

# Activated ALOXICOLL® LR

Enhanced Efficacy Antiperspirant Active ( Low Residue )

INCI Name: Aluminum Chlorohydrate

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

## Description

Activated ALOXICOLL® LR 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.

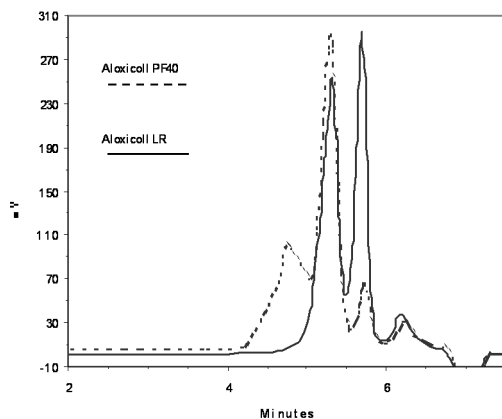
Activated ALOXICOLL® LR powder is a special, “low residue” active, which considerably reduces the level of visible deposits on the skin when used in formulations.

## 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® LR powder is used in anhydrous formulations, e.g. in aerosols, roll-ons, soft solids, creams and sticks, where a reduction in the visible white deposits on the skin is required, as well as maximum antiperspirant efficacy. The enhanced efficacy can only be maintained in anhydrous systems, and contact with water should be avoided prior to application to the skin.



## 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	99,4 % < 90 µm 99,9 % < 125 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>Activated Aloxicoll®LR</b> (1)	Aluminum Chlorohydrate	33,00
Filling instruction:		
Antiperspirant bulk		25,00
Propane		5,25
Butane		29,75
n-Pentane		40,00

## Antiperspirant Aerosol A 57

### Procedure

Mix **Gilugel®**, IPM and volatile Silicone under rapid agitation. Disperse the **Aloxicoll®** Powder and mix under 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® LR 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.

## Physiological Properties

According to the application area and concentration applied, ALOXICOLL® exhibits sweat reducing, deodorant, astringent, antibacterial and antiphlogistic properties.

## Packaging

Activated ALOXICOLL® LR powder is available in 90 kg PE drums.

## Storage

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

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