Aspartame

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

INDICATIVE SPECIFICATION — 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

SPECIFICATION

PARAMETER	SPECIFICATION	METHOD / NOTE
Assay (dried basis)	98.0–102.0% (HPLC)	Analytical
L-Phenylalanine	47.0–52.0% (HPLC)	Analytical
Related substances	≤2.0% (HPLC)	Analytical
Appearance	White crystalline powder	Specification
Moisture	≤4.5%	Specification
pH (1% solution)	4.5–6.0	Specification
Solubility	Sparingly soluble in water; more soluble at lower pH	Specification
Particle size	≥95% through 80 mesh	Sieve
Bulk density	0.30–0.60 g/mL	Tapped cylinder
Heavy metals	Pb ≤0.5 · As ≤0.5 · Cd ≤0.5 · Hg ≤0.1 mg/kg	Specification
Microbiology	APC ≤1,000 cfu/g · yeast and mould ≤100 cfu/g · E. coli and Salmonella absent	Specification
Marker / profile	Aspartame 98.0–102.0%, phenylalanine 47–52%	Identity / ratio
Appearance	White crystalline powder	Visual
Solubility	Sparingly soluble in water; solubility increases at lower pH, and dissolution time matters in a beverage line.	Matrix dependent
Standard packaging	1 kg foil pouch · 25 kg fiber drum	Food-grade liner

APPLICATIONS

- Beverages
- Tabletop

AVAILABLE FORMS

- Powder, 80 mesh
- Granular

- Dairy
- Confectionery
- Chewing gum
- Encapsulated on request

WHAT TO CONFIRM BEFORE ORDERING

- Aspartame is heat-labile; add after high-heat steps where possible.
- Ask for the diketopiperazine figure if the lot has been stored warm.
- Compare blends at equal sucrose equivalence, not equal weight.

> **Indicative document.** This sheet describes the grade we can quote; it is not a batch COA and does not confirm a result for a specific lot. Final specification, contaminant limits and documentation are agreed in writing before the order. The identity, assay basis, profile and method are release parameters, not marketing descriptions.

DOCUMENTATION RELEASED WITH EACH LOT

DOCUMENT	CONTENT	SCOPE
Certificate of analysis	Assay, identity, physical parameters, contaminant panel and the release decision for the lot.	Batch-specific
Technical data sheet	Identity, form, CAS, specification ranges, solubility, bulk density, storage and packing.	Product-level
Safety data sheet	Sixteen sections covering hazards, handling, storage, transport and emergency response.	Grade-specific
Allergen and GMO statements	Major allergens, gluten, animal-derived inputs and GMO status.	Batch-specific
Origin and traceability record	Manufacturing site and the link between the lot and the retained sample.	Batch-specific
Residual-solvent statement	The crystallisation system and the solvent class, where applicable.	Batch-specific

HOW TO REQUEST THIS GRADE

01 · BRIEF

Send the target specification, quantity, application and destination market.

02 · COUNTER-SPEC

We confirm what can be matched and the documents available for the grade.

03 · SAMPLE & QUOTE

A sample with its own COA, followed by packing, lead time and terms in writing.

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