



# 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, GB/T 17519; Adapts to GHS, IMDG, IATA Standards

Revision Date: 20 FEB 2026

Product Name: Clonazepam CAS:1622-61-3

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

#### 1.1 Product Identifiers

- Product Name: Clonazepam
- Product Number: CLZ-20260220
- Brand: SIGALD
- CAS-No.: 1622-61-3
- Synonyms: 5-(2-Chlorophenyl)-1,3-dihydro-7-nitro-2H-1,4-benzodiazepin-2-one

#### 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

- Emergency Phone #: +86-021-50350029 (CHEMTREC)

#### 1.4 Identified Uses & Uses Advised Against

- Identified Uses: Pharmaceutical raw material for anti-epileptic and anxiolytic drug production.
- Uses Advised Against: Direct human consumption; non-pharmaceutical industrial use; unauthorized formulation.

### SECTION 2: Hazards Identification

#### 2.1 GHS Classification

- Acute toxicity, oral (Category 4); Acute toxicity, dermal (Category 5); Eye irritation (Category 2); Specific target organ toxicity (single exposure), central nervous system (Category 3)

#### 2.2 GHS Label Elements

- Hazard Pictograms: (Exclamation mark)
- Signal Word: **Warning**
- Hazard Statements:
  - H302: Harmful if swallowed
  - H313: May be harmful in contact with skin
  - H319: Causes serious eye irritation
  - H335: May cause respiratory irritation; affects central nervous system
- Precautionary Statements:
  - P261: Avoid breathing dust/fume/gas/mist/vapors/spray
  - P264: Wash hands thoroughly after handling
  - P270: Do not eat, drink or smoke when using this product



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- P280: Wear protective gloves/eye protection/face protection
- P301+P312: If swallowed: Call a POISON CENTER/doctor if you feel unwell
- P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

## 2.3 Physical and Chemical Hazards

- Non-combustible; no explosive hazards under normal conditions.
- 2.4 Health Hazards
- Acute: Drowsiness, dizziness, confusion (CNS depression) if ingested/absorbed; eye irritation; skin irritation in sensitive individuals.
- Chronic: Prolonged exposure may cause CNS dysfunction; no known carcinogenic/mutagenic effects (per IARC).
- 2.5 Environmental Hazards
- Aquatic toxicity (Category 3); may harm aquatic organisms; low biodegradability.
- 2.6 Other Hazards
- No additional hazards identified.

## SECTION 3: Composition/Information on Ingredients

- Substance: Pure chemical compound (100% Clonazepam)
- CAS-No.: 1622-61-3; Formula: C<sub>15</sub>H<sub>10</sub>ClN<sub>3</sub>O<sub>3</sub>; Molecular Weight: 315.71 g/mol
- Hazardous Ingredients: Clonazepam (100%, w/w) – meets GHS acute toxicity/irritation criteria.

## SECTION 4: First Aid Measures

### 4.1 First-Aid Measures

- Inhaled: Move to fresh air; rest in a position comfortable for breathing. Call a doctor if symptoms (dizziness, drowsiness) persist.
- Skin Contact: Remove contaminated clothing; rinse skin with plenty of running water for 15-20 minutes. Call a doctor if irritation/redness occurs.
- Eye Contact: Rinse eyes thoroughly with plenty of running water for 15-20 minutes (hold eyelids open). Remove contact lenses if present. Immediate medical attention required.
- Swallowed: Do not induce vomiting. Rinse mouth with water. Call a poison center/doctor immediately; provide product label.
- 4.2 Most Important Symptoms
- CNS depression (drowsiness, lethargy, confusion); eye/skin irritation; nausea/vomiting (if ingested).
- 4.3 Medical Attention

- Symptomatic treatment; supportive care for CNS depression; no specific antidote available.
- 4.4 Notes to Physician
- Inform physician of clonazepam exposure; monitor vital signs and CNS function.

## SECTION 5: Firefighting Measures

### 5.1 Extinguishing Media

- Suitable: Water spray, foam, dry powder, carbon dioxide (CO<sub>2</sub>).
- Unsuitable: No limitations identified.
- 5.2 Special Hazards from Combustion
- May release toxic fumes (nitrogen oxides, hydrogen chloride, carbon monoxide) when burned at high temperature.
- 5.3 Firefighter Advice



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- Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective gear; keep containers cool with water spray; avoid contact with combustion products.

## SECTION 6: Accidental Release Measures

### 6.1 Personal Precautions

- Wear PPE (nitrile gloves, safety goggles, dust mask); ensure good ventilation; evacuate non-essential personnel.

### 6.2 Environmental Precautions

- Prevent spillage from entering drains, sewers, rivers, or other water bodies; contain spilled material to avoid environmental contamination.

### 6.3 Containment & Clean-Up

- Small Spill (solid powder): Sweep up with inert absorbent (sand, vermiculite); place in sealed hazardous waste container.

- Large Spill: Contain with dikes; transfer to sealed drum for professional disposal; do not wash spill into drains.

### 6.4 Reference: See Section 13 for waste disposal.

## SECTION 7: Handling and Storage

### 7.1 Safe Handling

- Operate in a well-ventilated fume hood/dust-free area; avoid dust generation; use closed handling systems to prevent exposure.
- Do not eat/drink/smoke in the work area; wash hands/face after handling; avoid contact with eyes/skin/mucous membranes.

### 7.2 Safe Storage

- Storage Conditions: Store in a cool, dry, dark warehouse (temperature 2-8°C); keep container tightly sealed; protect from light and moisture.
- Incompatibilities: Strong acids, strong bases, oxidizing agents, heavy metal salts.
- Storage Class (TRGS 510): 6.1 (Toxic Substances)
- Shelf Life: 24 months (unopened, under specified storage conditions).
- Segregation: Store separately from food, feed, and non-hazardous materials; keep away from children and unauthorized personnel.

## SECTION 8: Exposure Controls/Personal Protection

### 8.1 Control Parameters

- Occupational Exposure Limit (OEL): TWA 0.5 mg/m<sup>3</sup> (respirable dust); STEL 1.0 mg/m<sup>3</sup> (China, EU).

### 8.2 Exposure Controls

- Engineering Controls: Local exhaust ventilation (LEV) for dust generation; dust collection systems; positive pressure ventilation.
- Personal Protective Equipment (PPE):
  - Eye/Face: Chemical safety goggles + face shield (for large-scale handling).
  - Skin: Nitrile rubber gloves (thickness ≥ 0.11 mm); chemical-resistant lab coat.
  - Respiratory: N95 dust mask (normal handling); powered air-purifying respirator (PAPR) for high-dust environments.
  - Hand: No bare hand contact; replace gloves if damaged.



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- Environmental Exposure: Prevent dust/spillage from entering the environment; use secondary containment.

### SECTION 9: Physical and Chemical Properties

- Physical State: White to off-white crystalline powder
- Color: White/off-white
- Odor: Odorless
- Melting Point: 237-240°C
- Boiling Point: Decomposes before boiling (>300°C)
- Flammability: Non-combustible
- Flash Point: Not applicable
- Autoignition Temperature: >400°C
- Decomposition Temperature: >300°C (releases toxic fumes)
- pH Value: N/A (insoluble in water)
- Solubility: Sparingly soluble in water (<0.1 g/100 mL); soluble in ethanol (5 g/100 mL), chloroform, dimethyl sulfoxide (DMSO)
- Density (25°C): 1.48 g/cm<sup>3</sup> (solid)
- Vapor Pressure (25°C): <0.001 hPa (negligible)
- Particle Size: 90% passing 100 mesh (pharmaceutical grade)
- Explosive Properties: Not explosive
- Oxidizing Properties: None

### SECTION 10: Stability and Reactivity

10.1 Chemical Stability: Stable under recommended storage conditions (2-8°C, sealed, dark); decomposes at high temperature (>300°C) or strong acid/base conditions. 10.2 Hazardous Reactions: No hazardous reactions under normal use/handling; reacts with strong oxidizing agents to form toxic byproducts. 10.3 Conditions to Avoid: High temperature (>25°C for long-term), direct sunlight, moisture, strong acids/bases, oxidizing agents. 10.4 Incompatible Materials: H<sub>2</sub>SO<sub>4</sub>, NaOH, KMnO<sub>4</sub>, hydrogen peroxide, heavy metal chlorides. 10.5 Hazardous Decomposition Products: Nitrogen oxides (NO<sub>x</sub>), hydrogen chloride (HCl), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>).

### SECTION 11: Toxicological Information

#### 11.1 Toxicological Effects

- Acute Toxicity: Oral (Rat, LD<sub>50</sub>) = 180 mg/kg; Dermal (Rabbit, LD<sub>50</sub>) = >2000 mg/kg; Inhalation (Rat, LC<sub>50</sub>) = >5 mg/m<sup>3</sup> (4h).
- Skin Corrosion/Irritation: Mild irritation (Rabbit, 4h exposure); no corrosion.
- Serious Eye Damage/Irritation: Category 2 (serious eye irritation, reversible in 72h).
- CNS Effects: Dose-dependent depression (drowsiness, ataxia, coma at high doses).
- Mutagenicity: Negative (Ames test, chromosome aberration test).
- Carcinogenicity: IARC Class 3 (not classifiable as to its carcinogenicity to humans).



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- Reproductive Toxicity: May cause fetal harm if exposed during pregnancy (animal studies); Category D (US FDA).

### SECTION 12: Ecological Information

12.1 Toxicity: Aquatic (Zebrafish,  $LC_{50}$ ) = 12 mg/L (96h); Daphnia ( $EC_{50}$ ) = 8 mg/L (48h); Algae ( $EC_{50}$ ) = 15 mg/L (72h). 12.2 Persistence & Degradability: Biodegradability <20% (28d, OECD 301); persistent in aquatic environments. 12.3 Bioaccumulative Potential: Log K<sub>oc</sub> = 3.2 (moderate bioaccumulation in aquatic organisms). 12.4 Mobility in Soil: Low mobility (adsorbs to soil organic matter); no leaching to groundwater under normal conditions. 12.5 PBT/vPvB: Not classified as PBT/vPvB.

### SECTION 13: Disposal Considerations

#### 13.1 Waste Treatment

- Product Waste: Dispose of as hazardous pharmaceutical waste; incinerate at licensed hazardous waste incineration facility (temperature  $\geq 1100^{\circ}\text{C}$ ) with gas treatment.
  - Packaging Waste: Rinse packaging with ethanol; dispose of rinsate with product waste; recycle packaging if decontaminated, otherwise dispose as hazardous waste.
- 13.2 Disposal Regulations: Comply with China HW02 (medical waste) and international hazardous waste disposal regulations (Basel Convention).

### SECTION 14: Transport Information

14.1 UN Number: UN 2811 (Toxic solids, organic, n.o.s.) 14.2 UN Proper Shipping Name: Toxic solids, organic, n.o.s. (Clonazepam) 14.3 Transport Hazard Class: 6.1 (Toxic substances) 14.4 Packaging Group: III 14.5 Environmental Hazards: Marine Pollutant (No) 14.6 Special Transport Precautions

- Transport at 2-8 $^{\circ}\text{C}$ ; use insulated packaging with cold packs; avoid direct sunlight and high temperature.
- Use sealed, chemical-resistant packaging (HDPE drums with inner plastic liner); mark with GHS hazard labels and UN number.
- Do not transport with food, feed, beverages, or oxidizing agents; comply with IMDG/IATA/ADR transport rules for Class 6.1 goods.

### SECTION 15: Regulatory Information

#### 15.1 National & International Regulations

- China: Controlled Pharmaceutical Raw Material (National Medical Products Administration, NMPA); Hazardous Chemicals List (2015); Pharmacopoeia of the People's Republic of China (2020).
  - EU: REACH (registered); ECHA SVHC Candidate List (No); Pharmacopoeia Europaea (Ph. Eur.).
  - US: TSCA (listed); FDA-regulated pharmaceutical raw material; DEA Schedule IV controlled substance.
- 15.2 Other: Comply with local pharmaceutical manufacturing and handling regulations.

### SECTION 16: Other Information



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- This MSDS is based on current scientific and regulatory knowledge, complying with GB/T 16483, GB/T 17519, GHS Rev.9.
- The supplier is not liable for damage caused by improper handling, storage, use, or non-compliance with safety precautions.
- For additional information, contact the supplier's technical department.

