1. PRODUCT AND COMPANY IDENTIFICATION

Product name: 2-Chloro-4-nitroaniline
Product Number: 101650
Brand: Aldrich
Supplier: Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63143 USA
Telephone: +1 800-325-5832
Fax: +1 800-325-5652
Emergency Phone: (314) 779-5555
Preparation Information: Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview
OSHA Hazards
Target Organ Effect, Harmful by ingestion.

Target Organs
Blood, Spleen., Bone marrow, Liver, Central nervous system, Cardiovascular system.

GHS Classification
Acute toxicity: Oral (Category 4)
Acute aquatic toxicity (Category 2)

GHS Label elements, including precautionary statements

Pictogram

Signal word: Warning
Hazard statement(s): H302, H401
Precautionary statement(s): None

HMIS Classification
Health hazard: 1
Chronic Health Hazard: 1
Flammability: 1
Physical hazards: 0

NFPA Rating
Health hazard: 1
Fire: 1
Reactivity Hazard: 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: 1-Amino-2-chloro-4-nitrobenzene
Formula: C8H6ClN2O2
Molecular Weight: 172.57 g/mol
Component: 2-Chloro-4-nitroaniline
Concentration: 121-87-9
CAS-No: 204-502-2
EC-No: 610-009-69-7

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self-contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place.
Keep in a dry place.

8. EXPOSURE CONTROLS-PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection
For nuisance exposures use type P1 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OVAG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Immersion protection
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: > 480 min
Material tested: Dermatatest® (Alrich 2677272, Size II)

Splash protection
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: > 30 min
Material tested: Dermatatest® (Alrich 2677272, Size II)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection
Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and body protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form: powder
Colour: yellow

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
no data available

Materials to avoid
Strong oxidizing agents, Strong bases, Strong acids

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Oral LD50
LD50 Oral - mouse - 1,250 mg/kg
LD50 Oral - rat - 8,420 mg/kg

Inhalation LC50
no data available

Dermal LD50
no data available

Other Information on acute toxicity
no data available

Safety data

pH: no data available
Melting point/range: 105 - 109 °C (221 - 228 °F) - ill.
Boiling point: no data available
Flash point: 193 °C (379 °F) - closed cup
Ignition temperature: 552 °C (992 °F)
Autoignition temperature: no data available
Lower explosion limit: no data available
Upper explosion limit: no data available
Vapour pressure: no data available
Density: no data available
Water solubility: no data available
Partition coefficient: log Pow: 1.245
Relative vapour density: no data available
Odour: no data available
Odour Threshold: no data available
Evaporation rate: no data available
Skin corrosion/iritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available

Teratogenicity
no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion: Toxic if swallowed. May be harmful if absorbed through skin. May cause skin irritation.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Signs and Symptoms of Exposure
Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Oversed may be delayed 2 to 4 hours or longer, Central nervous system depression, Headache, Dizziness, Weakness, Incoordination.

Synergistic effects
no data available

Additional Information
RTEDS: DX1400000

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish: LC50 - Pimephales promelas (Fathead minnow) - 8.4 mg/l - 96.0 h
Remarks: The preceding data, or interpretation of data, was determined using Quantitative Structure Activity Relationship (QSAR) modeling.

Ecotoxicity to daphnia EC50 - Daphnia magna (Water flea) - 1.7 mg/l - 48 h
and other aquatic invertebrates

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 2237 Class: 6.1 Packing group: III
Proper shipping name: Chloronitroanilines
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG

UN number: 2237 Class: 6.1 Packing group: III
EMS-No: F-A, S-A
Proper shipping name: CHLORONITROANILINES
Marine pollutant: Marine pollutant

IATA

UN number: 2237 Class: 6.1 Packing group: III
Proper shipping name: Chloronitroanilines

15. REGULATORY INFORMATION

OSHA Hazards
Target Organ Effect, Harmful by ingestion.

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components

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New Jersey Right To Know Components

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California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further Information

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