



polycos[®] starch specialities

Nature's best meets Swiss Quality



Polycos Starch Specialities

Polycos Starch Specialities – natural polysaccharid

The Polycos Starch Specialities comprise different variations of natural starches. Starch itself is based on two different constituents: helical amylose and branched amylopectin. The prevalence of these constituents depends on the plant source and has an important effect on the functionality and the properties of the starch. Apart from the vegetable origin, additives and highly specialized processing determine the functionality of Polygal's Starch Specialities, which are tailored to a wide range of applications in cosmetics and personal care. Each of our products addresses particular applicatory needs and offers significant added value.

The source

Polycos Starch Specialities derive either from maize or rice. These starches are characterized by relatively small primary starch particles and therefore cater to products with particular sensory requirements. All Polycos Starch Specialities are extremely fine powders, which result in an unmatched velvety and gracious touch.

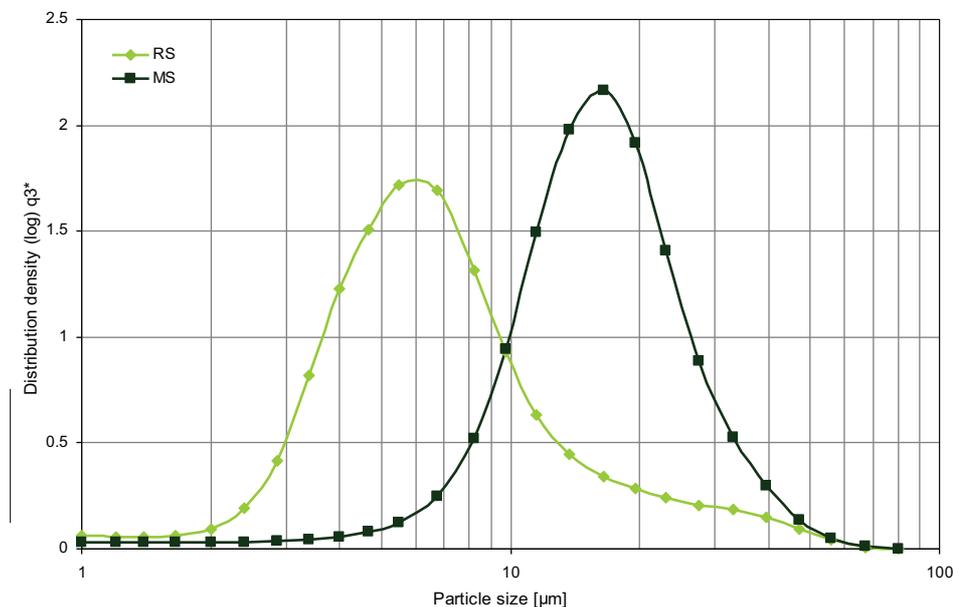
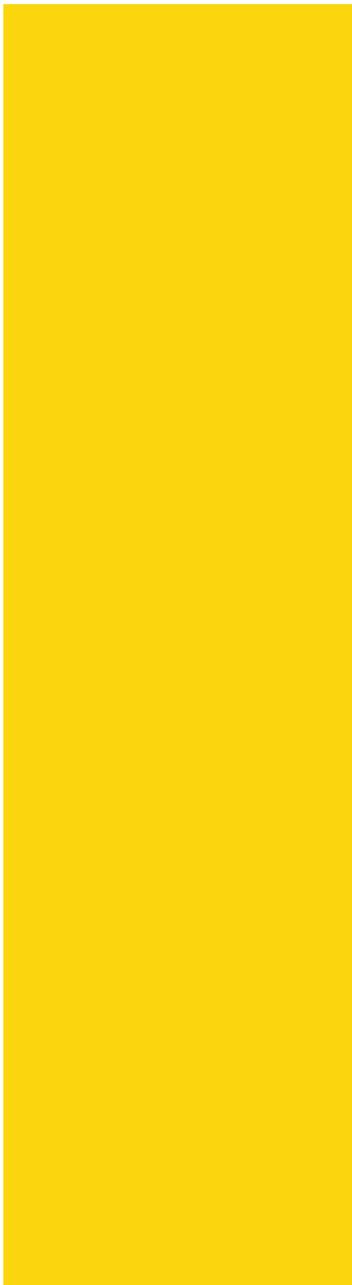


Fig 1: particle size distribution

The vegetable source of the material is reflected in the product name, which starts with RS and MS for rice starch and maize starch respectively. The products are generally white in colour. However, while they are purely white for RS-variant (rice starch) they may have a slight yellowish touch in the case of MS-products (maize starch).

swiss quality



Sterilized Starches

Based on its know-how in pharmaceutical operations, Polygal has developed starch specialities with specific softness due to their extremely fine particle size and unmatched microbiological properties. These products are ground at Polygal's facilities in Switzerland and subsequently sterilized within the sealed final packaging in a residue-free sterilisation process. By design, this process guarantees outstanding microbiological properties and practically sterile products.

Appearance	very fine, free flowing powder
Loss on dryingmax.	14 %
Granulation	
> 45 my	approx. 2 %

Typical microbiological load:

Total plate count	< 10 cfu/g
Total yeast and mould count	< 10 cfu/g

Available grades:

RS-STE	sterilized rice starch
MS-STE	sterilized maize starch

Polygal's sterilized starches show a high adsorption for oil and fats and have been especially developed for powder buffer applications. As a powder base they offer a valuable alternative to talcum powder, improving moisture balance and reducing the dry out of the skin.

Main Performance characteristics of sterilized starches

- High absorption of oil and fats
- Improving of moisture balance and reducing the dry out of the skin if compared to talcum powder
- Produces a soft mattifying effect
- Minimizes appearance of fine lines, wrinkles and blemishes



Modified Starches

Polygal has developed a range of products especially targeted for dry shampoo applications. These grades are based on natural, physically modified, surface-activated starches with a specific softness due to their extremely fine particle size. Characteristically, they show very low levels of residual moisture.

Appearance	fine, free flowing powder
Loss on drying	max. 7 %
Granulation	
> 45 my	approx. 1 %

Our standard grade is Polycos RS-UF, a rice starch that has been functionally enhanced by the addition of 0.05 – 0.1 % of cetrimonium chloride. This product has been shown to show outstanding performance in dry hair shampoos and is our recommended solution for this application.

Typical use levels of these starches in dry hair shampoo are

- 4 to 8 % in a basic formulation of an aerosol can filling

Main performance characteristics in dry shampoos

- High adsorption capability for oil and fat
- Removes the grease of the hair
- Brushed out of the hair easily after applying
- Gives an instant cleansing and freshening effect between hair washes
- Gives shine to the hair, whilst adding volume and texture

Main advantages of Polycos RS-UF in dry shampoo

- No lump forming inside the cosmetic packaging
- Fine powder does not stick to the inside
- No sedimentation – slightly slewing for even dispersion
- Fine, free flowing products
- Reliable powder for aerosol applications