

## Chemical Safety Data Sheet MSDS / SDS

## NITRALIN

Revision Date:2024-12-21 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## Product identifier

Product name : NITRALIN  
CBnumber : CB7424241  
CAS : 4726-14-1  
EINECS Number : 225-219-0  
Synonyms : Nitralin,Niralin

## Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

## Company Identification

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 400-158-6606

## SECTION 2: Hazards identification

## Classification of the substance or mixture

Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1

## Label elements

## Pictogram(s)

□

Signal word Warning

## Hazard statement(s)

H400 Very toxic to aquatic life

## Precautionary statement(s)

P273 Avoid release to the environment.

## Prevention

P273 Avoid release to the environment.

## Response

P391 Collect spillage.

## Storage

none

#### Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### Other hazards

no data available

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## SECTION 3: Composition/information on ingredients

### Substance

|              |                                                                   |
|--------------|-------------------------------------------------------------------|
| Product name | : NITRALIN                                                        |
| Synonyms     | : Nitralin, Niralin                                               |
| CAS          | : 4726-14-1                                                       |
| EC number    | : 225-219-0                                                       |
| MF           | : C <sub>13</sub> H <sub>19</sub> N <sub>3</sub> O <sub>6</sub> S |
| MW           | : 345.37                                                          |

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## SECTION 4: First aid measures

### Description of first aid measures

#### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

#### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

#### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

#### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

### Most important symptoms and effects, both acute and delayed

Dust irritates eyes. Other forms of exposure produce no observable symptoms. (USCG, 1999)

### Indication of any immediate medical attention and special treatment needed

#### Absorption, Distribution and Excretion

Nitralin is not absorbed by plant foliage & therefore is not a postemergence herbicide. absorption by seed or roots of plants is mediated by imbibition of water.

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## SECTION 5: Firefighting measures

## Extinguishing media

Fire Extinguishing Agents: Water (USCG, 1999)

## Specific Hazards Arising from the Chemical

Special Hazards of Combustion Products: Irritating oxides of sulfur and nitrogen are formed in fire. Behavior in Fire: Decomposes vigorously in a self-sustaining reaction at or above 225°C (USCG, 1999)

## Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

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# SECTION 6: Accidental release measures

## Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

## Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

## Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

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# SECTION 7: Handling and storage

## Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

## Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

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# SECTION 8: Exposure controls/personal protection

## Control parameters

### Occupational Exposure limit values

no data available

### Biological limit values

no data available

## Exposure controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

## Individual protection measures

### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

### Skin protection

Wear fire/flammable resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

|                                                          |                                                                                                                                                                           |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical state                                           | neat                                                                                                                                                                      |
| Colour                                                   | GOLDEN-ORANGE CRYSTALLINE SOLID                                                                                                                                           |
| Odour                                                    | MILD CHEMICAL ODOR                                                                                                                                                        |
| Melting point/freezing point                             | 304° F (USCG, 1999)                                                                                                                                                       |
| Boiling point or initial boiling point and boiling range | 507.2°C at 760mmHg                                                                                                                                                        |
| Flammability                                             | no data available                                                                                                                                                         |
| Lower and upper explosion limit/flammability limit       | no data available                                                                                                                                                         |
| Flash point                                              | 260.5°C                                                                                                                                                                   |
| Auto-ignition temperature                                | 435° F (USCG, 1999)                                                                                                                                                       |
| Decomposition temperature                                | no data available                                                                                                                                                         |
| pH                                                       | no data available                                                                                                                                                         |
| Kinematic viscosity                                      | no data available                                                                                                                                                         |
| Solubility                                               | SOLUBILITY @ 22 DEG C: 0.6 MG/L IN WATER; 360 G/L IN ACETONE; 330 G/L IN DIMETHYLSULFOXIDE; POORLY SOL IN COMMON HYDROCARBON AND AROMATIC SOLVENTS AND IN COMMON ALCOHOLS |
| Partition coefficient n-octanol/water                    | no data available                                                                                                                                                         |
| Vapour pressure                                          | 9.3X10-9 mm Hg at 20 deg C; 3.3X10-8 mm Hg at 30 deg C                                                                                                                    |
| Density and/or relative density                          | 1.333g/cm3                                                                                                                                                                |
| Relative vapour density                                  | no data available                                                                                                                                                         |
| Particle characteristics                                 | no data available                                                                                                                                                         |

## SECTION 10: Stability and reactivity

### Reactivity

No rapid reaction with air. No rapid reaction with water.

### Chemical stability

Instable to light

### Possibility of hazardous reactions

NITRALIN decomposes vigorously in a self-sustaining reaction at or above 225°C (USCG, 1999).

### Conditions to avoid

no data available

### Incompatible materials

no data available

### Hazardous decomposition products

no data available

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

no data available

### Reproductive toxicity

no data available

### **STOT-single exposure**

no data available

### **STOT-repeated exposure**

no data available

### **Aspiration hazard**

no data available

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## **SECTION 12: Ecological information**

### **Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

### **Persistence and degradability**

Investigations with nitralin demonstrates that degradation of the dinitroanilines in soil is affected by aerobic and anaerobic conditions(1). The aerobic pathway proceeds by a series of oxidative dealkylation steps; the anaerobic pathway is initiated via a sequential reduction of the nitro groups(1). Nitralin half-lives in Drummer and Cisne soils in the laboratory are 3.7 and 2.4 months respectively(2).

### **Bioaccumulative potential**

An estimated BCF value of 820 was calculated for nitralin(SRC), using an experimental water solubility of 0.6 mg/L(1) and a recommended regression-derived equation(2). According to a classification scheme, this BCF value suggests that bioconcentration in aquatic organisms will be high(3).

### **Mobility in soil**

It is relatively immobile in soil & 50% loss occurs in about 30-50 days.

### **Other adverse effects**

no data available

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## **SECTION 13: Disposal considerations**

### **Disposal methods**

#### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### **Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible

for combustible packaging materials.

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## SECTION 14: Transport information

### UN Number

ADR/RID: UN3077 (For reference only, please check.)

IMDG: UN3077 (For reference only, please check.)

IATA: UN3077 (For reference only, please check.)

### UN Proper Shipping Name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)

IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)

### Transport hazard class(es)

ADR/RID: 9 (For reference only, please check.)

IMDG: 9 (For reference only, please check.)

IATA: 9 (For reference only, please check.)

### Packing group, if applicable

ADR/RID: III (For reference only, please check.)

IMDG: III (For reference only, please check.)

IATA: III (For reference only, please check.)

### Environmental hazards

ADR/RID: Yes

IMDG: Yes

IATA: Yes

### Special precautions for user

no data available

### Transport in bulk according to IMO instruments

no data available

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## SECTION 15: Regulatory information

### Safety, health and environmental regulations specific for the product in question

#### European Inventory of Existing Commercial Chemical Substances (EINECS)

Listed.

#### EC Inventory

Listed.

#### United States Toxic Substances Control Act (TSCA) Inventory

Not Listed.

**China Catalog of Hazardous chemicals 2015**

Not Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Not Listed.

**PICCS**

Not Listed.

**Vietnam National Chemical Inventory**

Listed.

**IECSC**

Not Listed.

**Korea Existing Chemicals List (KECL)**

Listed.

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## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pagelD=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pagelD=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

#### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.



