

# Activated ALOXICOLL® SD100

Enhanced Efficacy Antiperspirant Active

INCI Name: Aluminum Chlorohydrate

Empirical Formula:  $Al_2(OH)_5Cl \cdot nH_2O$

## Description

Activated ALOXICOLL® SD100 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.

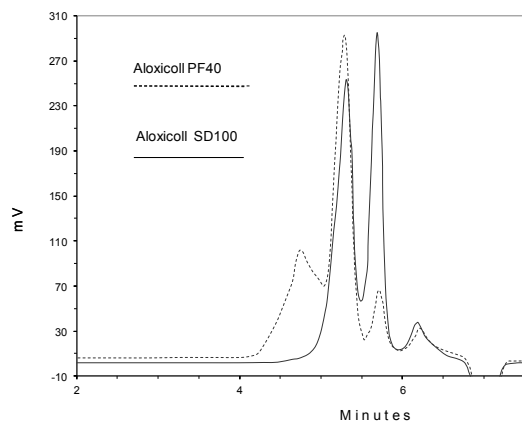
## Chemical Properties

Activated ALOXICOLL® powders are stable under anhydrous conditions. Aqueous / alcoholic solutions of ALOXICOLL® are slightly acidic. At pH values > 5, insoluble  $Al(OH)_3$  precipitates out. On drying, the residue decomposes to HCl and  $Al(OH)_3$ . On further heating, to temperatures >100°C,  $Al(OH)_3$  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® SD100 powder has a controlled maximum content of fine particles (< 10 µm). It is ideally suited for use in aerosol formulations, due to its excellent spray characteristics.



## 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 % < 100 µm



Raw Materials / Trade name	INCI name	w/w [%]
<b>Gilugel® SIL 5</b> (1)	Cyclopentasiloxane (and) Cyclohexasiloxane (and) Aluminum/ Magnesium Hydroxide Stearate	29,00
Isopropyl Myristate	Isopropyl Myristate	20,00
DC 345 Fluid(2)	Cyclopentasiloxane (and) Cyclohexasiloxane	18,00
<b>Act. Aloxicoll® SD 100</b> (1)	Aluminum Chlorohy- drate	33,00
Filling instructions:		
Antiperspirant bulk		25,00
Propane		5,25
Butane		29,75
n-Pentane		40,00

## Antiperspirant Aerosol A 53

### Procedure

Mix **Gilugel®**, IPM and volatile Silicone under rapid agitation. Disperse the **Aloxicoll®** powder and mix with shear until the solids are uniformly dispersed. Add perfume, fill into cans, degas and pressurise.

### Suppliers

- 1) BK Giulini
- 2) Dow Corning

## Safety

Activated ALOXICOLL® SD100 is an Aluminium Chlorohydrate according to USP 36. 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® SD100 powder is available in 75 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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