

Activated ALOXICOLL® P

Enhanced Efficacy Antiperspirant Active

INCI Name: Aluminum Chlorohydrate

Empirical Formula: $\text{Al}_2(\text{OH})_5\text{Cl} \times n\text{H}_2\text{O}$

Description

Activated ALOXICOLL® P is an enhanced efficacy antiperspirant active, providing improved sweat reduction over standard Aluminium Chlorohydrate powder, ALOXICOLL® PF40. The increase in efficacy is attributed to an activation step, which causes a change in the polymer distribution. This can be measured by HPLC. A shift of polymers from bands 1 and 2 to band 3 indicates an enhanced sweat reduction.

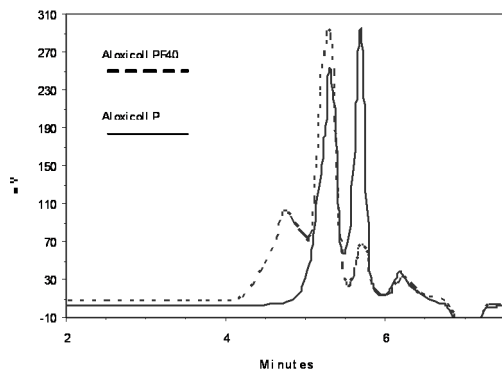
Chemical Properties

Activated ALOXICOLL® powders are stable under anhydrous conditions. Aqueous / alcoholic solutions of ALOXICOLL® are slightly acidic. At pH values > 5, insoluble $\text{Al}(\text{OH})_3$ precipitates out. On drying, the residue decomposes to HCl and $\text{Al}(\text{OH})_3$. On further heating, to temperatures >100°C, $\text{Al}(\text{OH})_3$ releases water.

Application

Activated ALOXICOLL® powders are used in anhydrous formulations, e.g. in aerosols, roll-ons, soft solids, creams and sticks, where maximum antiperspirant efficacy is required. The enhanced efficacy can only be maintained in anhydrous systems, and contact with water should be avoided prior to application to the skin.

Activated ALOXICOLL® P powder has a fine particle size distribution and high surface area, which lend improved stability to suspensions and allow rapid release of the active. It is ideal for use in aerosols, suspension roll-ons, soft-solids, creams and sticks.



General Data

Form	yellowish white powder
Aluminium	25,4 - 26,4 %
Chloride	16,4 - 17,4 %
Al : Cl	1,91 - 2,10
Iron	max. 120 ppm
Heavy metals [as Pb]	max. 20 ppm
pH [15 % solution]	4,0 - 4,8
Particle Size	99 % < 45 µm



Raw Materials / Trade name	INCI name	w/w [%]
DC 345 Fluid(2)	Cyclopentasiloxane (and) Cyclohexasiloxane	34,50
Arlacel 165 (3)	Glyceryl Stearate (and) PEG-100 Stearate	1,00
Lanette 18 (4)	Stearyl Alcohol	19,00
Polyethylen- glycol 4000	PEG - 75	5,00
Act. Aloxi- coll® P (1)	Aluminum Chlorohy- drate	20,00
Cutina HR (4)	Hydrogenated Castor Oil	0,50
Gilugel® SIL 5 (1)	Cyclopentasiloxane (and) Cyclohexasiloxane (and) Aluminum Magnesium Hy- droxide Stearate	20,00

Antiperspirant Stick A 54

Procedure

Combine the Arlacel, Lanette, PEG and Cutina, heat to 80 °C and mix well. Add **Gilugel®** under agitation. When a homogeneous gel is formed, add the **Aloxicoll®** under shear and cool to 65 °C. When the dispersion is uniform, add the volatile Silicone, cool to 55 °C and fill into containers. Stir continuously during the filling operation.

Suppliers

- 1)BK Giuliani
- 2)Dow Corning
- 3)Uniquema
- 4)Cognis

Safety

Activated ALOXICOLL® P is an Aluminium Chlorohydrate according to USP 32. The FDA Final Antiperspirant Monograph classifies ALOXICOLL® types under category 1, as safe and effective for use in all types of antiperspirant formulations.

Packaging

Activated ALOXICOLL® P powder is available in 80 kg PE drums.

Storage

Activated ALOXICOLL® powders can be stored for more than 3 years in original, unopened containers. Once opened, the materials should be used quickly and contact with moisture should be avoided.

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