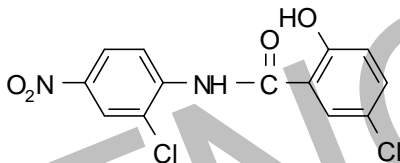


Material Safety Data Sheet

Product Name: NICLOSAMIDE

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name	Niclosamide
CAS	50-65-7
Molecular Weight	327.1
Chemical Abstract Name	5-chloro-N-(2-chloro-4-nitrophenyl)-2-hydroxybenzamide
Chemical Formulation	C ₁₃ H ₈ Cl ₂ N ₂ O ₄
Chemical Structure	

Uses

Used in conjunction with oxantel and pyrantel pamoate and praziquantel - used to treat "internal infestations of small animals" - tapeworms, roundworms, hookworms etc.

Manufacturer

Nanjing Essence Fine-Chemical Co., Ltd

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Website

www.essencechem.com

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average by Weight</u>
Niclosamide	50-65-7	96%

SECTION 3. HAZARDS IDENTIFICATION

Health Effects	Acute
Swallowed	Harmful by ingestion.

Eye	May be irritating.
Skin	May be irritating.
Inhaled	May be irritating.
Health Effects - Chronic	Nausea and gastrointestinal pain.

SECTION 4. FIRST AID MEASURES

Swallowed	Wash out mouth with water. Consult a doctor.
Eye	Wash out with plenty of water. Consult a doctor.
Skin	Remove contaminated clothing. Wash off with plenty of water and soap. Consult a doctor.
Inhaled	Remove victim to fresh air. Keep victim at rest. Consult a doctor.
First Aid Facilities	Ensure an eye bath and safety shower is readily available.
Advice to Doctor	Treat symptomatically and supportively. If the amount of chemical is judged to be less than a lethal dose, observe the patient and treat symptomatic. If gastric lavage is considered necessary, prevent aspiration of gastric material. Consider administration of activated charcoal.

SECTION 5. FIRE FIGHTING MEASURES

Flammability	Product may decompose giving out NO _x and HCl.
Fire / Explosion	Product may decompose emitting carbon monoxide, carbon dioxide, NO _x and HCl.
Extinguishing Media	Firefighters should wear full protective clothing including self contained breathing apparatus. Use water spray, CO ₂ , foam, or dry chemical media as extinguishing media.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Spills	Clean up personnel should wear full protective clothing. Collect spilled material. Clean up affected area with water.
Disposal	Combustion in an incinerator for chemical waste.

SECTION 7. HANDLING AND STORAGE

Handling	Avoid contact with skin and eyes. When using do not eat, drink or smoke. Wash face and hands before eating, drinking or smoking.
Storage	Keep container tightly closed. When using products, do not

eat, drink or smoke. Avoid contact with incompatible such as oxidizing agents.

Safe storage advice

Store under lock and key. Keep in original container, tightly sealed. Store in a cool, dry place away from farm feeds and food stuff.

Storage Life

Physical and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards

No information available.

Engineering Controls

Ensure adequate ventilation system.

Personal Protection

Eye protection - safety goggles or face shield. Hand protection -rubber gloves. Skin protection - work clothing. Respiratory protection - airlined respirator or dust mask, type P2.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Light yellow powder

Formula

C₁₃H₈Cl₂N₂O₄

Boiling Point

N/A deg C

Melting Point

227 deg C

Vapor Pressure

N/A

Specific Gravity

N/A (water = 1)

Flash Point

N/A

PH

N/A

Solubility in water

Insol g/l (25 deg C)

Flammability Limits

(as percentage volume in air)

Lower Explosion Limit : N/A

Upper Explosion Limit : N/A

SECTION 10. STABILITY AND REACTIVITY

Stability

Hydrolysed in aqueous solution, DT50 (20 °C) c. 7 d (pH 6.9), 18.8 d (pH 13.3). Stable to heat. Decomposes under u.v. irradiation. Hydrolysed by concentrated acid or alkali.

Stable for 2 year in normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Oral	Acute oral LD50 for rats 5000 mg/kg.
Skin and eye	Acute percutaneous LD50 for rats >1000 mg/kg (EC250). Strong eye irritant; skin reacts after repeated and long-lasting exposure (rabbits).
Inhalation	LC50 for rats (1 h) 20 mg/l air.
NOEL	(2 y) for male rats 2000, female rats 8000, mice 200 mg/kg diet; (1 y) for dogs 100 mg/kg b.w.
ADI	(Proposed) 3 mg/kg b.w.
Other	No relevant mutagenic or embryotoxic effect
Toxicity class	WHO (a.i.) III (Table 5); EPA (formulation) II

SECTION 12. ECOLOGICAL INFORMATION

Birds	LD50 for mallard ducks >500mg/kg.
Fish	LC50 (96h) for golden orfe 0.1 mg/l.
Daphnia	LC50 (48h) 0.2 mg/l.
Bees	No significant mortality effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Procedures	Do not contaminate rivers, dams or any other water source with the chemical or used containers. Drain and triple rinse containers and then destroy by perforation and flattening. Bury in an approved dumping site. Do not re-use for any other purpose.
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SECTION 14. TRANSPORT INFORMATION

Risk Phrases	R20 Harmful by inhalation. R22 Harmful if swallowed.
Safety Phrases	S2 Keep out of the reach of children. S18 Handle and open container with care. S24 Avoid contact with skin. S36 Wear suitable protective clothing.

SECTION 15. REGULATORY INFORMATION

Classification	III(WHO)
Hazard symbols	WARNING
Safety Phrases	Keep out of reach of children. Keep away from food, drink and

animal feeding stuff. When using do not eat, drink or smoke.
Wear suitable protective clothing, gloves and eye/face shield.
After contact with the skin, wash with plenty of water. If
swallowed seek medical advice immediately and show this
container or label.

Special label

Do not re-use container, keep tightly closed in a safe place.

SECTION 16. OTHER INFORMATION

No information available.

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