Aspartame

$C_{14}H_{18}N_2O_5$ · CAS 22839-47-0 · L-aspartyl-L-phenylalanine methyl ester, crystalline powder

CATALOG TDS — CONFIRMED IN WRITING AT QUOTATION

IDENTITY / FORM	FORMULA	CAS	PRIMARY ASSAY
L-aspartyl-L-phenylalanine methyl ester, crystalline powder	$C_{14}H_{18}N_2O_5$	22839-47-0	98.0–102.0% (HPLC)
METHOD	**MINIMUM ORDER**	**LEAD TIME**	**STANDARD PACK**
HPLC with UV detection	1 kg	1–7 days	1 kg foil pouch · 25 kg fiber drum

DESCRIPTION

A 99% aspartame powder with a sucrose-like sweetness, specified by assay, related substances and phenylalanine content, for beverages and tabletop where the application fits.

SWEETNESS

180–220 × sucrose, indicative

TASTE NOTE

Clean, sucrose-like sweetness with a slower onset than Ace-K and a shorter tail than saccharin.

SPECIFICATION

PARAMETER	SPECIFICATION	METHOD / NOTE
Assay (dried basis)	98.0–102.0% (HPLC)	As stated
L-Phenylalanine	47.0–52.0% (HPLC)	As stated
Related substances	≤2.0% (HPLC)	As stated
Appearance	White crystalline powder	As stated
Moisture	≤4.5%	As stated
pH (1% solution)	4.5–6.0	As stated
Solubility	Sparingly soluble in water; more soluble at lower pH	As stated
Particle size	≥95% through 80 mesh	As stated
Bulk density	0.30–0.60 g/mL	As stated
Heavy metals	Pb ≤0.5 · As ≤0.5 · Cd ≤0.5 · Hg ≤0.1 mg/kg	As stated
Microbiology	APC ≤1,000 cfu/g · yeast and mould ≤100 cfu/g · E. coli and Salmonella absent	As stated
Marker / profile	Aspartame 98.0–102.0%, phenylalanine 47–52%	Identity

PARAMETER	SPECIFICATION	METHOD / NOTE
Solubility	Sparingly soluble in water; solubility increases at lower pH, and dissolution time matters in a beverage line.	Matrix dependent
Starting use level	0.01–0.06% in beverages, depending on the target sucrose equivalence	Application dependent
pH behaviour	Most stable at pH 3–5; stability falls at neutral pH and high temperature.	Matrix dependent

APPLICATIONS

- Beverages
- Tabletop
- Dairy
- Confectionery
- Chewing gum

AVAILABLE FORMS

- Powder, 80 mesh
- Granular
- Encapsulated on request

PACKING

- 1 kg foil pouch
- 25 kg fiber drum

STORAGE

Store in a cool, dry, well-ventilated area, away from direct sunlight and moisture. Keep the pack closed after sampling. The lot-specific retest date is shown on the batch COA.

DOCUMENTATION RELEASED WITH EACH LOT

- Batch-specific certificate of analysis
- Technical data sheet and safety data sheet
- Allergen, GMO, origin and residual-solvent statements
- Third-party reports on request

Catalog document. This TDS describes the grade we can quote. The final specification, pack and documentation are confirmed in writing before the order. It is not a batch COA and does not report a result for a specific lot.

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