



NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

Safety Data Sheet (MSDS)

- **Feed Grade Allicin**(Compliant with GB/T 16483, GHS Rev.9, IMDG, IATA)

Revision Date: 20 FEB 2026

SECTION 1: Identification

1.1 Product Identifiers

- Name: Allicin (Feed Grade)
- CAS: 539-86-6
- Synonyms: Diallyl thiosulfinate; Diallyl disulfide oxide
- EINECS: 208-727-7

1.2 Supplier Details

- Company: NEWAY SINOPHC TECH. LIMITED
- Address: RM. 204, BLDG 3, 188 Aona Rd, Shanghai FTZ, China
- Tel: +86-021-50350029 | Fax: +86-021-50350029

1.3 Emergency Contact: +86-021-50350029 (24h)

1.4 Uses: **Exclusive for animal feed additive.** Acts as a natural flavor enhancer, antimicrobial agent and growth promoter. Improves feed palatability and intestinal health. Not for human consumption, pharmaceutical or industrial use.

SECTION 2: Hazards Identification

- **GHS Classification:** Skin corrosion/irritation (Category 2); Eye irritation (Category 2); Specific target organ toxicity - single exposure (respiratory tract irritation, Category 3); Flammable liquid (Category 4)
- **Pictogram:** (Exclamation Mark)
- **Signal Word:** Warning
- **Hazard Statements:**
 - H227: Combustible liquid
 - H315: Causes skin irritation
 - H319: Causes serious eye irritation
 - H335: May cause respiratory irritation
- **Precautionary Statements:**
 - P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 - P261: Avoid breathing fumes/mist
 - P280: Wear protective gloves/eye protection/face protection
 - P302+P352: If on skin: Wash with plenty of soap and water

Summary: Combustible oily liquid with a strong garlic odor. Causes mild skin/eye irritation and respiratory discomfort. Natural antimicrobial properties; non-toxic to animals at approved dosage.

SECTION 3: Composition/Information on Ingredients

- **Active Ingredient:** Allicin (CAS 539-86-6)



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- **Concentration:** 25.0% - 30.0% (dissolved in food-grade vegetable oil carrier)
- **Other Ingredients:** Food-grade soybean oil (70.0% - 75.0%)
- **Impurities:** None hazardous (compliant with feed hygiene standards)

SECTION 4: First Aid Measures

- **Inhalation:** Remove to fresh air. Rest in a well-ventilated area. If coughing persists, seek medical advice.
- **Skin Contact:** Immediately wash contaminated skin with plenty of soap and water for 10-15 minutes. Remove contaminated clothing. If irritation persists, seek medical attention.
- **Eye Contact:** Hold eyelids open and rinse continuously with clean running water for at least 15 minutes. Remove contact lenses if present. If eye irritation persists, consult an ophthalmologist immediately.
- **Ingestion (Human):** Do not induce vomiting. Rinse mouth thoroughly. Drink large amounts of water. Seek medical attention immediately, especially if discomfort occurs.
- **Antidote:** No specific antidote. Treat symptomatically.

SECTION 5: Firefighting Measures

- **Extinguishing Media:** Dry chemical powder, foam, carbon dioxide (CO₂), water spray (fog).
- **Hazards in Fire:** Decomposes at high temperatures to produce sulfur oxides (SO_x) and irritating fumes. Vapors may form explosive mixtures with air.
- **Firefighter Advice:** Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective gear. Cool containers with water spray until well after the fire is out. Fight fire from a safe distance.

SECTION 6: Accidental Release Measures

- **Personal Precautions:** Wear N95 respirator, nitrile gloves and chemical splash goggles. Eliminate all ignition sources (no smoking, flares, sparks).
- **Cleanup Methods:**
 - Small Spill: Absorb with inert material (e.g., sand, diatomaceous earth). Transfer to a sealed HDPE container for disposal.
 - Large Spill: Contain with sandbags or dikes to prevent spread. Pump into sealed drums. Ventilate the area thoroughly.
- **Environmental Precautions:** Prevent spilled material from entering drains, sewers or water bodies. The product is biodegradable but may cause oxygen depletion in water.

SECTION 7: Handling and Storage

- **Handling Precautions:** Handle in a well-ventilated area. Avoid contact with skin, eyes and clothing. Use explosion-proof electrical equipment. Do not eat, drink or smoke while handling.
- **Storage Conditions:**
 - Temperature: 5°C - 25°C (cool, dark place)
 - Package: Keep tightly sealed in original amber glass bottles or HDPE drums (airtight).
 - Shelf Life: **24 months (unopened, under specified conditions)**

- Incompatibilities: Strong oxidizing agents, strong acids, heavy metal salts
- Segregation: Store away from heat, sparks, open flames and incompatible materials. Mark "FEED GRADE" clearly.

SECTION 8: Exposure Controls/Personal Protection

- **Occupational Exposure Limit (OEL):** No specific limit for allicin; follow limits for vegetable oil mists.
- **Engineering Controls:** Use local exhaust ventilation to keep vapor concentrations low. Install explosion-proof lighting and equipment.
- **Personal Protective Equipment (PPE):**
 - Respiratory: Organic vapor cartridge respirator (for bulk handling)
 - Eyes: Chemical splash goggles (mandatory)
 - Skin: Nitrile rubber gloves and chemical-resistant apron (mandatory)

SECTION 9: Physical and Chemical Properties

- **Physical State:** Oily liquid | **Color:** Pale yellow to yellow
- **Odor:** Strong, characteristic garlic odor | **pH Value:** 5.0-7.0 (1% emulsion)
- **Melting Point:** -6°C | **Boiling Point:** Decomposes (100°C)
- **Flash Point:** 79°C (PMCC) | **Autoignition Temperature:** >300°C
- **Density:** 1.110-1.140 g/cm³ (25°C) | **Refractive Index:** 1.550-1.570 (25°C)
- **Solubility:** Insoluble in water; soluble in ethanol, ether and vegetable oils

SECTION 10: Stability and Reactivity

- **Stability:** Stable under cool, dark conditions. Decomposes when exposed to light, heat (>100°C), strong acids or alkalis.
- **Hazardous Reactions:** Reacts with strong oxidizing agents to produce toxic sulfur oxides. Decomposes in water over time (hydrolysis).
- **Hazardous Polymerization:** Will not occur.
- **Decomposition Products:** Sulfur dioxide (SO₂), diallyl disulfide, carbon monoxide (CO).

SECTION 11: Toxicological Information

- **Acute Toxicity:** Oral (Rat) LD₅₀ = 700 mg/kg (Moderate toxicity); Dermal (Rabbit) LD₅₀ = 1,500 mg/kg
- **Skin Irritation:** Causes moderate skin irritation (Category 2)
- **Eye Irritation:** Causes serious eye irritation (Category 2)
- **Carcinogenicity:** IARC Classification - Group 3 (not classifiable); natural product, no carcinogenic potential.
- **Animal Safety:** Safe at approved feed inclusion levels (0.01% - 0.05%). Acts as a natural antimicrobial and growth promoter without residues.

SECTION 12: Ecological Information

- **Aquatic Toxicity:** LC₅₀ (Zebrafish, 96h) = 12 mg/L (Moderately toxic to aquatic life)
- **Biodegradability:** Fully biodegradable (BOD₅ /COD = 0.75), degraded by soil microorganisms.



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- **Bioaccumulation Potential:** Low ($\log P = 3.2$)
- **Environmental Impact:** At recommended feed levels, excretion in manure is safe and may even have antimicrobial effects on soil bacteria. Avoid large-scale release into water.

SECTION 13: Disposal Considerations

- **Product Waste:** Expired allicin is classified as non-hazardous waste (due to vegetable oil carrier). Dispose of in accordance with local solid waste regulations. Do not reuse expired material.
- **Packaging Waste:** Rinse packaging with ethanol, then recycle or dispose of as non-hazardous waste.
- **Disposal Compliance:** Comply with China General Solid Waste Pollution Control Law and local environmental regulations.

SECTION 14: Transport Information

- **UN Number:** UN 1993 (Combustible liquids, n.o.s.)
- **UN Proper Shipping Name:** Allicin solution (Feed Additive), Combustible liquid
- **Hazard Class:** 3 | **Packaging Group:** III | **Environmental Hazard:** No
- **Transport Precautions:** Transport in approved containers (amber glass or HDPE). Keep away from heat, sparks and open flames. Use vehicles with explosion-proof equipment. Do not transport with strong oxidizers.

SECTION 15: Regulatory Information

- **China:** Compliant with GB 13078.1-2017, included in the "Catalogue of Feed Additives" (flavoring agents).
- **EU:** Compliant with EC 1831/2003 (Feed Additives), REACH registered (not in SVHC List).
- **US:** TSCA listed, approved by FDA/CVM for use in animal feed as a natural flavorant.
- **International:** Meets Codex Alimentarius Commission standards for natural feed additives.

SECTION 16: Other Information

- **Disclaimer:** This MSDS is for feed grade allicin (25% formulation) only. Misuse for non-feed purposes is at the user's sole risk. The supplier is not liable for damages resulting from improper handling or disposal.
- **Revision Date:** 20 FEB 2026