

TECHNICAL DATA SHEET

Sodium Magnesium Chlorophyllin

Item	Specification
Product Name	Sodium Magnesium Chlorophyllin
Synonyms	Chlorophyllin Sodium Magnesium Salt; E140(ii); CI Natural Green 5
CAS No.	11006-34-1
EINECS No.	234-242-5
Molecular Formula	$C_{34}H_{28}MgN_4NaO_6$
Molecular Weight	684.92
E Number	E140(ii)
Source	Extracted from natural plant chlorophyll (alfalfa / mulberry leaf)
Manufacturing Process	Saponification of native chlorophyll, retaining the central magnesium ion, followed by purification and drying

1. Physical & Chemical Properties

Property	Specification
Appearance	Yellow-green to dark green fine powder
Odor	Slight characteristic odor
Solubility	Freely soluble in water; slightly soluble in ethanol; insoluble in ether
pH (1% aqueous solution)	9.0 – 10.7
Absorptivity $E^{1\%}_{1cm}$ (400 nm, pH 7.5 buffer)	≥ 565
Absorbance Ratio A_{400} / A_{630}	5.0 – 6.0

2. Applications

- Natural water-soluble green colorant — cleaner label alternative to copper chlorophyllin (E141(ii)).
- Food and beverages: soft drinks, confectionery, ice cream, bakery, jellies (E140(ii)).
- Dietary supplements and nutraceutical raw material.
- Cosmetics and personal care: skin care, oral care formulations.

Remark: Lower light stability compared to Sodium Copper Chlorophyllin (E141(ii)); protect from prolonged light exposure.

3. Storage & Packaging

Item	Detail
Storage Conditions	Tightly sealed, protected from light, stored in a cool, dry place; hygroscopic
Shelf Life	24 months under recommended storage conditions
Packaging	1 kg / 5 kg / 10 kg / 25 kg aluminium foil bag or 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.