



*AGRANA's STARCHES  
for DECORATIVE COSMETICS*

*AGRANA STARCH*





## PRODUCT OVERVIEW

### PRODUCT NAME

### INCI

### Addition of starch BEFORE / AFTER emulsification

### NATURALITY

#### BOILING-RESISTANT STARCHES

CORN PO<sub>4</sub> PH "B"  
RICE PO<sub>4</sub> NATURAL  
RICE NS

*distarch phosphate*  
*distarch phosphate*  
*dimethylimidazolidinone*  
*rice starch*

BEFORE  
BEFORE  
BEFORE

COSMOS, NaTrue  
COSMOS, NaTrue  
—

#### NATIVE STARCHES

MAISITA 9040  
REISITA NATURAL  
TAPIOCA NATURAL  
MAISITA 21.001

*zea mays (corn) starch*  
*oryza sativa starch*  
*tapioca starch*  
*zea mays (corn) starch*

AFTER  
AFTER  
AFTER  
AFTER

COSMOS  
COSMOS  
COSMOS  
—



#### LIPOPHILIC STARCHES

AGENAFLO 9050  
AGENAFLO OS 9051

*corn starch modified*  
*aluminum starch*  
*octenylsuccinate*

AFTER  
AFTER

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#### ORGANIC CERTIFIED PRODUCTS

MAISITA 9060  
— organic maize starch  
AGENAJEL 21.387  
— organic waxy maize starch  
ORGANIC TAPIOCA NATURAL  
— organic tapioca starch  
AGENAMALT 20.233  
— organic maltodextrin DE6  
AGENAMALT 20.235  
— organic maltodextrin DE19

*zea mays (corn) starch*  
*zea mays (corn) starch*  
*tapioca starch*  
*maltodextrin*  
*maltodextrin*

AFTER  
AFTER  
AFTER  
BEFORE  
BEFORE

ORGANIC







## AGRANA's STARCHES FOR DECORATIVE COSMETIC

### THE FINEST BOTANICAL POWDERS for COSMETICS

AGRANA has a broad experience with starches in personal care.

AGRANA's name is synonymous with refinement of NATURAL, RENEWABLE RAW MATERIALS.

### Green ingredients



**AGRANA STARCHES**  
are green alternatives  
SILICONS and mineral-oil  
based ingredients like  
NYLON/ small micro-  
plastic



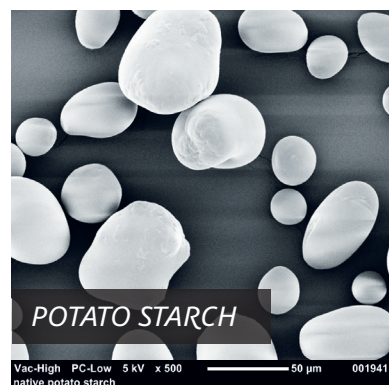
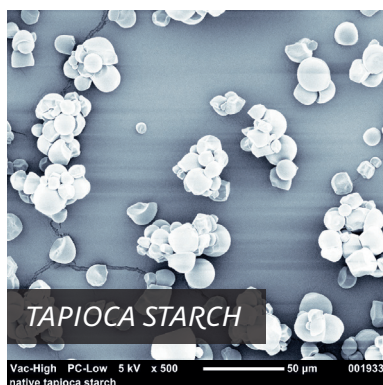
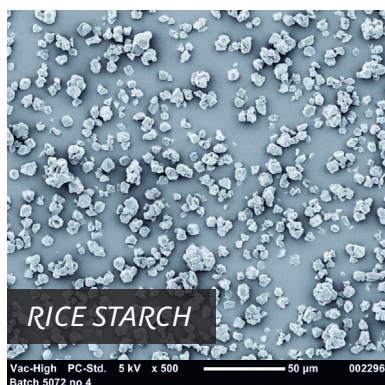
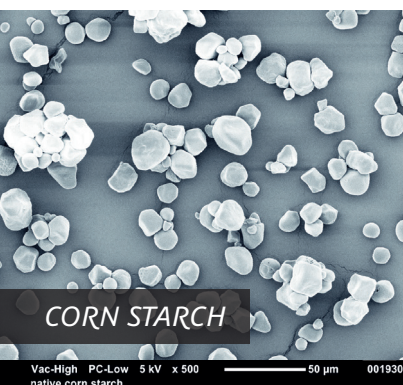
#### SUSTAINABLE PRODUCTS

- Non-GMO
- Naturally derived  
and safe



#### GREEN ALTERNATIVES

- Gluten-free
- Exempt from REACH
- Non animal tested
- Vegan



## OIL ABSORPTION

The ability of ingredients used in decorative cosmetics to exhibit oil absorption properties is vital in maintaining a long-lasting, even matte appearance on the skin.

When tested with Jojoba Oil, which is often regarded as the vegetable oil that most closely resembles human sebum, rice starches were shown to have particularly high oil absorption.

### Information



#### RICE STARCHES

can absorb more oil than corn or tapioca starch.

#### ABSORPTION g Jojoba oil / 10 g starch

	g	ml/g*
Talkum Food VWR	3,7	0,43
Talc Imperial 1820 LBC	3,7	0,43
Talc IMB 1886 LBC	5,2	0,60
AGENAFLO OS 9051	4,0	0,47
AGENAFLO 9050	4,2	0,49
CORN PO <sub>4</sub> PH"B"	4,3	0,50
MAISITA 9040	4,3	0,50
TAPIOCA NATURAL	4,3	0,50
REISITA NATURAL	5,9	0,69
D.S.A. 7	5,5	0,64
RICE PO <sub>4</sub> NATURAL	6,3	0,73

\*jojoba oil has a density of approx. 0,86 g/ml





## ***NATURAL and safe***

Current trends push the formulator to seek alternative ways to create the features and benefits the customer has come to expect in their emulsions, without the bad press ingredients / INCI labelling. Especially Distarch Phosphate provides an interesting alternative approach

- equal particle size and shape to Nylon powders, an effective substantial replacement
- provides the emulsion with the light, non-occlusive, fluid texture, perfect silicone alternative
- distarch phosphate allows cost reductions without compromising the formula (up to 50% of the silicone elastomer can be interchanged)
- An alternative talc replacement on both partial and full replacement whilst maintaining or enhancing the sensory perception in the final formulation



## APPLICATIONS



### POWDER PRODUCTS (LOOSE AND PRESSED)

Fine powders gently provide a mattifying appearance and fix make-up. Starches provide a (partial) alternative to talc and mica. Starches can

- absorb sebum
- enhance skin feel
- and improve the stability of pressed powders

Corn starch has a similar particle size range to that of mica (2 – 25µm) whereas rice starches are even finer (approx. 8µm) and exhibit an extraordinary soft-touch. The large surface allows a fine distribution of both functional and active ingredients.



### ANHYDROUS PRODUCTS

Starches reduce the greasy feeling after applying the cream to the skin.

In applications like lipsticks, rouges and pencils starches are added in order to achieve further even and truer colour pay-off. Lipophilic Starches can be used to give a more matte appearance.





#### EMULSION PRODUCTS

- with boiling resistant starches
- with lipophilic starches
- with native starches



#### NATIVE (ORGANIC) STARCHES

#### BOILING RESISTANT STARCHES

The optimum production technique for these starches is to disperse them in the aqueous phase and stir until emulsification occurs. These starches absorb and adsorb some of the water phase. Due to the adaptive properties of these starches some of the oil phase then is attached to the water-starch-phase during emulsification. This results in slow release of the emulsion on application.

Can be added prior to or post emulsification to achieve different effects. When added prior to emulsification they provide a natural thickening and emulsion stabilisation. The granules swell with heat and then gelatinise and rupture providing the viscosity. When added post emulsification (approx. 40°C), the starch maintains its granular form giving a silky skin feel.

#### BENEFITS OF USING LIPOPHILIC STARCHES IN EMULSION PRODUCTS

- Pleasant and silky-soft touch
- Enhanced efficacy of active skin care ingredients
- Long lasting moisturising effect
- Improved spreadability
- Mattifying effect – reduces the shine imparted by oils and waxes used in oil phase

After a detention time of 15 minutes, if necessary under additional stirring, this pre-mix should be transferred into the corresponding emulsion phase.

Lipophilic starches are added after emulsification and mitigate greasy feel of oil phase ingredients.

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