SIGMA-ALDRICH

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SAFETY DATA SHEET

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| ODUCT AND COMPA | NY IDEN | TIFICATION | | |
|---|--|--|-------------------------------|--|
| Product name | : | Clonidine hydrochloride | | |
| Product Number | : | C7897 | | |
| Brand | : | Sigma | | |
| Product Use | : | For laboratory research purposes. | | |
| Supplier | : | Sigma-Aldrich Canada Co. 2149 Winston Park Drive OAKVILLE ON L6H 6J8 CANADA | Manufactur [:] er | Sigma-Aldrich Corporation 3050 Spruce St. St. Louis, Missouri 63103 USA |
| Telephone | : | +1 9058299500 | | |
| Fax | : | +1 9058299292 | | |
| Emergency Phone # (both supplier and manufacturer) | For : | +1-703-527-3887 (CHEMTREC) | | |
| Preparation Informatic | n : | Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956 | | |
| Emergency Overview | | | | |
| Target Organs | | e e e e e e e e e e e e e e e e e e e | | |
| - | | in, Lungs, Nervous system | | |
| WHMIS Classifica | | | | |
| | | aterial Causing Immediate and | Highly toxic by in | halation |
| D1B Tox | Serious Toxic Effects Toxic Material Causing Immediate and Serious Toxic Effects | | Toxic by ingestic | on |
| GHS Classificatio Acute toxicity, Inha Acute toxicity, Oral | lation (Ca | | | |
| GHS Label eleme | nts, inclu | ding precautionary statements | | |
| Pictogram | | | | |
| Signal word | | Danger | | |
| Hazard statement(| 5) | | | |
| H301 | , | Toxic if swallowed. | | |

| H301 | Toxic if swallowed. |
|--|---|
| H330 | Fatal if inhaled. |
| Precautionary statement(s) P260 P284 P310 | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wear respiratory protection. Immediately call a POISON CENTER/doctor. |

4 *

HMIS Classification Health hazard: Chronic Health Hazard:

| Flammability: | |
|-------------------|--|
| Physical hazards: | |

Potential Health Effects

| Inhalation | May be fatal if inhaled. May cause respiratory tract irritation. |
|------------|---|
| Skin | May be harmful if absorbed through skin. May cause skin irritation. |
| Eyes | May cause eye irritation. |
| Ingestion | Toxic if swallowed. |

3. COMPOSITION/INFORMATION ON INGREDIENTS

0 0

| Synonyms | : | 2-(2,6-Dichloroanilino)-2-imidazolinehydrochloride |
|-----------------------------|---|--|
| Formula Molecular weight | | C ₉ H ₉ Cl ₂ N ₃ · HCl 266.55 g/mol |

| CAS-No. | EC-No. | Index-No. | Concentration |
|---------------------|-----------|-----------|---------------|
| Clonidine hydrochlo | ride | | |
| 4205-91-8 | 224-121-5 | - | <=100% |

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 off with soap and plenty of water. Take victim immediately to hospital. 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. 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 firefighting if necessary.

Hazardous combustion products

Explosion data - sensitivity to mechanical impact No data available

Explosion data - sensitivity to static discharge No data available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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. Normal measures for preventive fire protection.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature 2 - 8 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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.

Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

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 and safety officer 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

Face shield and safety glasses 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.

Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

| Form | solid |
|--------|-------|
| Colour | white |

Safety data

| - | |
|---|-------------------|
| рН | No data available |
| Melting point/freezing point | 130 °C (266 °F) |
| Boiling point | No data available |
| Flash point | No data available |
| Ignition temperature | No data available |
| Auto-ignition 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 | ca.50 g/l |
| Partition coefficient: n-octanol/water | No data available |
| Solubility in other solvents | Methanol |
| Relative vapour density | No data available |
| Odour | No data available |
| Odour Threshold | 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 Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Halogens 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 - Rat - 126 mg/kg Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Ataxia. Skin and Appendages: Other: Hair.

Inhalation LC50

LC50 Inhalation - Rat - 4 h - 19.7 mg/m3 Remarks: Behavioral:Tremor. Behavioral:Aggression. Lungs, Thorax, or Respiration:Dyspnea.

Dermal LD50

No data available

Other information on acute toxicity No data available

Skin corrosion/irritation No data available

Serious eye damage/eye irritation No data available

Respiratory or skin sensitisation 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.

Reproductive toxicity

Reproductive toxicity - Rat - Oral Maternal Effects: Ovaries, fallopian tubes. Reproductive toxicity - Mammal - Subcutaneous Effects on Newborn: Growth statistics (e.g., reduced weight gain).

No data available

Teratogenicity

Developmental Toxicity - Domestic Animals - Intravenous Specific Developmental Abnormalities: Cardiovascular (circulatory) system.

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 fatal if inhaled. May cause respiratory tract irritation. |
|------------|---|
| Ingestion | Toxic if swallowed. |
| Skin | May be harmful if absorbed through skin. May cause skin irritation. |
| Eyes | May cause eye irritation. |

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects No data available

Additional Information RTECS: NJ2490000

12. ECOLOGICAL INFORMATION

Toxicity

No data available

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

No data available

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: 2811 Class: 6.1 Packing group: I Proper shipping name: Toxic solids, organic, n.o.s. (Clonidine hydrochloride) Marine pollutant: No Poison Inhalation Hazard: No

IMDG

UN number: 2811 Class: 6.1 Packing group: I EMS-No: F-A, S-A Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Clonidine hydrochloride) Marine pollutant: No

IATA

UN number: 2811 Class: 6.1 Packing group: I Proper shipping name: Toxic solid, organic, n.o.s. (Clonidine hydrochloride) IATA Passenger: Not permitted for transport

15. REGULATORY INFORMATION

WHMIS Classification

| D1A | Very Toxic Material Causing Immediate and Serious Toxic Effects | Highly toxic by inhalation |
|-----|--|----------------------------|
| D1B | Toxic Material Causing Immediate and Serious Toxic Effects | Toxic by ingestion |

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3

| Skin Corr. | Corrosión cutáneas |
|------------|-------------------------|
| Skin Sens. | Sensibilización cutánea |

Further information

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