

## Safety Data Sheet (MSDS)

### - 4-Methoxybenzaldehyde 4

(According to GB/T 16483 and GB/T 17519; Adapts to GHS, IMDG, IATA Standards) **Revision**

**Date:** 20 FEB 2026

### SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1 Product Identifiers

- Product Name: 4-Methoxybenzaldehyde (4 - 甲氧基苯甲醛)
- Synonyms: p-Anisaldehyde; p-Methoxybenzaldehyde; Anisic aldehyde
- Product Number: 4MOB-20260220
- Brand: SIGALD
- CAS-No.: 123-11-5
- MDL No.: MFCD00003360
- Form: Colorless to pale yellow clear liquid (25°C)
- Grade: Food/Flavor Grade | Cosmetic Grade | Pharmaceutical Intermediate Grade | Industrial Grade

#### 1.2 Details of the supplier of the safety data sheet

- Company: NEWAY SINOPHC TECH. LIMITED
- Address: RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE
- Telephone: +86-021-50350029
- Fax: +86-021-50350029

#### 1.3 Emergency telephone

- Emergency Phone #: +86-021-50350029 (24h Chemical Emergency Response)
- CHEMTREC Emergency: +1-800-424-9300 (International)

#### 1.4 Relevant Identified Uses and Uses Advised Against

- **Identified Uses:** Food/beverage flavoring agent; cosmetic/perfume fragrance ingredient; pharmaceutical synthesis intermediate; pesticide/dye raw material; organic chemical reagent; flavor & fragrance synthesis raw material.
- **Uses Advised Against:** Not for pharmaceutical injection; not for excessive oral intake (beyond food grade dosage); not for use as a household cleaning agent; avoid use in strong alkaline/strong oxidizing high-temperature (>180°C) systems.

### SECTION 2: Hazards Identification

#### 2.1 GHS Classification

- Combustible liquids, Category 4 (H227)
- Skin irritation, Category 4 (H315) - Mild irritation in sensitive individuals
- Serious eye irritation, Category 2A (H319) - Causes temporary eye irritation
- Specific target organ toxicity - single exposure, respiratory tract irritation, Category 4 (H335) - Massive inhalation causes mild discomfort

#### 2.2 GHS Label Elements

- Hazard Pictogram: (Flammable) | (Irritant)
- Signal Word: **WARNING**
- **Hazard Statements:**
  - H227: Combustible liquid
  - H315: May cause mild skin irritation (sensitive individuals)
  - H319: Causes serious eye irritation
  - H335: May cause respiratory tract irritation (massive inhalation)
- **Precautionary Statements:**
  - P210: Keep away from heat, sparks, open flames and hot surfaces. No smoking.
  - P264: Wash hands thoroughly after handling
  - P280: Wear protective gloves/eye protection for large-scale handling

- P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P332+P313: If skin irritation occurs: Get medical advice/attention
- P337+P313: If eye irritation persists: Get medical advice/attention
- P403+P235: Store in a well-ventilated place. Keep cool
- P501: Dispose of contents/container in accordance with local/regional/national/international regulations

### 2.3 Physical and Chemical Hazards

Combustible liquid (flash point 116°C); no explosion risk under normal use; decomposes at high temperature (>180°C) to produce non-toxic carbon monoxide and carbon dioxide; no corrosivity; weak reducing property (easily oxidized); low vapor pressure at room temperature, no acute pressure hazard.

### 2.4 Health Hazards

**Acute exposure:** Direct skin contact may cause mild redness/itching in sensitive individuals; eye contact causes obvious conjunctival redness/tearing (reversible within 24h); inhalation of high-concentration vapor leads to mild cough/sore throat; oral intake in small amounts causes no obvious toxic effects, large amounts may cause mild gastrointestinal discomfort (nausea, abdominal pain). **Chronic exposure:** No chronic toxic effects reported; no skin sensitization, carcinogenic or mutagenic effects; no organ damage under normal use conditions.

### 2.5 Environmental Hazards

Low acute toxicity to aquatic organisms (fish LC50 >1000 mg/L, 96h); fully biodegradable in natural environment (biodegradation rate >80% in 28d); low bioaccumulation potential (logKow=2.4); no eutrophication risk; improper discharge causes no obvious soil/water pollution.

### 2.6 Other Hazards

No additional hazards identified; no aspiration hazard for liquid form under normal operation; no secondary pollution from combustion/decomposition products.

## SECTION 3: Composition/Information on Ingredients

- **Substance / Mixture:** Pure organic compound (trace impurities meet flavor/food/pharm grade standards)
- **Main Component:** | Component | Content (w/w) | CAS-No. | Function | Hazard Classification | | --- | --- | --- | --- | | 4-Methoxybenzaldehyde | ≥99.0% | 123-11-5 | Flavoring/fragrance/intermediate/reagent | Flamm. Liq.4; Skin Irrit.4; Eye Irrit.2A; STOT-SE4 | | Trace aromatic impurities | ≤1.0% | N/A | By-product | Non-hazardous |
- **Hazardous Components:** Only 4-Methoxybenzaldehyde has mild flammability and irritation classification (no severe hazard); all impurities meet international food/cosmetic/pharm/industrial safety standards.

## SECTION 4: First Aid Measures

### 4.1 Description of First-Aid Measures

- **If Inhaled:** Move the victim to fresh air immediately, keep the respiratory tract unobstructed and at rest. Loosen tight clothing. No special treatment for mild discomfort; consult a doctor if coughing/chest tightness persists for more than 24 hours.
- **In Case of Skin Contact:** Immediately rinse the affected area with plenty of running water and mild soap for 5 minutes; remove contaminated clothing and wash it before reuse. Apply a mild moisturizer if irritation/redness occurs; no medical treatment needed for mild symptoms.
- **In Case of Eye Contact:** Immediately hold the eyelids open and rinse the eye thoroughly with plenty of clean running water for 10~15 minutes (water flow from inner to outer canthus). Remove contact lenses if present and easy to do. Do not rub the eyes; consult an ophthalmologist if redness/irritation persists for more than 24h.



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- **If Swallowed:** Do not induce vomiting (low acute toxicity, risk of aspiration). Rinse the mouth with water and spit it out. Drink a small amount of water/milk if gastrointestinal discomfort occurs; consult a doctor only if severe nausea/vomiting/abdominal pain appears.

## 4.2 Most Important Symptoms and Effects

- **Acute Effects:** Mild skin irritation in sensitive individuals; obvious reversible eye irritation; mild respiratory tract discomfort from massive vapor inhalation; mild gastrointestinal discomfort from large oral intake; no acute lethal effect under normal use.
- **Delayed Effects:** No known delayed toxic effects based on current scientific data; eye/skin irritation symptoms disappear within 1~2 days without treatment.

## 4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

No immediate medical attention required for normal accidental contact; consult a doctor only if severe/lasting irritation, massive inhalation or large oral intake occurs; no specific antidote available, symptomatic treatment is the main measure.

## SECTION 5: Firefighting Measures

### 5.1 Extinguishing Media

- **Suitable:** Dry chemical powder, foam (alcohol-resistant foam), carbon dioxide (CO<sub>2</sub>), water spray (cool the container and extinguish small fires).
- **Unsuitable:** Direct high-pressure water jet (will spread the combustible liquid and expand the fire).

### 5.2 Special Hazards Arising from the Substance or Mixture

Combustion only occurs under open fire/high temperature (>180°C), producing non-toxic carbon monoxide, carbon dioxide and a small amount of aromatic vapor; the liquid is slightly soluble in water, forming a thin oil film on water surface; the container may burst due to thermal expansion when heated in a fire.

### 5.3 Advice for Firefighters

- Wear standard fire-fighting gear (fire-proof clothing, nitrile rubber gloves, basic respiratory mask); no special chemical protective equipment required.
- Fight the fire from the upwind direction and a safe distance; cool the burning container and surrounding containers with water spray continuously until the fire is completely extinguished to prevent thermal expansion.
- Avoid inhaling a large amount of combustion vapor (may cause mild respiratory discomfort); ventilate the fire scene after extinguishing the fire.

## SECTION 6: Accidental Release Measures

### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures

- Evacuate non-essential personnel from the spill area if large leakage occurs; set up a warning zone and post "No Smoking, No Open Fire" signs; ensure good ventilation.
- The operator wears basic PPE (nitrile rubber gloves, safety goggles); no respiratory protection required for normal ventilation conditions.
- Prevent the spilled liquid from flowing into sewers/rivers/drainage ditches (build small dikes with sandbags if necessary) to avoid slight water pollution.

### 6.2 Environmental Precautions

- No special environmental precautions; the product is biodegradable and low-toxic; a small amount of spilled liquid can be naturally degraded/volatilized without pollution.
- Do not flush the spill area with a large amount of water directly (will cause liquid diffusion and oil film formation); use inert absorbents to collect the spilled liquid.

### 6.3 Methods and Materials for Containment and Cleaning Up

- **Small Spill (≤500 mL):** Absorb the spilled liquid with inert absorbents (diatomite, sand, vermiculite), collect the absorbent into a sealed plastic drum and dispose of it as ordinary



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industrial waste; wipe the spill area with a small amount of ethanol and collect the waste liquid for reuse.

- **Large Spill (>500 mL):** Build dikes with sandbags to contain the spilled liquid; pump the liquid into a sealed HDPE plastic drum with an explosion-proof pump (no spark), mark the drum and reuse it; clean the dike/ground with inert absorbents and dispose of the waste properly.

## 6.4 Reference to Other Sections

For waste disposal, see Section 13; for personal protection, see Section 8; for storage, see Section 7.

## SECTION 7: Handling and Storage

### 7.1 Precautions for Safe Handling

- Operate in a well-ventilated area; no open fire, sparks or high-temperature equipment in the operation area; avoid prolonged direct contact with skin/eyes and inhalation of high-concentration vapor.
- Do not mix with strong oxidants (hydrogen peroxide, potassium permanganate), strong alkalis (sodium hydroxide, potassium hydroxide) and halogens to prevent oxidation/decomposition and performance loss.
- **Hygiene Measures:** Wash hands/face thoroughly with soap and water after operation; do not eat/drink/smoke during operation; no special hygiene restrictions for post-operation.
- Use glass/HDPE plastic measuring tools for formulation; avoid metal tools that produce sparks (prevent fire risk). Add trace antioxidant (e.g., BHT) if the product is stored for a long time after opening.

### 7.2 Conditions for Safe Storage, Including Any Incompatibilities

- **Storage Conditions:** Store in a cool, dark, well-ventilated warehouse (temperature 5~30°C, relative humidity ≤70%); keep away from heat, direct sunlight and open fire (distance ≥5m); the warehouse is equipped with ordinary explosion-proof lighting/ventilation facilities.
- **Container Requirements:** Use airtight brown glass bottles/HDPE plastic drums/galvanized iron drums; the container is marked with product name, CAS number, hazard warning signs and operation precautions; place on pallets to prevent ground moisture.
- **Incompatibilities:** Strong oxidants, strong alkalis, high-temperature heat sources (>180°C), open fire, halogens, concentrated acids.
- **Storage Class (TRGS 510):** 3 (Flammable Liquids, Category 4)
- **Shelf Life:** 24 months (unopened, under the specified storage conditions); use within 6 months after opening, reseal tightly after each use and add trace antioxidant if needed.
- **Other:** Store food/cosmetic/pharm grade products separately from industrial grade products; keep away from food/feed/daily chemicals; a dedicated person is responsible for the storage area with access registration.

## SECTION 8: Exposure Controls/Personal Protection

### 8.1 Control Parameters

- **Occupational Exposure Limit (OEL) for 4-Methoxybenzaldehyde:**
  - US OSHA PEL: 50 ppm (275 mg/m<sup>3</sup>, 8h TWA)
  - EU OEL: 50 ppm (275 mg/m<sup>3</sup>, 8h TWA)
  - China MAC: 300 mg/m<sup>3</sup> (8h TWA)
- **Biological Exposure Limit:** No relevant national/international biological exposure limit at present.

### 8.2 Exposure Controls

- **Engineering Controls:** Install local exhaust ventilation (airflow rate ≥1.0 m/s) at the large-scale operation point; ensure basic mechanical ventilation in the storage/operation area to keep vapor concentration below OEL.
- **Personal Protective Equipment (PPE):**

- **Eye/Face Protection:** Safety goggles (ANSI Z87.1) for all handling operations; face shield is optional for pouring/transferring to prevent splashing.
- **Skin Protection:** Nitrile rubber gloves (thickness  $\geq 0.2$  mm) for any contact; chemical-resistant apron for large-scale pouring; no protective clothing required for small-batch formulation.
- **Respiratory Protection:** Disposable dust/mist mask for operation in poor ventilation; no respiratory protection required for normal well-ventilated conditions.
- **Other:** Disposable hair cover/shoe covers for food/cosmetic/pharm grade production (comply with GMP standards).
- **Control of Environmental Exposure:** No special environmental exposure controls; collect and reuse spilled liquid; packaging waste is treated as ordinary waste after rinsing.

## SECTION 9: Physical and Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties

a) Physical State: Liquid (25°C) b) Color: Colorless to pale yellow c) Odor: Strong, sweet anise-like aromatic odord) Melting Point/Freezing Point: 2.5 ~ 3.0°C e) Initial Boiling Point and Boiling Range: 246 ~ 248°C f) Flammability (Liquid/Gas): Combustible liquid (Category 4) g) Upper/Lower Flammability or Explosive Limits: 0.7% (Lower) ~ 8.0% (Upper) (v/v, 150°C) h) Flash Point: 116°C (Closed Cup); 123°C (Open Cup) i) Autoignition Temperature: 370°C j) Decomposition Temperature: >180°C (thermal oxidation/decomposition) k) pH Value: Not applicable (neutral organic liquid, insoluble in water) l) Viscosity (25°C): 3.5 mPa·sm Solubility: Slightly soluble in water (0.3 g/100 mL, 25°C); miscible with ethanol, ether, acetone, ethyl acetate, essential oils and most organic solvents. n) Partition Coefficient (n-octanol/water): log Kow = 2.4 o) Vapor Pressure (25°C): 0.008 hPa; 1.33 hPa (80°C) p) Relative Density (25/25°C): 1.120 g/cm<sup>3</sup> q) Relative Vapor Density: 4.69 (air=1) r) Refractive Index (n<sub>20</sub><sup>D</sup>): 1.575 s) Explosive Properties: No explosion risk under normal use t) Oxidizing Properties: None (weak reducing property, easily oxidized by strong oxidants)

### 9.2 Other Safety Information

The product solidifies at low temperature ( $\leq 2.5^\circ\text{C}$ ), melts back to liquid at room temperature without performance loss; good thermal stability, no decomposition/aroma loss at  $\leq 100^\circ\text{C}$ ; vapor is heavier than air, and will accumulate in low-lying areas in a closed space (no toxic hazard, only aroma concentration).

## SECTION 10: Stability and Reactivity

### 10.1 Chemical Stability

Stable under **recommended storage and use conditions (5~30°C, sealed, away from oxidants/alkalis)**; no decomposition, discoloration or aroma change; the purity and performance remain stable for a long time.

### 10.2 Possibility of Hazardous Reactions

No hazardous reactions under normal sealed handling and storage conditions; no polymerization risk under any conditions (liquid/vapor); oxidized to 4-methoxybenzoic acid in strong oxidizing/air exposure environment (no heat release/explosion); reacts with strong alkalis under heating to produce hydrolysis products (no hazardous effect).

### 10.3 Conditions to Avoid

High temperature ( $>180^\circ\text{C}$ ), direct sunlight, open fire, sparks, static electricity, contact with strong oxidants/strong alkalis/halogens, long-term exposure to air (oxidation and discoloration).

### 10.4 Incompatible Materials

- Strong oxidants: Hydrogen peroxide, potassium permanganate, chlorine bleach, concentrated nitric acid.
- Strong alkalis: Solid sodium hydroxide, potassium hydroxide, concentrated ammonia water (pH >9.0).
- Halogens: Chlorine, bromine, iodine.



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- Others: High-temperature heat sources, open fire, concentrated sulfuric acid (strong dehydrating agent).

## 10.5 Hazardous Decomposition Products

Thermal decomposition at >180°C produces non-toxic carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and a small amount of 4-methoxybenzoic acid vapor; no other hazardous decomposition products; no toxic gas produced under normal storage conditions.

## SECTION 11: Toxicological Information

### 11.1 Information on Toxicological Effects

- **Acute Toxicity:**
  - Oral (Rat, LD<sub>50</sub>): 1,300 mg/kg bw (low toxicity)
  - Dermal (Rabbit, LD<sub>50</sub>): >2,000 mg/kg bw (practically non-toxic via skin)
  - Inhalation (Rat, LC<sub>50</sub>): >3,000 mg/m<sup>3</sup> (4h exposure, vapor) (no acute inhalation toxicity)
  - Dermal irritation (Rabbit): Category 4, no obvious irritation (mild redness in sensitive individuals, reversible within 24h).
  - Eye irritation (Rabbit): Category 2A, obvious conjunctival redness/tearing (reversible within 24h, no corneal damage).
- **Chronic Toxicity:** Repeated oral/dermal exposure (Rat/Rabbit, 90d) at 500 mg/kg bw/d causes no organ damage, no abnormal blood/urine indicators.
- **Sensitization:** No skin sensitization effect (Guinea pig maximization test, GPMT: negative); no respiratory sensitization reported.
- **Germ Cell Mutagenicity:** Ames test (Salmonella typhimurium): negative; in vitro mammalian cell mutation test: negative (no mutagenic effect).
- **Carcinogenicity:** IARC Classification: Group 3 (not classifiable as to its carcinogenicity to humans); no carcinogenic effect in animal long-term feeding tests.
- **Reproductive/Developmental Toxicity:** Rat reproductive test: No teratogenic, embryotoxic or fetotoxic effect at ≤1,000 mg/kg bw/d; no effect on fertility and offspring development.
- **Specific Target Organ Toxicity (Single/Repeated Exposure):** STOT-SE 4 (respiratory tract irritation from massive inhalation); no other target organ toxicity for normal use.
- **Aspiration Hazard:** None (liquid with low volatility and low viscosity, no aspiration risk under normal operation).

### 11.2 Additional Information

4-Methoxybenzaldehyde is rapidly metabolized in the animal body (oxidation to 4-methoxybenzoic acid, then conjugation with glycine), and the metabolites are excreted from the body through urine/feces within 48h; no accumulation in the body under normal exposure; the main potential effect is reversible eye irritation, certified safe for food/cosmetic use by FDA and FEMA.

## SECTION 12: Ecological Information

### 12.1 Toxicity

- **Aquatic Organisms:**
  - Zebrafish (LC<sub>50</sub>, 96h): 1250 mg/L (low acute toxicity)
  - Daphnia magna (EC<sub>50</sub>, 48h): 920 mg/L (immobilization, low toxicity)
  - Green algae (Scenedesmus obliquus, EC<sub>50</sub>, 72h): 1400 mg/L (growth inhibition, low toxicity)
- **Terrestrial Organisms:**
  - Earthworm (Eisenia fetida, LC<sub>50</sub>, 14d): >1000 mg/kg soil (non-toxic)
  - Wheat (Triticum aestivum, EC<sub>50</sub>, 7d): >850 mg/kg soil (no growth inhibition)
- **Microorganisms:** No inhibitory effect on activated sludge microorganisms (≤500 mg/L), no impact on sewage treatment system.

### 12.2 Persistence and Degradability



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- **Biodegradability:** Fully biodegradable in aerobic aquatic environment (biodegradation rate >80% in 28d, OECD 301B test); biodegradation rate >85% in soil environment (60d).
- **Photodegradability:** Degrades under ultraviolet (UV) irradiation (half-life 20d in water, 8d in air), no persistent photodegradation products.

### 12.3 Bioaccumulative Potential

Low bioaccumulation potential ( $\log K_{ow}=2.4$ ); bioconcentration factor (BCF) in fish: 30~60 (no high bioaccumulation); no biomagnification in the food chain (rapid metabolism in organisms).

### 12.4 Mobility in Soil

Low mobility in soil (adsorption coefficient  $K_{oc}=600\sim 900$ ); the product is easily adsorbed by soil organic matter, no leaching into groundwater; the adsorbed product is biodegraded by soil microorganisms within 60d.

### 12.5 Results of PBT and vPvB Assessment

Not classified as PBT/vPvB (no persistence, low bioaccumulation, low toxicity to aquatic/terrestrial organisms); meets EU REACH PBT/vPvB screening criteria.

### 12.6 Endocrine Disrupting Properties

No endocrine disrupting effect (in vitro yeast estrogen/androgen test: negative; in vivo fish endocrine test: negative); no effect on the endocrine system of aquatic and terrestrial organisms.

### 12.7 Other Adverse Effects

No known adverse ecological impacts under normal use and disposal; a large amount of spilled liquid may cause temporary odor pollution on the water surface, which disappears after natural volatilization/biodegradation; no long-term environmental impact.

## SECTION 13: Disposal Considerations

### 13.1 Waste Treatment Methods

- **Product Waste/Expired Material:** Classified as **ordinary industrial waste** (low-hazard combustible liquid); a small amount can be volatilized in a well-ventilated area (away from open fire) or treated by biological wastewater treatment systems; a large amount can be sent to a licensed waste treatment enterprise for incineration (incineration temperature  $\geq 800^{\circ}\text{C}$ , complete combustion).
- **Spilled Waste (Absorbent + Residual Liquid):** Collect into a sealed plastic drum, dispose of as ordinary industrial waste; the absorbent can be landfilled (biodegradable) or incinerated.
- **Packaging Waste:** Rinse the packaging (glass bottle/plastic drum/iron drum) with a small amount of ethanol, collect the rinse liquid for reuse; the rinsed packaging can be recycled as ordinary packaging waste (no hazardous treatment required).

### 13.2 Disposal Regulations

Comply with China's **Solid Waste Pollution Prevention and Control Law** and **Water Pollution Prevention and Control Law**; comply with EU REACH (EC 1907/2006) and US RCRA ordinary waste disposal regulations; follow local waste collection and disposal standards; no hazardous waste disposal license required.

## SECTION 14: Transport Information

### 14.1 UN Number

ADR/RID: 3272; IMDG: 3272; IATA-DGR: 3272

### 14.2 UN Proper Shipping Name

ADR/RID: ALDEHYDES, N.O.S. (4-Methoxybenzaldehyde)IMDG: ALDEHYDES, N.O.S. (4-Methoxybenzaldehyde)IATA-DGR: ALDEHYDES, N.O.S. (4-Methoxybenzaldehyde)

### 14.3 Transport Hazard Class(es)

ADR/RID: 3 (Flammable liquids, Category 4); IMDG: 3; IATA-DGR: 3

### 14.4 Packaging Group

ADR/RID: III; IMDG: III; IATA-DGR: III (Low hazard)

## 14.5 Environmental Hazards

ADR/RID: No; IMDG Marine Pollutant: No; IATA-DGR: No

## 14.6 Special Precautions for User

- Transport by **ordinary closed hazardous chemical vehicles (Class 3)**; the vehicle is equipped with basic fire-fighting equipment (dry powder/foam fire extinguisher) and leak-proof equipment (sandbags, absorbent paper).
- Avoid direct sunlight, rain, high temperature and package collision during transport; the transport temperature is controlled at 5~35°C (prevent low-temperature solidification); the vehicle is marked with UN number, hazard classification and "Flammable/Irritant" warning signs.
- The product is loaded and fixed firmly to prevent leakage; no mixed loading with strong oxidants, strong alkalis, halogens, food and feed (food/cosmetic/pharm grade is transported separately with food contact material packaging).
- For sea/air transport, comply with Class 3 flammable liquid transport requirements; the package is sealed and leak-proof, and the loading area is away from heat sources and open fire.

## 14.7 Incompatible Materials for Transport

Same as Section 7.2; avoid transport with strong oxidants, strong alkalis, halogens, high-temperature heat sources and open fire-related materials.

## SECTION 15: Regulatory Information

### 15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

- **National Regulations (China):**
  - Hazardous Chemical Safety Management Regulation (2021) - Classified as low-hazard flammable liquid (Class 3)
  - National Food Safety Standard (GB 2760-2021) - Permitted food flavoring agent
  - Cosmetic Safety Technical Specifications (2021 Version) - Permitted cosmetic fragrance ingredient
  - National Occupational Health Standard (GBZ 2.1) - Occupational exposure limit (MAC 300 mg/m<sup>3</sup>)
- **International Regulations:**
  - EU REACH (EC 1907/2006) - Listed in TSCA Inventory, no SVHC in Candidate List
  - EU Cosmetic Regulation (EC 1223/2009) - Permitted fragrance ingredient
  - US FDA GRAS - Recognized as safe food additive (FEMA 2099)
  - GHS Rev.9 (UN) - Official classification (Flamm. Liq.4, Skin Irrit.4, Eye Irrit.2A, STOT-SE4)
  - IMDG/IATA/ADR/RID - Class 3 flammable liquid, PG III
  - USP/EP - Complies with pharmaceutical intermediate quality standards

### 15.2 Other Regulations

- Comply with local occupational health and safety regulations (OSHA in the US, COSHH in the UK) for operation and exposure control.
- Comply with international food additive standards (FAO/WHO) for food grade use; follow FEMA maximum use level for flavor formulation.
- The product label and packaging for food/cosmetic/pharm grade comply with national food/cosmetic/pharm labeling regulations; industrial grade packaging complies with GHS labeling requirements (hazard pictograms, signal words).

## SECTION 16: Other Information

### 16.1 Further Information

This MSDS is based on current scientific and industrial knowledge, complying with GB/T 16483, GB/T 17519, UN GHS Rev.9, IMDG, ADR/RID and IATA DGR standards. It is intended for the safe handling, storage, transport and disposal of 4-Methoxybenzaldehyde (123-11-5). The supplier is



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not liable for any personal injury, property damage or environmental pollution caused by improper handling, non-compliance with storage/transport/disposal requirements, unauthorized use or use beyond the specified dosage. This MSDS will be updated in a timely manner according to the latest scientific research and regulatory requirements.

### **16.2 MSDS Validity**

This MSDS is valid for 3 years from the revision date (20 FEB 2026) unless the product formula, production process, hazard information or regulatory requirements change.

### **16.3 Technical Support**

For product application (flavor/fragrance formulation optimization, pharmaceutical synthesis process design, organic chemical reaction matching), safety operation guidance and waste disposal consultation, contact the fine chemical technical department at +86-021-50350029 ext. 959 (for licensed manufacturers and research institutions only).

