MATERIAL SAFETY DATA SHEET

Chlorophyll Paste

(Chlorophylls · E140(i))

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Product Name	Chlorophyll Paste
Synonyms	Chlorophylls; Natural Chlorophyll Oleoresin; E140(i)
CAS No.	1406-65-1
EINECS No.	215-800-7
Main Components	Chlorophyll a ($C_{55}H_{72}MgN_4O_5$), Chlorophyll b ($C_{55}H_{70}MgN_4O_6$), edible vegetable oil carrier
Recommended Use	Food colour (oil phase), cosmetic colourant, supplement/pharma raw material
Restrictions on Use	Use only as permitted by applicable food / cosmetic regulations

SECTION 2: HAZARDS IDENTIFICATION

Classification (GHS/CLP):

- Not classified as hazardous under GHS criteria for this form.
- May cause mild eye and skin irritation on contact.
- Paste form is combustible when heated; combustion may produce oxides of carbon and nitrogen.

Label Elements:

- Signal word: None required under GHS for this substance.
- Hazard statements: Not classified as hazardous.

Other Hazards:

- May stain surfaces, clothing and skin (green pigment).
- Photosensitive and acid-sensitive — discolouration possible under strong light or acidic conditions.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substance	Chlorophylls (natural magnesium chlorophyll) in edible oil carrier
Concentration	Total chlorophylls ≥ 5.0% (batch-specified, typically 5 – 20%)
Impurities	Moisture, residual solvents (total ≤ 50 ppm)

SECTION 4: FIRST AID MEASURES

Inhalation	Remove to fresh air. If breathing difficulty persists, seek medical attention.
Skin Contact	Wash with soap and water; use oil-removing cleanser if stained. Remove contaminated clothing.
Eye Contact	Rinse immediately with plenty of clean water for at least 15 minutes. Seek medical advice if irritation persists.
Ingestion	Rinse mouth. Do NOT induce vomiting. Drink water. Seek medical attention if a large

	amount is swallowed.

SECTION 5: FIRE-FIGHTING MEASURES

- Extinguishing media: foam, dry chemical, carbon dioxide (CO_2); water spray may be used to cool surroundings.
- Specific hazards: combustible paste; avoid spreading burning material with high-pressure water jet.
- Protective equipment for firefighters: self-contained breathing apparatus and full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- Personal precautions: avoid skin and eye contact; use gloves and protective clothing.
- Environmental precautions: prevent entry into drains and watercourses.
- Clean-up: contain with inert absorbent material, collect in sealed containers for disposal; wash residue with detergent.

SECTION 7: HANDLING AND STORAGE

- Handling: avoid prolonged skin contact; do not eat, drink or smoke while handling; wash hands after handling. Warm gently before use if too viscous.
- Storage: keep tightly closed; store in a cool, dry, dark place; protect from oxygen, strong light and acids; keep away from oxidising agents.
- Storage temperature: ambient, < 25 °C recommended; Shelf life: 24 months.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

- Occupational exposure limits: no specific OEL established for this substance.
- Engineering controls: adequate ventilation; avoid generating mists or fumes when heating.
- Hand protection: protective gloves (nitrile or natural rubber).
- Eye protection: safety goggles.
- Skin protection: work clothing; long sleeves; barrier cream if needed.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Dark green paste (semi-solid at room temperature)
Odour	Slight characteristic odour
Colour	Dark green
Solubility in Oils / Organic Solvents	Dispersible / soluble
Solubility in Water	Insoluble
Flash Point	> 100 °C
Boiling Point	Not applicable (decomposes before boiling)
Density	Approx. 0.9 – 1.1 g/cm^3
Auto-ignition Temperature	Not determined

SECTION 10: STABILITY AND REACTIVITY

- Stability: stable under recommended storage conditions.
- Conditions to avoid: strong light, high temperature, prolonged exposure to air/oxygen, acids.

- Incompatible materials: strong oxidising agents, strong acids (may displace the central magnesium ion).
- Hazardous decomposition products: oxides of carbon and nitrogen under combustion; no hazardous polymerisation.

SECTION 11: TOXICOLOGICAL INFORMATION

- Acute toxicity: low toxicity; no significant acute hazard expected from published data on chlorophylls.
- Eye / skin irritation: mild, transient irritation or staining possible on contact.
- Sensitisation: not expected to be a skin sensitiser.
- Mutagenicity / carcinogenicity: no evidence of genotoxic or carcinogenic concern in approved food-use assessment (E140).
- Note: As a permitted food colour (E140(i)), it is subject to food-safety evaluation; handle with normal industrial hygiene practices.

SECTION 12: ECOLOGICAL INFORMATION

- Ecotoxicity: expected low; no significant bioaccumulation anticipated.
- Persistence and degradability: naturally derived pigment, expected biodegradable.
- Mobility: oil-soluble, low mobility in water; avoid large discharges into water bodies.
- Bioaccumulation potential: low.

SECTION 13: DISPOSAL CONSIDERATIONS

- Dispose of in accordance with local, state and national regulations.
- Preferably recycle where feasible; otherwise incinerate in an approved facility.
- Do not allow to enter drains or waterways.

SECTION 14: TRANSPORT INFORMATION

UN Number	Not regulated (not dangerous goods)
UN Proper Shipping Name	Not applicable
Transport Hazard Class(es)	Not applicable
Packing Group	Not applicable
Marine Pollutant	No
Transport in bulk	Not applicable

SECTION 15: REGULATORY INFORMATION

- EU: permitted food colour E140(i) per Regulation (EC) No 1333/2008 and related specifications.
- USA: subject to FDA colour-additive regulations where applicable.
- China: food additive — chlorophylls (paste) permitted under GB 2760 (as applicable).
- This SDS does not constitute a full regulatory compliance assessment; confirm specific national authorisations before use.

SECTION 16: OTHER INFORMATION

- Sources of key data: FCC, EU specifications for food colours, manufacturer's analytical data.

- This SDS is provided for information and industrial-hygiene purposes; it is the user's responsibility to ensure compliance with applicable laws and regulations.
- Prepared: 2026-10-26 | Revision: 1 | Supersedes: none

— End of Material Safety Data Sheet —