Poly Aluminium Chloride (PAC)

Chemical Specification:

Product Name : Poly Aluminium Chloride
Apperance : Yellow & White
Aluminium Oxide (Al_2O_3) Content : 31.2%
Basicity : 87%
pH : pH of 5% Solution 2.5 to 4.5
Iron Content : 2%
Heavy Metal : 0.0020%
Chloride as C1 : 30
Packaging : 25 kg/bag

Application:

- Removes suspended Solids (Coagulant)
- Reduce Chemical Oxygen Demand
- Removes Phosphorus
- Sludge dewatering

Plymer (Poly-Electrolyte)

Specification:

Product : Anionic and Catinoic Type
Parameter : White fine-sand shaped powder
Physical Form : Colorless or light yellow colloid
Ionic Nature : 90.0
Molecular Weight : 15 million~20 million
Charge Density : 10-40
pH Range (Effective) : 6.0-9.0
Bulk Density : 0.6-0.8 g/cm3
Solubility in Water : Completely soluble
Viscosity (1% solution) : 1000-3000 cps
Shelf Life : 2 years (stored in dry conditions)
Packaging : 25 kg bags or 500 kg jumbo bags

Application:

- **Acts as a flocculant in raw water clarification, sewage treatment, and industrial effluent processing.**
- **Aids in sludge thickening and dewatering for municipal and industrial plants.**
- **Reduces turbidity and enhances solid removal in sedimentation and filteration units.**

Activated Carbon

Coconut Shell Activated Carbon:

NEERSORB™ 830C_SPL is a coconut shell based granular activated carbon produced by steam activation at 900-11000° C by through rotary kiln process. **NEERSORBTM 830°C_SPL** is a super low ash activated carbon used in Condensate Polishing Unit (CPUs) where silica leaching is critical and chloride & Fe content should be minimal. **NEERSORBTM 830°C_SPL** meets or exceeds **IS, AWWA** standards well as NSF 61 for potable water treatment.

Product Specification:

S. No.	Test Parameter	Specifications
1.0	Iodine Number, mg/g	1050 min
2.0	BET Surface Area, mg^2/gm	1000 min
3.0	Moisture, % as packed	Not more than 5.0% w/w
4.0	Ash content	0.5 max
5.0	Hardness No	98 min
6.0	pH	6-8
7.0	Uniformity Coefficient	1.8 max
8.0	Bulk Density, g/ml	0.49 ± 0.3
9.0	Mesh Size (US Sieve Series) Greater than 12 mesh, % Less than 35 mesh, %	5 max 5 max

- Silica leaching less than 50 ppb after 50 bed volume, Retention time 10-15 min

Water De-coloring Agent

Chemical Specification:

Product Name : Water Decoloring Agent
Chemical Name : Poly Diallyl Dimethyl Ammonium Chloride
Appearance : Colorless to light yellow, viscous liquid.
Iconicity : Cationic.
pH (1% solution) : 4.0
Solid Content : 56.66%
Viscosity : 50-500 mPa·s (varies with concentration and polymer type)
Specific Gravity (25°C) : 1.1-1.3
Solubility in Water : Easily soluble in water at all concentrations
Storage : Store in a cool, dry place, away from direct sunlight and freezing. Protect from moisture. Recommended storage temperature: 5°C-35°C.
Shelf Life : 12 months under proper storage conditions.

Application:

1. Helps to remove different kinds of synthetic dyes.
2. Reduces lignin and other color-causing compounds on paper and pulp mills
3. Helps treat artificial colors from the food and beverage industry.

Antifoaming Agent

Specification:

Appearance : Milky white liquid or clear emulsion
Chemical Nature : Silicone-based or non-silicone organic blend
Specific Gravity : 0.95-1.05
pH Range (as supplied) : 6.0-8.0
Solubility : Dispersible in water
Flash Point : > 100° C (non-flammable)
Dosage : 10-100 ppm (varies with application)
Shelf Life : 12-24 months (sealed & stored properly)
Packaging : 25 kg HPDE drums / 200 kg barreks / 1000 L IBC tanks

Application:

- **Prevents and eliminates foam in aeration tanks, clarifiers, and effluent discharge**
- **Useful in membranen bioreactor (MBR) and dissolved air flotation (DAF) systems**
- **Controls foam in chemical dosing tanks during flocculation/coagulation.**

Anion Exchange Resin

Chemical Specification:

Product Name : TRILITE MA-12
Ionic Form : Cl^-
Shipping Density : 670 g/l
Particle Density : 1.08
Particle Density : 575±50 μm
Moisture Retention : 49~55%

Application:

1. Demineralization of water by removing anions
2. Removing Silica.
3. Removing TOC
4. Scavenging Chloride
5. Removing Acid

Cation Exchange Resin

Chemical Specification:

Product Name : TRILITE MC-08
Ionic Form : Na^{2+}
Shipping Density : 845 g/l
Particle Density : 1.28
Particle Density : 600±50 μm
Moisture Retention : 43~49%

Application:

1. To remove the hardness of the water.
2. Deionization of water.
3. Reducing alkalinity.
4. Removing heavy metals.
5. Removing ammonia.

Ferrous Sulphate

Specification:

- **Chemical Formula :** $FeSO_4.7H_2O$
- **CAS Number :** 7782-63-0
- **Appearance :** Pale green crystals or powder
- **Iron (Fe^{2+}) Content :** ≥ 19%
- **pH (1% Solution) :** ~3.5 - 4.5
- **Solubility in Water :** Fully soluble

Application:

- **Removes phosphates, sulfides, and heavy metals**
- **Conditions sludge for better dewatering**
- **Acts as a coagulant to remove turbidity and improve clarity**
- **Reduces hydrogen sulfide generation in anaerobic systems**

Caustic Soda

Chemical Specification:

Chemical Formula: : NaOH
CAS Number: : 1310-73-2
Appearance: : white and crystalline, often appearing as flakes or pellets
NaOH: : 98.51 %w/w
Na2CO3 : 0.28 %w/w
NaCl : 60.00 ppm
Fe : 7.50 ppm
Cu : <2.00 ppm

Application:

1. It is used to neutralize or adjust the pH in different wastewater plants.
2. Steps like coagulation, flocculation, and disinfection work in a specific pH range, and caustic helps to attain that range.
3. It helps to remove heavy metals by removing dissolved heavy metals.
4. Sometimes it works as a coagulation and flocculation Aid.
5. It helps to regenerate ion exchange resins.

Hydrochloric Acid (HCl)

Chemical Specification:

Chemical Formula : HCl
Appearance : Colorless to slightly yellow, fuming liquid (depending on concentration and impurities)
Odor : Pungent, irritating odor
Concentration (Commercial Grade) : 30%-36% by weight (higher concentrations are available but less common for general water treatment due to fuming and handling difficulties)
pH (1% solution) : <1.0 (highly acidic)
Specific Gravity : 1.15-1.19 (for 30%-36% solutions)
Solubility in Water : Completely miscible (soluble) in water at all concentrations.
Boiling Point : Varies significantly with concentration (e.g., 108.58°C for 20.2% HCl constant boiling azeotrope)
Freezing Point : Varies significantly with concentration (e.g., -46.2°C for 30% HCl, -30.2°C for 36% HCl)
Storage : Store in corrosion-resistant containers (e.g., plastic-lined steel, fiberglass reinforced plastic, or specialized plastics like HDPE). Keep in a cool, well-ventilated area, away from strong bases, oxidizing agents, and metals. Avoid direct sunlight and extreme temperatures.
Shelf Life : Indefinite if stored properly in sealed containers.

Application:

1. Helps to adjust the pH for alkaline wastewater
2. Helps to regenerate cation exchange resin.
3. To remove mineral scale deposition from equipment like pipes, heat exchangers, and RO membranes.

Aluminium Sulphate

Specification:

Product : Alum
Chemical Formula : $Al_2(SO_4)_3.18H_2O$
CAS Number : 10043-01-3
Appearance : White to off-white crystaline solid or powder
Al_2O_3 Content : 16% - 17% (typical)
pH (1% Solution) : ~3.0-3.5
Solubility in Water : Fully soluble
Iron Content (Fe) : ≤ 0.01%
Packaging : 25 kg bags / 50 kg bags / Bulk
Shelf Life : 1 year (dry condition)

Application:

- **Coagulates fine suspended solids for improved sedimentation and filtration.**
- **Reduce turbidity and color in surface water**
- **Removes phosphorus and other dissolved impurities**
- **Used in both domestic and industrial effluent treatment**

Calcium Hypochlorite

Specification:

Chemical Formula : Ca(ClO)2
Appearance : White or off-white granular, powdered, or tablet form.
Odor : Strong chlorine odor.
Available Chlorine Content : 66.6% by weight.
Solubility in Water : Slowly soluble in water, forming hypochlorous acid and hypochlorite ions (ClO-), which are the active disinfecting agents. Leaves a slight calcium residue.
pH (1% solution) : 11.40
Stability : More stable than sodium hypochlorite solution, especially in storage, but can decompose in the presence of heat, moisture, organic matter, or contaminants.
Storage : Store in a cool, dry, well-ventilated area, in tightly sealed, non-combustible containers. Keep away from heat sources, direct sunlight, organic materials, acids, and easily oxidizable substances. Calcium hypochlorite is an oxidizer and should be stored separately from other chemicals.
Shelf Life : Generally 1-2 years if stored properly, though available chlorine content may slowly decrease over time.

Application:

- kills a wide range of bacteria and other micro-organism.
- It can oxidize various organic and inorganic contaminants.
- Easy to transport because of its solid form so best to use in remote or decentralized system.
- Odor and Biofilm control.
- Effectively

Nitric Acid

Specification:

Chemical Formula : HNO3
CAS No : 7697-37-2
Appearance : Colorless to yellowish liquid (yellowing is due to decomposition into nitrogen oxides, especially when exposed to light). Concentrated solutions can fume in air.
Specific Gravity : 1.408
HNO3 : 68.2%
HNO2 : 2 PPM
Cl : 0.01 PPM
Fe : 0.2 PPM
Ig-Residue : 2.0 PPM
Pb : 0.01 PPM
Arsenic : 0.01 PPM

Application:

- Preservation and cleaning of stainless steel equipment.
- Nutrient Source for Biological Treatment.
- Metal Removal

Citric Acid

Chemical Specification:

Product Name : Citric Acid Monohydrate
Chemical Formula : $C_6H_8O7.H_2O$
CAS Number : 5949-29-1
Type : Acidity Regulators, Chewing Gum Bases, Colorants, Emulsifiers
Appearance : White or almost white, Crystalline Powder
Odor : Odorless
Purity : 100%
Moisture Content : 8.63%
Heavy Metal : <5mg/kg
Shelf life : 36 months
Package : 25 KG/BAG
Packaging : 25kg/bag
Grade : Food grade

Application:

1. Descaling and Cleaning of Equipment
2. Chelating Agent
3. pH Adjustment
4. Corrosion inhibitor

Sodium Hypochlorite (Hypo)

Chemical Specification:

Chemical Formula: : NaClO
CAS Number: : 7681-52-9
Appearance: : A clear, pale yellow/ yellowish-green liquid
Specific Gravity: : 1.206
NaOH: : 1.49 %w/v
Available Chlorine: : 12.44 %w/v

Application:

1. Hypo nutrilizes a broad spectrum of microorganisms like bacteria, viruses, and others.
2. Control Algae and organic matter in raw water.
3. Oxidize dissolved iron, manganese, and hydrogen sulfide.
4. Break down pollutants and reduce nutrient overload.
5. Reduces COD

Sulfuric Acid

Specification:

Product Name : Sulphuric Acid 98% (Food Grade)
CAS No : 7664-93-9
Appearance : Colorless to slightly colored, clear to hazy liquid
Concentration : 98%
Specific Gravity : 1.83
Iron Content : 5 PPM

Application:

- Helps to adjust the pH of highly basic effluent.
- While regenerating ion exchange resin
- Cleaning and descaling

Italmatch RO Chemicals

Silica Selective AntiScalant

Physical and chemical product properties

Appearance	clear yellow liquid
pH	2.5
Boiling point	> 100° C
Specific gravity (20° C)	1.23
Flash point	nonflammable aqueous solution

◉ Chemical reactivity

DEQUEST SPE 0108 is not affected by chlorine or other oxidizing biocides. DEQUEST SPE 0108 should be injected in membrane systems after chlorine and sodium metabisulphate with residual cationic polymers from the pre-treatment.

◉ Application and dosage level

DEQUEST SPE 0108 is an aqueous solution and corrosive in it's concentrated form. Corrosion resistant dosing equipment must be used. Suitable materials are PVC, Glass lining, Glass reinforced plastic, PP or HDPE.
The dosage level is dependent on the quality of the feed water.
Recommended injection point is into the feedwater, downstream of any filteration equipment and cartridge filters housings. DEQUEST SPE 0108 is miscible with water in all propertions. It may be applied as neat product, or as a solution in permeate water. A minimum dosing Solution strenght of 10% us recommended.

◉ Packaging and shelf life

DEQUEST SPE 0108 is available in 25 kg pails, 250 kg drums.

Italmatch RO Chemicals

General Purpose AntiScalant/Antifoulant

Physical and chemical product properties

Appearance	clear yellow liquid
pH	2.5
Boiling point	> 100° C
Specific gravity (20° C)	1.23
Flash point	nonflammable aqueous solution

◉ Chemical reactivity

DEQUEST SPE 0111 is not affected by chlorine or other oxidizing biocides. DEQUEST SPE 01111 should be injected in membrane systems after chlorine and sodium metabisulphate treatment. DEQUEST SPE 0111 is not compatible with resideal cationic polymers from the pre-treatment.

◉ Application and dosage level

The dosage level of DEQUEST SPE 0111 is dependent on the quality of the feedwater.
Recommended injectionpoint is into the feedwater, downstream of any filteration equipment and cartridge filters.
DEQUEST SPE 0111 is miscible with water in all proportions. It may be applied as neat product, or as a solution in permeate water. A minimum dosing solution strength of 10% is recommended.

◉ Packaging and shelf life

DEQUEST SPE 01111 is available in 25 kg pails, 290 kg drums.