

TECHNICAL DATA SHEET

Copper Chlorophyll (Oil Soluble)

Item	Specification
Product Name	Copper Chlorophyll (Oil Soluble)
Synonyms	Chlorophyll Copper Complex (oil-soluble); Copper Chlorophyllin Ester; CI Natural Green 5
CAS No.	11006-34-1
EINECS No.	234-242-5
Molecular Formula	C ₅₅ H ₇₂ CuN ₄ O ₆
Molecular Weight	932.73
E Number	E141(i)
Source	Natural plant chlorophyll (alfalfa / mulberry leaf)
Manufacturing Process	Extraction, saponification, copper replacement, esterification/oil-phase purification
Physical Form	Dark green viscous oil / paste, or oil-dispersible powder

1. Physical & Chemical Properties

Property	Specification
Appearance	Dark green viscous oil, paste or oil-dispersible powder
Odor	Slight characteristic odor
Solubility	Freely soluble in oils, fats and organic solvents (ethanol, acetone); insoluble in water
pH (1% aqueous dispersion)	Not applicable (oil-soluble, no aqueous phase)
Absorptivity E ¹ % _{1cm} (405 nm, in suitable solvent)	≥ 400
Moisture	≤ 1.0%

2. Applications

- Green colourant for oil-based and fatty foods (E141(i)).
- Bakery fats, margarine, butter analogues, chewing gum, snack coatings.
- Cosmetics: lipstick, cream, oil-phase cosmetic formulations.
- Food supplement and pharmaceutical formulations (oil phase).

Remark: Good light and heat stability in oil phase. Protect from strong light and prolonged high temperature.

3. Storage & Packaging

Item	Detail
Storage Conditions	Tightly sealed, protected from light and oxygen, stored in a cool, dry place
Shelf Life	24 months under recommended storage conditions
Packaging	1 kg / 5 kg / 10 kg / 25 kg aluminium bag, HDPE drum or food-grade plastic container with liner

4. Handling Precautions

- May stain; handle with care and use protective gloves.
- Protect from direct sunlight, oxygen and high temperature.

- Not for direct consumption as raw material; use at permitted dosage levels.
- Keep container closed after use.

— *End of Technical Data Sheet* —