IS 15573: 2018 Polyaluminium Chloride (*First Revision*)

Polyaluminium chloride (PAC) is a versatile water treatment chemical that plays a crucial role in the coagulation and flocculation processes. PAC is highly effective in removing suspended particles from water, making it an essential component in applications such as drinking water purification, wastewater treatment, and paper manufacturing. Its ability to operate efficiently over a wide pH range enhances its appeal, as it can adapt to varying water quality conditions while providing consistent performance.

One of the key advantages of PAC is its lower corrosiveness compared to other aluminum salts, making it safer for handling and use in industrial processes. Additionally, PAC contributes to the effective removal of organic matter and heavy metals, thereby improving water quality and treatment efficiency. As a result, it is increasingly favored by municipalities and industries looking for reliable solutions to achieve cleaner water and meet regulatory standards in water treatment.

Polyaluminium chloride (PAC) is a general name given to polyaluminium chloride compounds, namely polyaluminium chloride hydroxide and polyaluminium chloride hydroxide sulphate, general chemical formula of which is mentioned below along with CAS No:

Chemical Formula		CAS No.
$[Al(OH)_a Cl_b]_n$	a = 2.5, b = 0.5	12042-91-0
($n \approx 15$) and	a = 2, b = 1	10284-64-7
	a and b variable	1327-41-9
	(a > 1.05)	
$[A1(OH)_a Cl_b (SO_4)_c]_n$	a, b and c variable	
($n \approx 15$)	a > 1.05	39290-78-3

This standard prescribes the characteristics, requirements, and methods of sampling and test for polyaluminium chloride liquid and powder each of two types: (a) Medium basicity, and (b) High basicity, both grades are effective coagulant for the treatment of low to high turbidity surface raw water for drinking purposes. Various physico-chemical properties including Aluminium content and various heavy metals impurities and their test methods have been stipulated in the standard.