

EVERYDAY CHEMICALS: ALUMINIUM CHLORHYDRATE

Aluminium chlorohydrate is an inorganic polymer, with the general formula $\text{Al}_n\text{Cl}_{3n-m}(\text{OH})_m$. It is synthetically produced from other aluminium compounds, and is a common active ingredient in anti-perspirants, along with other aluminium-containing compounds. It also finds applications in water treatment.

ANTIPERSPIRANTS

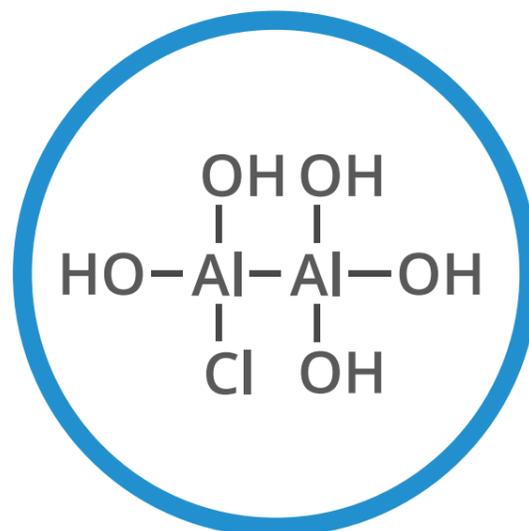


Aluminium chlorohydrate is the active ingredient in many anti-perspirants, used at a concentration of 10-25%. The exact manner in which it helps prevent perspiration has been debated, but it is now generally accepted that it forms a gelatinous aluminium hydroxide-protein gel, which acts to obstruct the sweat glands.

OTHER ALTERNATIVES

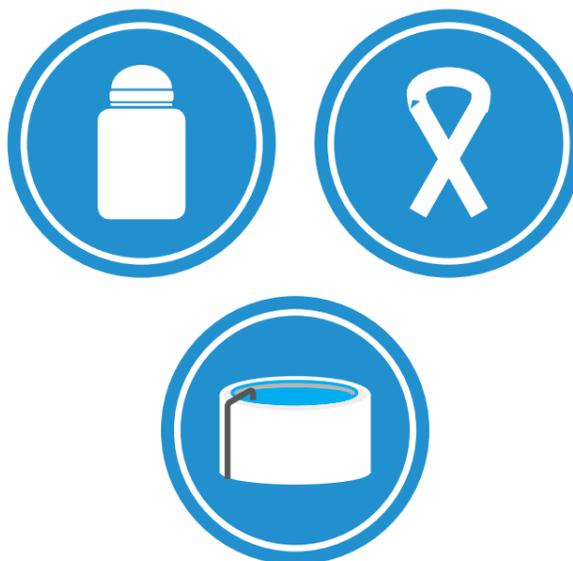


A range of similar aluminium-containing compounds can also be found in antiperspirants, and act to prevent perspiration in a similar manner. Generally, they are either types of aluminium chlorohydrates, or aluminium zirconium chlorohydrates. Aluminium zirconium chlorohydrates are thought to be more effective.



ALUMINIUM CHLOROHYDRATE

White powder



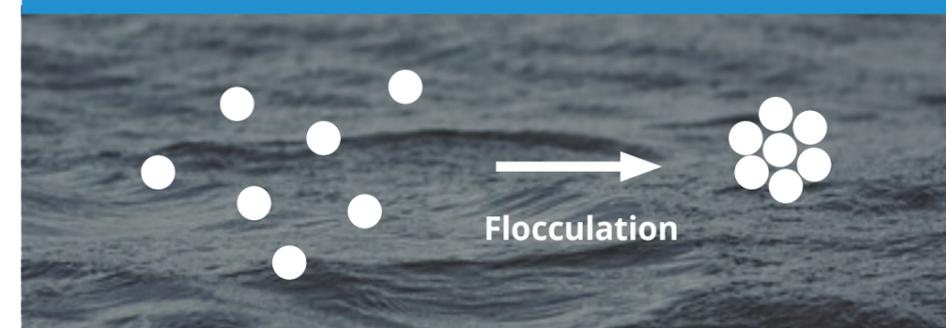
SAFETY

0.012%

Amount of aluminium absorbed through the skin from antiperspirants

There is no scientific evidence that aluminium compounds in anti-perspirants can cause cancer, despite claims to the contrary. Research shows that only 0.012% of aluminium contained in anti-perspirants is absorbed through the skin. This is less than would be expected to be absorbed from food during the same time.

WATER & WASTE MANAGEMENT



Aluminium chlorohydrate is also commonly used in water and waste management processes to help remove dissolved organic matter and small particles of impurities. It acts as what is known as a 'flocculating agent', causing particles to lump together so they can then be removed from water.

