

**HSWT ASPARTAME POWDER**



EFFECTIVE DATE: JAN 01<sup>ST</sup> 2023

SUPERSEDES : JAN 01<sup>ST</sup> 2022

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**MANUFACTURER / SUPPLIER:**

HSWT France SAS / Port 7516, 59820 Gravelines, France  
Tel: +33 (0)3 28 22 74 00 Fax: +33 (0)3 28 22 75 00



**DESCRIPTION:**

**Food additive**, Aspartame is a Non-Nutritive artificial **Sweetener** based on two amino acids. It is metabolized like a food protein. Aspartame is a white or almost white odourless crystalline powder having a sweet taste, slightly hygroscopic, approximately 200 times as sweet as sucrose. Aspartame provides a clean sugar-like sweetness without any bitter or metallic aftertaste.

**TRADE NAME:**

**HSWT Aspartame Powder**

**PRODUCT SYNONYMS:**

**Aspartame**; Aspartyl Phenylalanine methyl ester, APM

**CHEMICAL NAMES:**

N-L- $\alpha$ -Aspartyl-L-Phenylalanine-1-methyl ester  
Or 3-amino-N-( $\alpha$ -carbomethoxy-phenethyl)-succinamic acid-N-methyl ester

INS: 951 or E 951 in EU Molecular Formula:  $C_{14}H_{18}N_2O_5$   
EINECS Number: 245-261-3 Molecular Weight: 294.31 g/mol  
CAS Number: 22839-47-0  
Solubility: sparingly or slightly soluble in water and slightly soluble in ethanol (alcohol).

TESTS	METHODOLOGY	SPECIFICATIONS	TYPICAL RESULTS <sup>(1)</sup>
<b>• IDENTITY</b>			
Infrared absorption	FCC/JSFA	Conform to standard	Conform to standard
<b>• PURITY</b>			
Assay titration (dried basis)	JSFA/EU/JECFA	98.0 % - 102.0 %	> 99 %
Assay HPLC (dried basis)	FCC	98.0 % - 102.0 %	> 99 %
Loss on drying	FCC/JSFA/EU/JECFA	≤ 4.5 %	< 3.2 %
5-benzyl-3,6-dioxo-2-piperazineacetic acid <sup>(2)</sup> (dried basis)EP		≤ 1.5 %	< 0.2 %
Residue on ignition/Sulphated ash (dried basis)	FCC/JSFA	≤ 0.2 %	< 0.2 %
Heavy metals (as lead)	EP	≤ 10 mg/kg	< 10 mg/kg
Arsenic (dried basis)	EP	≤ 3 mg/kg	< 3 mg/kg
Lead (dried basis)	HS	≤ 1 mg/kg	< 1 mg/kg
Specific rotation (dried basis)	FCC/JSFA/EU/JECFA	+14.5° to +16.5°	15.3°
Transmittance	EU/JECFA	≥ 95.0 %	> 99 %
pH	FCC/JSFA/EU/JECFA	4.5 - 6.0	5.3
Conductivity	EP	≤ 30 $\mu$ S.cm <sup>-1</sup>	< 15 $\mu$ S.cm <sup>-1</sup>
Related substances <sup>(3)</sup> (dried basis)	USP/EP	≤ 2.0 % USP; ≤ 1.5 % EP	< 2.0 % USP; < 1.5 % EP
L-Phenylalanine (dried basis)	EP	≤ 0.5 %	< 0.5 %
Others optical isomers (dried basis)	HS	≤ 0.02 %	< 0.01 %
Residual solvents	HS	Meets requirements	Meets requirements
Appearance of solution	EP	Clear and NMT GY6	Clear and NMT GY6
<b>• MICROBIOLOGICAL PROPERTIES</b>			
Total Aerobic Bacteria	HS	≤ 250 cfu/g	< 10 cfu/g
Yeast and Mold	HS	≤ 100 cfu/g	< 10 cfu/g
Coliforms	HS	≤ 10 cfu/g	Negative/g
E-Coli	HS	Negative/g	Negative/g
Salmonella	EXT LAB	Negative/25g	Negative/25g
<b>• PHYSICAL PROPERTIES</b>			
Particle size on 150 $\mu$ m (100 Mesh)	HS	≤ 1 %	≤ 1 %
Bulk density	HS	-	0.20 – 0.27 kg/l

FCC = Food Chemical Codex JSFA = Japanese Standard for Food Additives JECFA = Joint FAO/WHO Expert Committee on Food Additives  
EU = Commission Regulation EXT LAB = External Laboratory HS = HSWT France SAS  
EP = European Pharmacopoeia USP = US Pharmacopoeia

<sup>(1)</sup> "Typical Results": Not to be considered as a guarantee. <sup>(2)</sup> Others names: Aspartame Related Compound A or Impurity A. <sup>(3)</sup> Others names: Chromatographic Purity or Other Related Impurities; sum of impurities other than imp A and C for EP and other than imp A for USP&FCC.



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**CONFORMITY WITH:** Joint FAO/WHO Expert Committee on Food Additives specifications;  
Food Chemicals Codex;  
EU Commission Regulation 231/2012;  
Japanese Standards for Food Additives.  
**Note:** current version specified on CoA

**SHELF LIFE:** 5 years at ambient room condition in a cool and dry place (recommendation: below 30°C and 35 to 75 % relative humidity), when properly preserved in well-closed original container. Product should be reevaluated after this period. Do not store near products with a strong odor.

**PACKAGING:** Standard packaging: 25 kg recyclable corrugated cardboard box with double inner polyethylene liner sacks and safety cable tie, 12 boxes on 2 levels per Euro pallet, boxes are designed to be stacked no more than 2 pallets high. Further packaging units are possible, e.g. 5kg cardboard box and 1kg polyethylene jars.

**LOT CODING:** Example Lot **E301010**:  
**E** = Aspartame Powder  
**3** = Year manufactured: 2023  
**01** = Month manufactured: January  
**01** = Day manufactured: 01<sup>st</sup> day of month  
**0** = Optional plant code

**NUTRITIONAL INFO:** Aspartame is chemically pure and contains no hazardous substances, additives, preservatives, colors or flavors. Aspartame is metabolized in the body and consequently has some nutritive value:

NUTRIENT:	PER 100 g:
Water	< 4.5 g
Protein <sup>(1)</sup>	95.3 g
L-phenylalanine <sup>(2)</sup>	56 g
Fat	0 g
Carbohydrates	0 g
Fibers	0 g
Ash	< 0.2 g
Cholesterol	0 mg
Calcium	< 2 mg
Iron	< 2 mg
Potassium	≤ 10 mg
Sodium	≤ 30 mg
Vitamins	0 mg
Calories /Joules	382 kcal / 1600 kJ

(1) Aspartame is a dipeptide, which is digested and metabolized like a protein.

(2) Phenylalanine is an essential amino acid; required intake for adults: > 1 g/day

**SAFETY:** High safety based on ADI level; SCF / JECFA = 40; FDA = 50  
ADI = Acceptable Daily Intake (mg/kg body weight/day)

**REGULATORY:** Worldwide Approval (> 100 countries) / In USA: GMP

**LABELING:** **In EU:**

- On ingredient list: " Sweetener: aspartame" or "Sweetener: E 951"
- Information notice: "Aspartame is a source of Phenylalanine"
- Close to the sales denomination: "with sweetener"
- No Hazard pictogram mandatory as not classified as a dangerous substance.

Further information relating to the laws and regulations of individual countries can be obtained from HSWT France SAS.