

HSWT ASPARTAME POWDER



EFFECTIVE DATE: JUL 01ST 2019

SUPERSEDES : APR 01ST 2019

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MANUFACTURER / SUPPLIER:

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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- α -Aspartyl-L-Phenylalanine-1-methyl ester
Or 3-amino-N-(α -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 ⁽¹⁾
• IDENTITY			
Infrared absorption	FCC/JSFA	Conform to standard	Conform to standard
• PURITY			
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 ⁽²⁾	EP	≤ 1.5 %	< 0.2 %
Residue on ignition/Sulphated ash	FCC/JSFA	≤ 0.2 %	< 0.2 %
Heavy metals (as lead)	EP	≤ 10 mg/kg	< 10 mg/kg
Arsenic	EP	≤ 3 mg/kg	< 3 mg/kg
Lead	HS	≤ 1 mg/kg	< 1 mg/kg
Specific rotation	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 $\mu S.cm^{-1}$	< 15 $\mu S.cm^{-1}$
Related substances ⁽³⁾	USP/EP	≤ 2.0 % USP; ≤ 1.5 % EP	< 2.0 % USP; < 1.5 % EP
L-Phenylalanine	EP	≤ 0.5 %	< 0.5 %
Others optical isomers	HS	≤ 0.02 %	< 0.01 %
Residual solvents	HS	Meets requirements	Meets requirements
Appearance of solution	EP	Clear and NMT GY6	Clear and NMT GY6
• MICROBIOLOGICAL PROPERTIES			
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
• PHYSICAL PROPERTIES			
Particle size on 150 μm (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

⁽¹⁾ "Typical Results": Not to be considered as a guarantee. ⁽²⁾ Others names: Aspartame Related Compound A or Impurity A. ⁽³⁾ Others names: Chromatographic Purity or Other Related Impurities; USP&FCC/EP different definition: USP&FCC include L-Phenylalanine; EP does not include L-Phenylalanine.



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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 **E904010**:
E = Aspartame Powder
9 = Year manufactured: 2019
09 = Month manufactured: September
01 = Day manufactured: 01st 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 ⁽¹⁾	95.3 g
L-phenylalanine ⁽²⁾	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"
- Additional notice: "Contains 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.