Maltitol Product Specification Sheet

Maltitol is a natural functional sugar alcohol derived from starch. As a food additive (sweetener), it is manufactured through starch hydrolysis, hydrogenation, refining and crystallization. It features a sweetness level close to sucrose, low calorie and low GI value. Suitable for sugar-controlled groups, it is widely applied in food, oral care, pharmaceutical and other industries.

I. Basic Information

- Chinese Name: Maltitol (Hydrogenated Maltose, 4-O-α-D-Glucopyranosyl Sorbitol)
- English Name: Maltitol
- CAS No.: 585-88-6
- INS No.: 965
- CNS No.: 19.008
- UN No.: None (Non-dangerous Goods)
- Product Type: Food Additive (Sweetener), Low-calorie Functional Sugar Alcohol
- Executive Standards: GB 28307-2012, GB 2760-2024, US FDA GRAS, EU E965, JECFA, FCC
- Production Process: High-purity crystalline product made from starch raw materials such as corn and cassava via liquefaction, saccharification, hydrogenation reaction, followed by refining, concentration, crystallization, drying and screening

II. Appearance & Organoleptic Properties

- Appearance & State:
  White crystalline powder, no visible impurities to the naked eye, good fluidity and low moisture absorption & caking tendency
- Odor & Taste:
  Pure sweet taste, no peculiar odor or off-flavor, cool mouthfeel after intake, no bitter aftertaste or metallic taste
- Solubility:
  Easily soluble in water (approx. 120 g/100 mL at 20°C), slightly soluble in ethanol, with clear and transparent aqueous solution
- Sweetness Characteristic:
  Sweetness reaches 80%-95% of sucrose, with a sweetness curve similar to sucrose, capable of replacing sucrose at a 1:1 ratio
- Calorie Value:
  Approx. 12 kJ/g (2.9 kcal/g), lower than sucrose, classified as a low-calorie sweetener
- GI Value:
  ≈35, low glycemic index, no sharp stimulation on insulin secretion, applicable for sugar-controlled groups and diabetic patients
- Stability:
  High temperature resistance (≥150°C), acid and alkali resistance, low browning tendency, suitable for baking, cooking and various processing technologies

III. Physical & Chemical Specifications

Item	Standard Requirement
Maltitol Content (Dry Basis, HPLC)	≥98.0%
Moisture (Loss on Drying)	≤1.0%
Ash Content (Residue on Ignition)	≤0.1%
pH Value (10% Aqueous Solution)	5.0–7.0
Reducing Sugar (Calculated as Glucose)	≤0.2%
Heavy Metals (Calculated as Pb)	≤1.0 mg/kg
Total Arsenic (As)	≤0.5 mg/kg
Cadmium (Cd)	≤0.1 mg/kg
Mercury (Hg)	≤0.05 mg/kg
Specific Rotation	+105.5°~+108.5°

IV. Microbiological Limits

Item	Standard Requirement
Total Aerobic Bacteria Count	≤1000 CFU/g (NHC of PRC)
Coliform Bacteria	≤0.3 MPN/g (NHC of PRC)
Molds & Yeasts	≤50 CFU/g (NHC of PRC)
Salmonella	Not Detected / 25g
Staphylococcus Aureus	Not Detected / 25g

V. Safety & Compliance

- **China:** Approved by GB 2760-2024, allowed for appropriate use in all types of foods according to production demands with no daily intake limit
- **Unsuitable Crowds:** Infants under 2 years old (low intestinal tolerance), patients with irritable bowel syndrome (bloating caused by excessive intake)
- **International Recognition:**

• United States: FDA GRAS approved, permitted to claim "anti-caries and beneficial to dental health"

• European Union: Approved by EFSA safety assessment with code E965, available for all food categories

• JECFA (FAO/WHO): No limited ADI value granted with fully recognized safety

• Canada, Australia & New Zealand, Japan and other regions: Approved as a food sweetener

- Label Declaration: Marked as **Maltitol**; prohibited for infant food; allowed to claim "low calorie, low glycemic index and anti-caries"

VI. Packaging & Storage & Transportation

- Packaging: 25 kg per paper drum (lined with food-grade PE bag); customized small packages of 1 kg/5 kg/10 kg are available
- Storage: Store in a cool, dry and well-ventilated area, avoid direct sunlight and humid environment with relative

humidity ≤65%

- Shelf Life: 24 months (unopened and stored under qualified conditions)
- Transportation: Delivered as ordinary food, keep rainproof, moisture-proof and damage-proof; strictly prohibited to transport together with toxic and harmful substances

VII. Application Fields

- Sugar-free Food: Sugar-free biscuits, sugar-free pastries, sugar-free yogurt, sugar-free ice cream, meal replacement food
- Confectionery & Snacks: Hard candy, soft candy, chocolate, chewing gum, energy bars, compressed candy (anti-caries)
- Functional Food: Sugar-controlled food, sports nutrition food, health food for middle-aged and elderly people, ketogenic supplementary food
- Oral Care Products: Toothpaste, mouthwash, oral spray (inhibiting oral bacteria and preventing dental caries)
- Pharmaceutical Excipients: Medicinal sweetener, flavor corrector for tablets/granules, humectant and filler
- Daily Chemical & Cosmetics: Moisturizing cream, toner, toothpaste, mouthwash (moisturizing, bacteriostasis and taste improvement)

VIII. Core Advantages

- Natural Source: Derived from starch raw materials such as corn and cassava, natural sugar alcohol without artificial synthesis
- Low Calorie & Low GI: Calorie is only about 70% of sucrose, GI≈35, suitable for sugar control, fat loss and diabetic crowds
- Anti-caries Property: Cannot be fermented by oral bacteria to produce acid, inhibits dental plaque formation and reduces tooth decay risk
- Excellent Taste: Sweetness close to sucrose with cool mouthfeel and no adverse aftertaste, optimizing product flavor
- Processing Compatibility: High temperature resistance, acid & alkali resistance, anti-browning and good moisture retention, compatible with baking, beverage, confectionery and all food categories
- Mild Metabolism: No insulin required for human metabolism, promotes calcium absorption and owns better intestinal tolerance than most sugar alcohols

IX. Quality Assurance

- Batch-wise COA (Certificate of Analysis) provided, including complete physical, chemical and microbiological test data
- Production system complies with HACCP, ISO 22000, FSSC 22000 food safety management standards
- Authoritative certifications including Non-GMO, Halal and Kosher are available
- Full-process Quality Traceability: Whole-process control from raw materials to finished products, stable batch quality and controllable product quality

Maltitol Nutrition Facts

Nutrition Facts (Per 100 g)

Item	Per 100 g	Nutrient Reference Value % (NRV%)
Energy	120 kJ	1%
Protein	0 g	0%
Fat	0 g	0%
Carbohydrates	98.0 g	33%
— of which: **Maltitol (Sugar)**	≥98.0 g	—
Dietary Fiber	0 g	0%
Sodium	0 mg	0%

Labeling Specification

1. Nutrition Facts Labeling: Strictly follow the above format in accordance with GB 28050-2025; energy calculated at 12 kJ/g with compliant NRV%.
2. Warning Labeling: Mark in a prominent position (font size ≥ 1/2 of product name): Unsuitable Crowds: Infants under 2 years old.
3. Compliance Statement Labeling: This product complies with GB 28307-2012 and GB 2760-2024, and can be appropriately used as a food sweetener according to production requirements.
4. Product Name Labeling: Mark both Chinese **麦芽糖醇** and English **Maltitol**, clearly indicate **crystal grade** and purity ≥98.0 g/100 g.
5. Claim Specification: Permitted to mark "low calorie, low glycemic index, anti-caries"; medical efficacy claims (such as blood sugar reduction, weight loss and disease treatment) are prohibited.

Key Notes

1. NRV% Calculation: In accordance with GB 28050-2025: Energy NRV=8400 kJ, Carbohydrate NRV=300 g; maltitol energy coefficient: 12 kJ/g.
2. Carbohydrate Labeling Logic: Maltitol belongs to sugar alcohol carbohydrates and is included in total carbohydrates; it will not cause rapid blood sugar elevation, and "sugar-free / low sugar" can be marked on labels.
3. Metabolic Characteristics: Partially absorbed in the small intestine after intake, and the rest fermented in the large intestine with mild metabolism and low accumulation risk.
4. Export Labeling: Supplement corresponding compliance marks for overseas markets (e.g. FDA GRAS, EU E965, JECFA certification).