TECHNICAL DATA SHEET

Magnesium Chlorophyll (Oil Soluble)

Item	Specification
Product Name	Magnesium Chlorophyll (Oil Soluble)
Synonyms	Chlorophylls (oil-soluble); Natural Magnesium Chlorophyll; E140(i)
CAS No.	1406-65-1
EINECS No.	215-800-7
Main Components	Chlorophyll a: $C_{55}H_{72}MgN_4O_5$ (Chlorophyll a, MW 893.49); Chlorophyll b: $C_{55}H_{70}MgN_4O_6$ (Chlorophyll b, MW 907.47)
E Number	E140(i)
Source	Natural plant chlorophyll (alfalfa / mulberry leaf / spinach)
Manufacturing Process	Extraction, purification and concentration in oil phase
Physical Form	Dark green viscous oil / paste / oleoresin

1. Physical & Chemical Properties

Property	Specification
Appearance	Dark green viscous oil, paste or oleoresin
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)
Absorptivity $E^{1}\%_{1}$cm (660 nm, in suitable solvent)	≥ 400
Moisture	≤ 1.0%

2. Applications

- Natural green colourant for oil-based and fatty foods (E140(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: *Less stable than copper chlorophyll (E141(i)): magnesium chlorophyll is more sensitive to light, heat and acid. Copper may replace magnesium under acidic conditions. 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, high temperature and acids.

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

— End of Technical Data Sheet —