



TECHNICAL DATA SHEET

1. Product Identification

Product Name: Magnesium L-Aspartate Dihydrate

Synonyms: Magnesium L-Aspartate Salt; Magnesium Aspartate (L-Form)

Chemical Name: Magnesium salt of L-Aspartic Acid

Molecular Formula: $C_8H_{12}MgN_2O_8 \cdot 2H_2O$

Molecular Weight: 324.5g/mol

CAS No.: 215533-00-9

Grade: Food Grade / Nutritional Grade

2. Product Description

Magnesium L-Aspartate is a magnesium salt formed from **L-Aspartic Acid**, a naturally occurring amino acid involved in human metabolic pathways. It is widely used in **nutritional supplements** as a source of magnesium with good bioavailability.

The product is supplied as a **white to off-white crystalline powder**, suitable for use in capsules, tablets, powders, and premix formulations.

3. Typical Specifications

Item		Specification
pH		6.0-8.0
Content (anhydrous basis)	%	98.0-102.0
Specific optical rotation		+22.0 to +24.0
Chloride	≤ppm	200
Sulfate	≤ppm	500
Ammonium	≤ppm	200
Iron	≤ppm	50
Heavy metal	≤ppm	10
Loss on drying	≤%	10.0-14.0

Specifications may be adjusted according to customer or regulatory requirements.

4. Functional Properties

Provides **elemental magnesium** for nutritional supplementation

Amino acid chelated form, suitable for supplement formulations

Good compatibility with other vitamins and minerals

Non-hygroscopic under recommended storage conditions

5. Mechanism of Action (Nutritional Perspective)

Magnesium is an essential mineral involved in:

Energy metabolism (ATP-dependent reactions)

Muscle and nerve function

Electrolyte balance

L-Aspartic Acid acts as an amino acid carrier, helping deliver magnesium in a form suitable for nutritional applications.

6. Applications

Dietary supplements

Sports nutrition products

Mineral premixes

Capsules, tablets, sachets, and powder blends

7. Packaging

25 kg fiber drum or carton with inner food-grade PE bag

Other packaging available upon request

8. Storage & Shelf Life

Store in a **cool, dry, and well-ventilated place**

Keep container tightly closed

Shelf Life: 24 months from date of manufacture when stored properly

9. Safety & Handling

For food and nutraceutical use only

Avoid inhalation of dust

Use standard industrial hygiene practices

Refer to MSDS for detailed safety information

10. Regulatory Status

Intended for use in **nutritional and dietary supplement applications**

Compliance depends on local regulations (FDA, EFSA, etc.)

Documentation such as **COA, MSDS, allergen statement** available upon request