

SPECIFICATION

Product Name: Aspartame
Chemical Formula: $C_{14}H_{18}N_2O_5$
CAS Number: 22839-47-0
Molecular Weight: 294.30 g/mol
Appearance: White crystalline powder.
Odor: Odorless

Chemical Composition

Parameter	Unit	Typical Value	Specification (Min/Max)
Assay	%	99.10%	98.0-102.0%
Specific Rotation $[\alpha]_{D20}$	°	+15.20°	+14.50°~+16.50°
Loss on Drying	%	3.12%	≤4.50%
Residue On Ignition (Sulphate Ash)	%	0.07%	≤0.20%
pH (0.8%w/v in water)	-	5.30	4.50-6.00
Diketopiperazine (DKP) 5-benzyl-3,6-dioxo-2-Piperazineaceticacid	%	<1.5%	≤1.5%
Other Related impurities Chromatographic purity	%	<2.0%	≤2.0%
Transmittance	-	0.990	≥0.95
Heavy Metals (as Pb)	mg/kg	<10 mg/kg	<10 mg/kg

Arsenic(asAs)	mg/kg	<3 mg/kg	<3 mg/kg
Lead	mg/kg	<1 mg/kg	<1 mg/kg
Residual Solvents	-	Conform	Meet therequirements
Particle Size	-	Conform	100 Mesh

Physical Properties

- Solubility: Slightly soluble in water. Very slightly soluble in alcohol. Practically insoluble in non-polar solvents in organic solvents.

Shelf Life & Storage

- Shelf Life: 3 years from date of manufacture under recommended storage.
- Storage Conditions: Store in a cool and dry place (preferably below 25°C). Keep in a tightly closed, airtight container. Protect from moisture and humidity. Avoid exposure to heat and direct sunlight. Keep away from alkaline substances, as it may accelerate degradation.

Applications

- Use: Widely used as a low-calorie sugar substitute. Diet soft drinks, flavored water, powdered drink mixes. Sugar-free desserts, chewing gum, candies, yogurt, and baked goods (limited due to heat sensitivity). Used in syrups, chewable tablets, and lozenges to improve taste. Included in dietary supplements and protein powders.
- Dosage: Depends on application, sweetness level required, and formulation stability.

Packaging

- Standard Packing: 25 kg woven PP bags with inner liner and 1 kgs or as per customer requirement.
- Labeling: Product name, batch number, net weight, manufacture date, expiry date, and manufacturer details.

* Specifications are based on the manufacturer's provided specifications.