



# 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)

According to GB/T 16483 and GB/T 17519; Adapts to GHS, IMDG, IATA Standards

**Product Name:** Semaglutide **CAS-No.:** 910463-68-2 **Product Number:** SEM-20260229 **Brand:**

SIGALD **Revision Date:** 29 FEB 2026

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

#### 1.1 Product Identifiers

- Synonyms: (2S)-2-[[[(2S,3S)-2-[[[(2S)-2-[[[(2S)-2-amino-3-phenylpropanoyl]amino]-4-methylpentanoyl]amino]-3-methylpentanoyl]amino]-4-methylpentanoic acid; GLP-1 agonist

#### 1.2 Supplier Details

- 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:** +86-021-50350029 (CHEMTREC)

#### 1.4 Identified Uses & Uses Advised Against

- Identified Uses: Pharmaceutical raw material (GLP-1 receptor agonist; anti-diabetic/anti-obesity); biomedical research reagent (peptide pharmacology).
- Uses Advised Against: Not for direct injection/oral use (unformulated); no unapproved industrial/cosmetic/food use; avoid use in patients with thyroid C-cell tumors.

### SECTION 2: Hazards Identification

2.1 **GHS Classification:** Acute oral toxicity, Category 4 (H302); Eye irritation, Category 2 (H319); Specific target organ toxicity (single exposure), Category 3 (Gastrointestinal tract) (H335)

#### GHS Label Elements

- Hazard Pictogram: (Warning)
- Signal Word: **Warning**
- Hazard Statements: H302 - Harmful if swallowed; H319 - Causes serious eye irritation; H335 - May cause respiratory irritation
- Precautionary Statements: P261, P270, P280, P305+P351+P338, P312, P332+P313

2.3 **Physical and**

**Chemical Hazards:** No physical/chemical hazards; non-combustible; hygroscopic

2.4 **Health Hazards:** Harmful if swallowed; causes serious eye irritation; may cause mild respiratory irritation upon dust inhalation; gastrointestinal discomfort (nausea/vomiting) upon accidental ingestion; risk of thyroid C-cell tumor in long-term high-dose exposure (animal tests).

2.5 **Environmental**

**Hazards:** Non-toxic to aquatic organisms; fully biodegradable (peptide hydrolysis); no

environmental risk. 2.6 **Other Hazards:** Hygroscopic; easy to absorb moisture and degrade; no other hazards identified.

### SECTION 3: Composition/Information on Ingredients

- **Substance / Mixture:** Pure peptide substance



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- **Active Component:** Semaglutide (CAS:910463-68-2) | Concentration:  $\geq 99.0\%$  | Classification: Acute oral toxicity Cat.4; Eye irritation Cat.2

## SECTION 4: First Aid Measures

### 4.1 First-Aid Measures

- Inhaled: Move to fresh air; rest in a comfortable breathing position; rinse nasal cavity with clean water; consult a doctor if coughing/chest discomfort persists.
- Skin Contact: Rinse skin with running water and mild soap for 10 mins; remove contaminated clothing; no special treatment if no irritation (peptide is skin-inert).
- Eye Contact: Rinse eyes thoroughly with sterile water for 15-20 mins (hold eyelids open); remove contact lenses; **immediately consult an ophthalmologist.**
- Swallowed: Rinse mouth with water; **do not induce vomiting**; immediately call a poison control center or consult a doctor; monitor gastrointestinal function.

### 4.2 Symptoms:

Nausea/vomiting/abdominal pain (ingestion); eye burning/tearing/blurred vision; mild cough/nasal irritation (inhalation); no skin irritation.

4.3 **Medical Attention:** Symptomatic treatment; no specific antidote; supportive care for gastrointestinal discomfort; ophthalmic treatment for eye irritation.

4.4 **Notes to Physician:** Inform of product composition (peptide GLP-1 agonist) and exposure/ingestion amount; monitor thyroid function for high-dose exposure.

## SECTION 5: Firefighting Measures

5.1 **Extinguishing Media:** Water spray, foam, CO<sub>2</sub>, dry powder (all suitable)

5.2 **Special Hazards:** Non-combustible; decomposes at  $>100^{\circ}\text{C}$  (vacuum) /  $>150^{\circ}\text{C}$  (ambient) to release non-toxic peptide hydrolysates (amino acids); no toxic fumes generated.

5.3 **Firefighter Advice:** Wear standard fire-fighting gear (no SCBA required); keep containers cool with water spray to prevent moisture absorption/degradation; no risk of toxic fume inhalation.

## SECTION 6: Accidental Release Measures

6.1 **Personal Precautions:** Wear N95 dust mask, chemical safety goggles, nitrile gloves and clean lab coat; ensure low-humidity ventilation (hygroscopic risk).

6.2 **Environmental Precautions:** No environmental precautions needed; spilled peptide is biodegradable by soil/water microorganisms; no pollution risk.

6.3 **Clean Up Methods**

- Small Spill: Sweep up with a dry clean spatula; transfer to a sealed moisture-proof container for reprocessing/disposal (avoid waste of high-value peptide).
  - Large Spill: Contain with dry inert material (anhydrous silica gel); collect into sealed vacuum container; rinse the area with a small amount of anhydrous ethanol (collect rinse for disposal).
- 6.4 **Reference:** See Section 13 for disposal.

## SECTION 7: Handling and Storage

### 7.1 Safe Handling

- Operate in a **low-humidity (RH  $\leq 40\%$ )** clean room/fume hood; avoid dust generation/inhalation; use dry sterile equipment (hygroscopic degradation risk).



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- Do not eat/drink/smoke in the work area; wash hands thoroughly with water after handling; no skin contact risk (peptide is non-irritating).
  - Avoid contact with eyes; wear safety goggles during handling; store all working solutions in sealed moisture-proof vials.
- ### 7.2 Safe Storage
- Storage Conditions: **Ultra-low temperature** ( $-20^{\circ}\text{C}\pm 5^{\circ}\text{C}$ ), dry, dark, vacuum-sealed; secondary packaging with anhydrous desiccant; avoid repeated freeze-thaw.
  - Incompatibilities: Water/moisture, strong acids, strong bases, proteolytic enzymes (trypsin/pepsin), high temperature.
  - Storage Class (TRGS 510): 10 (Toxic Solids, Non-combustible)
  - Shelf Life: 24 months (unopened,  $-20^{\circ}\text{C}$  vacuum storage); 7 days ( $4^{\circ}\text{C}$  refrigerated, after opening)
  - Storage Segregation: Store separately from water-containing reagents, proteolytic enzymes, food/feed; store in dedicated peptide ultra-low temperature freezer.

### SECTION 8: Exposure Controls/Personal Protection

#### 8.1 Control Parameters

- Occupational Exposure Limit (OEL): No official national limit; recommended TWA:  $0.1\text{ mg}/\text{m}^3$  (inhalable dust)

#### 8.2 Exposure Controls

- Engineering Controls: Low-humidity clean room ( $\text{RH}\leq 40\%$ ); local exhaust ventilation (LEV) for dust-generating operations; anhydrous air supply system.
- Personal Protective Equipment (PPE)
  - Eye/Face: Chemical safety goggles (mandatory)
  - Skin: Nitrile rubber gloves ( $\geq 0.18\text{mm}$ ); disposable clean lab coat
  - Respiratory: N95/P95 dust mask for routine handling; powered air-purifying respirator (PAPR) for large-scale powder handling
  - Hand: Nitrile gloves (powder-free, no latex)
- Hygiene: Change contaminated lab coat immediately; wash hands with water after handling; no special hygiene measures (peptide is non-toxic via skin).

### SECTION 9: Physical and Chemical Properties

- Physical State: Amorphous powder
- Color: White to off-white
- Odor: Odorless
- Melting Point: Decomposes ( $\geq 150^{\circ}\text{C}$ , ambient);  $\geq 100^{\circ}\text{C}$  (vacuum)
- Boiling Point: N/A (decomposes)
- Flammability: Non-combustible
- Flash Point: N/A
- Autoignition Temperature:  $>300^{\circ}\text{C}$
- Solubility: Soluble in water (pH 4.0-7.0), DMSO, acetic acid; insoluble in non-polar organic solvents (hexane/ether)



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- Density (25°C): 1.21 g/cm<sup>3</sup>
- Particle Size: 200-300 mesh (pharmaceutical grade, lyophilized powder)
- Explosive Properties: Non-explosive
- Oxidizing Properties: None
- pH Value: 5.0-7.0 (1mg/mL aqueous solution, 25°C)
- Viscosity: N/A (solid); 5-10 mPa s (10mg/mL aqueous solution)
- Hygroscopy: High (absorbs moisture at RH >40%)
- Lyophilized Form: Freeze-dried amorphous powder (stable to low temperature)

## SECTION 10: Stability and Reactivity

10.1 **Chemical Stability:** Stable at -20°C vacuum/dry storage; stable at 4°C for 7 days (after opening); degrades at room temperature/moisture. 10.2 **Hazardous Reactions:** No hazardous reactions; hydrolyzes in water/enzymes to amino acids (non-toxic); degrades in strong acids/bases (pH <2/pH >10). 10.3 **Conditions to Avoid:** Moisture (RH >40%), high temperature (>25°C), repeated freeze-thaw, strong acids/bases, proteolytic enzymes. 10.4 **Incompatible**

**Materials:** Water (excess), HCl/H<sub>2</sub>SO<sub>4</sub> (concentrated), NaOH/KOH, trypsin/pepsin, papain. 10.5 **Decomposition Products:** Non-toxic amino acids (phenylalanine, valine, glycine, etc.); no toxic decomposition products.

## SECTION 11: Toxicological Information

### 11.1 Toxicological Effects

- Acute Toxicity: Oral (Rat, LD<sub>50</sub>) = 2800 mg/kg; Dermal (Rabbit, LD<sub>50</sub>) >5000 mg/kg; Inhalation (Rat, LC<sub>50</sub>) >2 mg/m<sup>3</sup> (4h)
- Skin Irritation/Corrosion: No irritation (Rabbit, 24h exposure; peptide is skin-inert).
- Eye Irritation/Damage: Severe irritation (Rabbit, 24h exposure); corneal irritation (reversible with sterile water rinse).
- Respiratory/Skin Sensitization: No sensitizing effects (human/animal tests; peptide is endogenous GLP-1 analog).
- Mutagenicity: No mutagenic effects (Ames test, chromosome aberration test).
- Carcinogenicity: Animal tests (rat/mouse) show thyroid C-cell tumor at high-dose long-term exposure; no human carcinogenicity data.
- Reproductive Toxicity: No adverse reproductive/teratogenic effects at therapeutic dosages; avoid high-dose exposure during pregnancy/lactation.
- Target Organ Toxicity: Gastrointestinal tract (acute ingestion); thyroid gland (long-term high-dose animal exposure); no human target organ toxicity.
- Aspiration Hazard: Low (amorphous powder, low dustiness); no pulmonary toxicity.

## SECTION 12: Ecological Information

12.1 **Toxicity:** Fish (Zebrafish, LC<sub>50</sub>) >1000 mg/L (96h); Daphnia (EC<sub>50</sub>) >1000 mg/L (48h); Algae (EC<sub>50</sub>) >1000 mg/L (72h); non-toxic to aquatic life. 12.2 **Persistence and Degradability:**

Fully biodegradable (100% hydrolysis) by aquatic/soil microorganisms (proteases); degradation

half-life = 2-4 days (ambient temperature).12.3 **Bioaccumulative Potential:** None (peptide is hydrolyzed to amino acids; no bioaccumulation in food chains).12.4 **Mobility in Soil:** High mobility (soluble in soil water); hydrolyzed by soil microorganisms; no leaching to groundwater (no toxicity).12.5 **PBT/vPvB:** Not classified as PBT/vPvB; non-persistent, non-bioaccumulative, non-toxic.12.6 **Other Effects:** No adverse ecological impacts; hydrolyzed amino acids act as soil nutrients; promotes microbial growth.

## SECTION 13: Disposal Considerations

13.1 **Waste Treatment:** Low-value waste: dispose via licensed hazardous chemical waste treatment facilities (incinerate at >800°C, non-toxic ash). High-value waste: reprocess via lyophilization (vacuum drying) for reuse; no waste of high-purity peptide.13.2 **Packaging Waste:** Rinse packaging with anhydrous ethanol; dry thoroughly; dispose as non-hazardous plastic/glass waste; recycle dedicated peptide packaging.13.3 **Aqueous Waste:** Dilute with water (1:100); discharge to biological wastewater treatment system (peptide is biodegradable); no toxic waste.

## SECTION 14: Transport Information

14.1 **UN Number:** ADR/RID/IMDG/IATA: 281114.2 **UN Proper Shipping Name:** Toxic solids, organic, n.o.s. (Semaglutide)14.3 **Transport Hazard Class:** 6.1 (Toxic substances)14.4 **Packaging Group:** III14.5 **Environmental Hazards:** IMDG: Marine pollutant (No)14.6 **Special Precautions: Cold chain transport** (-20°C±5°C); use vacuum-sealed packaging with anhydrous desiccant; avoid direct sunlight, moisture, collision and breakage; no temperature fluctuation (repeated freeze-thaw).14.7 **Incompatible Materials:** Avoid transport with water-containing products, proteolytic enzymes, strong acids/bases and food/feed.

## SECTION 15: Regulatory Information

### 15.1 National & International Regulations

- China: Chinese Pharmacopoeia (CP) compliant; Hazardous Chemical Safety Management Regulation (Class 6.1 toxic substance); Pharmaceutical Raw Material Management Regulation (GMP grade peptide).
- International: GHS (Rev.9) Cat.4 Acute oral toxicity; REACH (EU) - Registered; TSCA (US) - Listed on Inventory; USP/EP compliant (pharmaceutical grade); FDA-approved for anti-diabetic/anti-obesity use.15.2 **Other:** Comply with local pharmaceutical import/export (peptide drug), cold chain transport and hazardous chemical regulations; mark for thyroid C-cell tumor risk (animal test).

## SECTION 16: Other Information

- This MSDS is based on current scientific research and complies with GB/T 16483, GB/T 17519 and GHS international standards.
- Supplier is not liable for damage caused by improper use, storage (non-cold chain) or non-compliance with safety precautions.



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- Pharmaceutical grade Semaglutide meets CP/USP/EP/FDA quality standards; GMP grade for formulated injectable anti-diabetic/anti-obesity drugs.
- For further technical/safety information, contact the supplier's peptide R&D/EHS department (provide cold chain storage/transport guidance).



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