TECHNICAL DATA SHEET

Sodium Copper Chlorophyllin

Item	Specification
Product Name	Sodium Copper Chlorophyllin
Synonyms	Chlorophyllin Copper Complex Sodium Salt; E141(ii); CI Natural Green 5
CAS No.	11006-34-1
EINECS No.	234-242-5
Molecular Formula	$C_{34}H_{31}CuN_4Na_3O_6$
Molecular Weight	724.15
E Number	E141(ii)
Source	Natural plant chlorophyll (alfalfa / mulberry leaf)
Manufacturing Process	Saponification, copper replacement, purification and drying

1. Physical & Chemical Properties

Property	Specification
Appearance	Dark green to blue-black fine powder
Odor	Slight characteristic odor
Solubility	Freely soluble in water; slightly soluble in ethanol; insoluble in ether
pH (1% aqueous solution)	9.5 – 10.7
Absorptivity $E^{1}\%_{1}$cm (405 nm, pH 7.5 buffer)	≥ 568
Absorbance Ratio A_{405} / A_{630}	3.4 – 3.9

2. Applications

- Natural water-soluble green colorant for food and beverages (E141(ii)).
- Confectionery, ice cream, bakery products, jellies and dairy analogues.
- Cosmetics and personal care: toothpaste, oral care, skin care formulations.
- Pharmaceutical excipient and raw material.

3. Storage & Packaging

Item	Detail
Storage Conditions	Tightly sealed, protected from light, stored in a cool, dry place
Shelf Life	24 months under recommended storage conditions
Packaging	1 kg / 5 kg / 10 kg / 25 kg net fiber drum with food-grade polyethylene liner

4. Handling Precautions

- Hygroscopic material — avoid prolonged exposure to open air.
- Protect from direct sunlight and strong oxidizing agents.
- Not for direct consumption as raw powder; use as food additive at permitted dosage levels.
- Keep container closed after use.

— End of Technical Data Sheet —