

MATERIAL SAFETY DATA SHEET

Sodium Magnesium Chlorophyllin

(Chlorophyllin Sodium Magnesium Salt · E140(ii))

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

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
Chemical Formula	$C_{34}H_{28}MgN_4NaO_6$
Molecular Weight	684.92
Recommended Use	Food additive (colour), cosmetic ingredient, nutraceutical 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 (solid powder).
- May form combustible dust when finely dispersed; avoid dust cloud generation.
- Eye and skin contact with dust may cause mild, transient irritation.

Label Elements:

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

Other Hazards:

- Hygroscopic; absorbs moisture on prolonged exposure to air.
- Photosensitive — discolouration may occur under strong light.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substance	Sodium Magnesium Chlorophyllin
Concentration	≥ 95.0% (Total Magnesium Chlorophyllins, on dried basis)
Impurities	Moisture, ash (magnesium/ sodium salts), 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 affected area with soap and water. Remove contaminated clothing.
Eye Contact	Rinse immediately with plenty of clean water for at least 15 minutes, lifting eyelids. 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: water spray, foam, dry chemical, carbon dioxide (CO₂).
- Specific hazards: combustible organic powder — dust explosion risk if dispersed in air above ignition limits.
- Protective equipment for firefighters: self-contained breathing apparatus and full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- Personal precautions: avoid dust inhalation; use dust mask and protective gloves.
- Environmental precautions: prevent entry into drains and watercourses.
- Clean-up: sweep or vacuum without creating dust, collect in sealed containers for disposal.

SECTION 7: HANDLING AND STORAGE

- Handling: avoid creating dust clouds; use local exhaust ventilation; keep container sealed when not in use; wash hands after handling.
- Storage: keep tightly closed in original container; store in a cool, dry, dark place; keep away from strong oxidising agents and direct sunlight; hygroscopic.
- 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: local exhaust ventilation; avoid dust generation.
- Respiratory protection: dust mask (e.g. FFP1/2) when handling large quantities or generating dust.
- Hand protection: protective gloves (nitrile).
- Eye protection: safety goggles.
- Skin protection: work clothing; long sleeves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Yellow-green to dark green fine powder
Odour	Slight characteristic odour
pH (1% aqueous solution)	9.0 – 10.7
Solubility in Water	Freely soluble
Solubility in Organic Solvents	Slightly soluble in ethanol; insoluble in ether
Melting Point	Decomposes before melting
Flash Point	Not applicable (solid, not volatile)
Bulk Density	Approx. 0.3 – 0.6 g/cm ³ (typical)
Auto-ignition Temperature	Not determined

SECTION 10: STABILITY AND REACTIVITY

- Stability: stable under recommended storage conditions.
- Conditions to avoid: strong light, high humidity, prolonged air exposure.

- Incompatible materials: strong oxidising agents, strong acids (may release 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; LD50 (oral, rat) is not established for the finished powder — no significant acute hazard expected from published data on chlorophyllins.
- Eye / skin irritation: mild, transient irritation possible from dust contact.
- Sensitisation: not expected to be a skin sensitiser.
- Mutagenicity / carcinogenicity: no evidence of genotoxic or carcinogenic concern in approved food-use assessment.
- Note: As a permitted food colour (E140(ii)), it is subject to food-safety evaluation; handle with normal industrial hygiene practices.

SECTION 12: ECOLOGICAL INFORMATION

- Ecotoxicity: expected to be low; no significant bioaccumulation anticipated.
- Persistence and degradability: naturally derived pigment, expected biodegradable in environmental compartments.
- Mobility: soluble 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 recover/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(ii) per Regulation (EC) No 1333/2008 and related specifications.
- USA: subject to FDA colour-additive regulations where applicable (as chlorophyllin derivative).
- China: food additive — sodium magnesium chlorophyllin 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: 2026-10-21 | Revision: 0 | Supersedes: none

— End of Material Safety Data Sheet —