SIGMA-ALDRICH
Material Safety Data Sheet
Version 3.2
Revision Date 10/02/2012
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1. PRODUCT AND COMPANY IDENTIFICATION
Product name: 2-Chloroaniline
Product Number: 23300
Brand: Aldrich
Supplier: Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone: +1 800-332-5832
Fax: +1 800-332-5902
Emergency Phone # (For both supplier and manufacturer): (314) 776-6555
Preparation information: Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8556

2. HAZARDS IDENTIFICATION
Emergency Overview
OSHA Hazards
Target Organ Effect: Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Irritant
Target Organs: Blood, Kidney, Liver
GHS Classification
Acute toxicity, Oral (Category 3)
Acute toxicity, Inhalation (Category 3)
Acute toxicity, Dermal (Category 3)
Eye irritation (Category 2A)
Specific target organ toxicity - repeated exposure (Category 2)
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 4)
GHS Label elements, including precautionary statements
Signal word: Danger
Hazard statement(s):
H301 + H311: Toxic if swallowed or in contact with skin
H315: Causes serious eye irritation.
H331: Toxic if inhaled.
H373: May cause damage to organs through prolonged or repeated exposure.
H400: Very toxic to aquatic life.
H410: May cause long lasting harmful effects to aquatic life.
Precautionary statement(s):
P261: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273: Avoid release to the environment.
P280: Wear protective gloves/ protective clothing.
P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P305 + P381 + P361: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor/physician.
P311: Call a POISON CENTER or doctor/physician.

3. COMPOSITION/INFORMATION ON INGREDIENTS
Formula: C7H5ClN
Molecular Weight: 127.57 g/mol
Component | Concentration
--- | ---
2-Chloroaniline | 95-51-2
EC-No. | 203-426-4
Index-No. | 812-010-03-8

4. FIRST AID MEASURES
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. 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 with soap and plenty of water. Take victim immediately to hospital. Consult a physician. In case of eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING 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.
5. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

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
Stabilize with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Light sensitive. Store under inert gas. Air sensitive.

6. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. 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: butyl-rubber
Minimum layer thickness: 0.3 mm
Break through time: > 480 min
Material tested: Bunzl Safety Ltd

Spash protection
Material: Nature latex/chloroprene
Minimum layer thickness: 0.6 mm
Break through time: > 30 min
Material tested: NOK (Aichi 25776+7, Size M)

Eye protection
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
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form: clear, liquid
Colour: light yellow

Safety data
pH: no data available
Melting point/freezing point: 0 - 3 °C (32 - 37 °F)
Boiling point: 208 - 210 °C (406 - 410 °F)
Flash point: 98 °C (208 °F) - closed cup - DIN 51758
Ignition temperature: > 500 °C (> 932 °F)
Autoignition temperature: no data available
Lower explosive limit: 2.4 % (V)
Upper explosive limit: 14.2 % (V)
Vapour pressure: 0.13 hPa (0.10 mmHg) at 20 °C (68 °F)
Water solubility: ca. 51.13 g/l at 20 °C (68 °F)
Partition coefficient: log Pow: 1.8
Relative vapour density: 4.4 (Air = 1.0)
Odour: no data available
Evaporation rate: no data available

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
acids, Acid chlorides, Acid anhydrides, Chlorofomates, Strong oxidizing agents
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 - 255 mg/kg

Inhalation LC50
LC50 Inhalation - rat - 4 h - 4.1 mg/l

Dermal LD50
Other information on acute toxicity - no data available

Skin corrosion/irritation

Serious eye damage/eye irritation

Respiratory or skin sensitization

Germ cell mutagenicity

Genotoxicity in vitro - mouse - lymphocytes

Genotoxicity in vitro - Hamster - Lungs
Mutation in mammalian somatic cells.

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

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

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcogen or potential carcogen 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)
May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard
no data available

Potential health effects
Inhalation
Toxic if inhaled. Causes respiratory tract irritation.

Ingestion
Toxic if swallowed.

Skin
Toxic if absorbed through skin. Causes skin irritation. Causes eye irritation.

Signs and Symptoms of Exposure
Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. Liver injury may occur. Kidney injury may occur.

Synergistic effects
no data available

Additional Information
PTEOS: Not available

12. ECOLOGICAL INFORMATION

Toxicity
Toxicity to fish
LC50 - Pimephales promelas (fathead minnow) - 5.7 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (Water flea) - 1.8 mg/l - 48 h

Toxicity to algae
EC50 - Desmodesmus subspicatus (green algae) - 150 mg/l - 72 h

Persistence and degradability
Bioactivity
aerobic
Result: 18% - Not readily biodegradable.

Bioaccumulative potential
Bioaccumulation
Dine tropea (zebra fish) - 96 h
Bioconcentration factor (BCF): 15.3

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.

Very 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 turn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 2019 Class: 6.1 Packing group: II
Proper shipping name: Chloroanilines, liquid
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 2019 Class: 6.1 Packing group: II
EMS-No: F-A, S-A
Proper shipping name: CHLOROANILINES, LIQUID
Marine pollutant: No
15. REGULATORY INFORMATION

OSHA Hazards
Target Organ Effect, Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Irritant

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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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.