Organic Sorbitol Powder

What is Organic Sorbitol Powder?

Organic Sorbitol occupies a dual functional role in formulation science — it functions simultaneously as a reduced-calorie sweetener, a humectant, and a texturizing agent. As a sugar alcohol, sorbitol provides approximately 60% of sucrose's sweetness while delivering only 2.6 kcal/g compared to sugar's 4 kcal/g, making it a practical tool for calorie reduction in sugar-free and low-calorie product positioning. Its glycemic index of 9 means it produces a minimal blood glucose response, a property that supports diabetic-friendly and low-GI labeling claims.

ORGANICWAY supplies Organic Sorbitol in two physical formats. Organic Sorbitol Powder is a white crystalline product derived from organic fruits and starch, with a purity of ≥98% on a dry basis, moisture content of ≤0.5%, and a free-flowing crystalline structure that makes it suitable for dry-mix applications, tablet and capsule formulations, and powdered supplement sachets. Organic Sorbitol Syrup is produced via hydrogenation of glucose followed by refining, presenting as a light-colored liquid with a dry matter content of 69–71%, D-sorbitol content of ≥50% on a dry basis, and a viscosity suitable for pump and spray applications. The syrup format contains a broader compositional profile than the powder — including total sugars of 4–8% and a moisture content of 29–31% — which affects its sweetness intensity and application suitability compared to the crystalline powder.

The practical choice between formats depends on processing method. Powder is the standard choice for compressed tablets, chewable supplements, dry beverage sachets, and baked goods, where its crystalline purity, low moisture content, and free-flowing properties enable accurate dosing and clean-label dry ingredient declarations. Syrup is designed for liquid applications: coating solutions for confectionery, humectant systems in bakery fillings and glazes, syrup-based beverages, and personal care formulations where a pourable liquid phase is required. Both formats share identical certifications (USDA/EU organic, Non-GMO, Kosher, Halal available, FSSC 22000) and identical functional properties in terms of glycemic response, humectancy, and non-cariogenicity.

PHYSICAL & CHEMICAL SPECIFICATIONS

Product Specifications

Parameter	Sorbitol Powder	Sorbitol Syrup
Appearance	White crystalline powder	Light colored syrup
Source	Organic fruits / starch	Glucose (hydrogenation)
D-Sorbitol Content	≥98% (dry basis)	≥50% (dry basis)
Moisture	≤0.5%	29–31%
Dry Matter	~99.5%	69–71%
Sweetness	~60% of sucrose	Lower (diluted)
Total Sugars	—	4.0–8.0%
Reducing Sugars	—	≤0.15%
Ash	≤0.1%	≤0.10%
pH (1:1 solution)	—	5.0–7.5
Refractive Index (20°C)	—	1.4575–1.4620
Specific Gravity (20°C)	—	1.285–1.315 g/mL

Parameter	Sorbitol Powder	Sorbitol Syrup
Electrical Resistivity	—	≤10 µS/cm
Nickel	—	≤1.0 mg/kg
Heavy Metals (Pb)	—	≤1.0 mg/kg
Arsenic (As_2O_3)	—	≤1.0 mg/kg
Packaging	25 kg kraft bags	275 kg drums / 25 kg bags
Shelf Life	24 months	24 months

Application Matrix

Application	Powder	Syrup	Notes
Compressed tablets	Recommended	Not suitable	Crystalline purity required
Chewable supplements	Recommended	Available	Sweetness and mouthfeel
Powdered beverage sachets	Recommended	Not suitable	Dry-phase ingredient
Confectionery coatings	Available	Recommended	Syrup enables smooth coating
Bakery fillings and glazes	Available	Recommended	Humectant + pourability
Syrup-based beverages	Not suitable	Recommended	Liquid phase required
Personal care / toothpaste	Recommended	Recommended	Humectant properties

Application	Powder	Syrup	Notes
Frozen desserts	Available	Recommended	Freeze-thaw stability (syrup: -18°C, 48h no crystallization)

MICROBIOLOGICAL & CONTAMINANT STANDARDS

Test	Powder	Syrup
Total Plate Count	Reported on CofA	≤100 cfu/g
Yeast & Mold	Reported on CofA	Reported on CofA
E. coli	Reported on CofA	Negative / g
Salmonella	Reported on CofA	Negative / 25g
Heavy Metals (Pb)	Reported on CofA	≤1.0 mg/kg
Arsenic	Reported on CofA	≤1.0 mg/kg
Nickel	—	≤1.0 mg/kg
Residues	Below EU ML / USDA-NOP limits	Below EU ML limits
Gluten	<20 ppm	<20 ppm

All batches tested and released against specifications. CofA available with every shipment.

CERTIFICATIONS

Certification	Powder	Syrup
USDA Organic	Yes	Inquired

Certification	Powder	Syrup
EU Organic	Yes	Inquired
Non-GMO Project Verified	Yes	Inquired
Kosher	Yes	Inquired
Halal	Yes	Inquired
FSSC 22000	Yes	Yes
Vegan	Yes	Yes
Gluten-Free	Yes	Yes

APPLICATIONS & FORMULATION TIPS

Key Functional Benefits

Organic Sorbitol's three primary functional roles in formulations are calorie reduction, humectancy, and texture modification. As a sweetener, sorbitol at 60% sucrose sweetness reduces caloric density from 4 kcal/g to approximately 2.6 kcal/g, enabling "reduced calorie" and "sugar-free" label claims in confectionery, baked goods, and beverages. As a humectant, sorbitol's hydroxyl groups bind water molecules, reducing water activity in bakery products (extending freshness and shelf life), maintaining moisture in fillings and glazes, and preventing crystallization in frozen desserts. The syrup's freeze-thaw stability — no crystallization at -18°C for 48 hours — is particularly valuable in frozen confectionery applications. As a texturizer, sorbitol contributes body and mouthfeel in sugar-free gum and confectionery, reducing the astringency and cooling sensation often associated with high-intensity sweeteners.

Formulation Guidance

Sorbitol's laxative threshold of approximately 20 g/day for adults should be incorporated into serving size calculations for any product intended for repeated consumption. The powder's extremely low moisture content (≤0.5%) means it behaves as a dry excipient in tablet and capsule formulations, improving flow and compressibility. The syrup's refractive index of 1.4575–1.4620 is useful for inline concentration monitoring in syrup preparation processes. For confectionery coating applications, the syrup's viscosity

and specific gravity parameters should be entered into coating pan calculations to ensure proper coverage and drying times.

FAQ

Q: How does sorbitol compare to xylitol?

A: Sorbitol delivers approximately 60% of sucrose's sweetness compared to xylitol's near-100% equivalence, making xylitol a more direct sugar replacement in sweet applications. Both are non-cariogenic and low-GI. The key practical difference is laxative tolerance: sorbitol's laxative threshold is approximately 20 g/day for most adults, while xylitol's is considerably higher (around 50–70 g/day in divided doses). This makes sorbitol more suitable for single-serving applications with controlled dosing (tablets, small confectionery pieces) and less suitable for freely-consumed products where total intake is unpredictable. In humectant and moisture-retention applications, the two behave comparably.

Q: Is sorbitol safe for diabetic or low-carb diets?

A: With a glycemic index of 9, sorbitol produces a minimal blood glucose response and is generally considered suitable for diabetic-friendly and low-GI product formulations. However, sorbitol is metabolized as a carbohydrate and contributes calories (2.6 kcal/g), so it cannot be excluded from total carbohydrate counts in the same way as non-metabolized fibers. "Sugar-free" labeling is permissible where sorbitol replaces sucrose, but "low-carb" or "net carb" claims require careful regulatory review depending on the target market. Consultation with local regulatory guidance is recommended before making carb-restriction claims.

Q: Can sorbitol replace glycerin in cosmetics and personal care products?

A: Yes. Sorbitol and glycerin share comparable humectant mechanisms — both attract and retain water molecules in the dermal layer — but sorbitol provides a cleaner ingredient label from a consumer perspective, as it is naturally derived from organic fruits and starch and carries organic and Non-GMO credentials that glycerin typically cannot match. In toothpaste and mouthwash formulations, sorbitol's non-cariogenic property adds a functional advantage that glycerin does not provide.

Q: What is the difference in sorbitol content between the powder and syrup?

A: The powder delivers ≥98% pure D-sorbitol on a dry basis, making it essentially a sorbitol-only ingredient suitable for applications requiring precise sorbitol dosing and low moisture. The syrup delivers

≥50% D-sorbitol on a dry basis, with the remaining composition consisting of water (29–31%), other sugars (4–8% total), and trace minerals. For this reason, the powder is the preferred format for tablet, capsule, and dry supplement formulations, while the syrup is designed for liquid-phase applications where the broader compositional profile is acceptable or even advantageous (e.g., humectant systems, confectionery coatings, syrups).

Q: What is the shelf life and recommended storage condition?

A: Both formats have a shelf life of 24 months from the date of manufacture when stored in sealed original packaging. Sorbitol Powder should be stored in a cool (≤25°C), dry location away from direct sunlight and moisture; its ≤0.5% moisture content makes it hygroscopic, and exposure to humidity may cause caking. Sorbitol Syrup should be stored at 10–25°C; it is freeze-thaw stable (no crystallization at -18°C for 48 hours per batch specification), but extended storage at elevated temperatures should be avoided to prevent viscosity changes. Both formats should be kept away from strong odors to prevent flavor absorption.

Q: What is the minimum order quantity and lead time?

A: 1 kg free sample with full CofA is available for qualifying buyers (FEDEX/UPS/EMS). Commercial orders start at 25 kg. Private label orders require 100 kg minimum. Lead time: 10–20 working days from order confirmation. Standard packaging: 25 kg kraft paper bags (powder), 275 kg drums or 25 kg bags (syrup). Custom packaging is available for large orders. Available incoterms: DAP, DDP, FOB, CIF. Acceptable payment terms: T/T, L/C, D/P, D/A.

PACKAGING & STORAGE

Packaging

Format	Standard Packaging	Custom Options
Sorbitol Powder	25 kg kraft paper bags	5 / 10 / 20 kg bags; fiber drums; IBC super sacks
Sorbitol Syrup	275 kg steel drums; 25 kg bags	Custom drum sizes; branded packaging for private label

Storage Conditions

Parameter	Powder	Syrup
Temperature	≤25°C (cool, dry)	10–25°C
Humidity	<60% RH; avoid moisture	<65% RH
Light	Avoid direct sunlight	Avoid direct sunlight
Odor	Store away from strong odors	Store away from strong odors
Shelf Life (sealed)	24 months	24 months
Freeze-Thaw Stability	—	Stable at -18°C, 48h

For more information, please visit our website:

https://www.organic-way.com/products/organic-sorbitol-powder/