X	X	X
CP-1154					X			X	
CP-1162					X		X	X	
CP-1169								X	
MP-5140			X	X	X				X
MP-5165		X		X	X			X	X

GUIDE OF APPLICATION: FLOCCULATION

The following should be used as a 'general guideline' of product affinity for flocculation of neutralized and conditioned solids.

Product affinity	Smaller applications <5,000 US Gallons / day <18,000 L / day	larger applications >5,000 US Gallons / day >18,000 L / day	Product dilution for application	Product dilution requirements
AP-2140: prepared liquid	X		Not required	If desired: 10%
AP-2040: powder		X	Yes	0.12%
AP-2210: emulsion		X	Yes	0.1%

BCCHEMICAL