



HISTAMINE DIHYDROCHLORIDE

GHS Safety Data Sheet

Version No:2.0

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

HISTAMINE DIHYDROCHLORIDE

OTHER NAMES

C5-H9-N3.2HCl, Alergenol, Amin-Glaukosan, Imido, Imadyl, "dihydrochloride of:", beta-aminoethylglyoxaline, beta-aminoethylimidazole, "ethylamine, 2-imidazol-4-yl-", "free histamine", "imidazole, 4-(2-aminoethyl)-", 1H-imidazole-4-ethanamine, beta-imidazolyl-4-ethylamine, 2-(4-imidazolyl)ethylamine, imidazole-4-ethylamine, 4-imidazoleethylamine, 5-imidazoleethylamine

PRODUCT USE

A potent vasodilator found in normal tissues and blood and in nature as result of putrefaction.

When given parenterally stimulates smooth muscle especially the bronchioles and lowers blood pressure by dilating the arterioles and capillaries. Stimulates secretion by many glands, especially the gastric glands. Stimulates the secretion of pepsin and acid by the stomach;. eating and vagal stimulation promotes the release of histamine from gastric mucosa. Given as the acid phosphate by subcutaneous injection to identify the causes of achlorhydria and as a diagnostic aid for phaeochromocytoma since it also has a stimulant action on chromaffin cells. Also used to determine histamine sensitivities.

The flavoprotein diamine oxidase converts histamine to the corresponding aldehyde and ammonia. Some undegraded histamine in the form of N-acetyl- and N-methyl derivatives is excreted in the urine.

SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V. INDUSTRIAL ESTATE,

248, WORLI,

MUMBAI- 400030.INDIA.

technical@sdfine.com

Telephone: 91- 22- 24959898

Telephone: 91- 22- 24959899

Fax: 91- 22- 24937232

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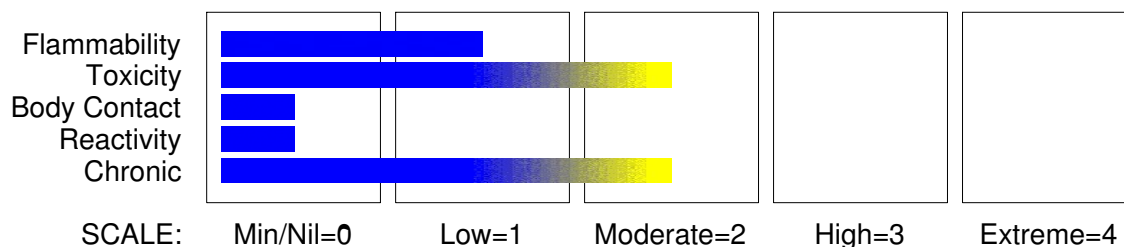
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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

HAZARD RATINGS



Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Acute Toxicity (Oral) Category 5
Respiratory Sensitizer Category 1
Skin Sensitizer Category 1



EMERGENCY OVERVIEW

HAZARD

DANGER

Determined by using GHS criteria:

H303 H334 H317

May be harmful if swallowed

May cause allergic or asthmatic symptoms or breathing difficulties if inhaled

May cause allergic skin reaction

PRECAUTIONARY STATEMENTS

Prevention

Avoid breathing dust/fume/gas/mist/vapours/spray.

Contaminated clothing should not be allowed out of the workplace.

In case of inadequate ventilation wear respiratory protection.

Response

IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.

If skin irritation or rash occurs, seek medical advice/attention.

If experiencing respiratory symptoms call a POISON CENTER or doctor/physician.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Specific treatment: refer to Label or MSDS.

Wash contaminated clothing before reuse.

IF ON SKIN: Gently wash with plenty of soap and water.

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Section 2 - HAZARDS IDENTIFICATION

Disposal

Dispose of contents and container in accordance with relevant legislation.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
histamine dihydrochloride	56-92-8	>98

Section 4 - FIRST AID MEASURES

SWALLOWED

For advice, contact a Poisons Information Centre or a doctor.

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

EYE

If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin or hair contact occurs:

- Immediately flush body and clothes with large amounts of water, using safety shower if available.
- Quickly remove all contaminated clothing, including footwear.
- Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
- Transport to hospital, or doctor.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

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Section 4 - FIRST AID MEASURES

NOTES TO PHYSICIAN

Treat symptomatically.

Effects of histamine may be relieved by an antihistamine H1 antagonist, but adrenaline may be required.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.

FIRE/EXPLOSION HAZARD

- Solid which exhibits difficult combustion or is difficult to ignite.
 - Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited.
 - Dry dust can also be charged electrostatically by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport.
 - Build-up of electrostatic charge may be prevented by bonding and grounding.
 - Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.
 - All movable parts coming in contact with this material should have a speed of less than 1-metre/sec.
- Combustion products include: carbon monoxide (CO), nitrogen oxides (NOx) and hydrogen chloride.

FIRE INCOMPATIBILITY

Avoid contamination with strong oxidising agents as ignition may result.

Personal Protective Equipment

Gas tight chemical resistant suit.

Limit exposure duration to 1 BA set 30 mins.

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Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Wear impervious gloves and safety glasses.
- Use dry clean up procedures and avoid generating dust.
- Sweep up or
- Vacuum up (consider explosion-proof machines designed to be grounded during storage and use).
- Place spilled material in clean, dry, sealable, labelled container.

MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Neutralise/decontaminate residue.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise emergency services.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



+ + + + + +

+: May be stored together

O: May be stored together with specific precautions

X: Must not be stored together

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with moisture.
- Avoid contact with incompatible materials.

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Section 7 - HANDLING AND STORAGE

- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

SUITABLE CONTAINER

- Polyethylene or polypropylene container.
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

Avoid reaction with oxidising agents.

STORAGE REQUIREMENTS

- Keep dry.
- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials.
- Protect containers against physical damage.
- Check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- histamine dihydrochloride: CAS:56- 92- 8

MATERIAL DATA

These "dusts" have little adverse effect on the lungs and do not produce toxic effects or organic disease. Although there is no dust which does not evoke some cellular response at sufficiently high concentrations, the cellular response caused by P.N.O.C.s has the following characteristics:

- the architecture of the air spaces remain intact,
- scar tissue (collagen) is not synthesised to any degree,
- tissue reaction is potentially reversible.

Extensive concentrations of P.N.O.C.s may:

- seriously reduce visibility,
- cause unpleasant deposits in the eyes, ears and nasal passages,
- contribute to skin or mucous membrane injury by chemical or mechanical action, per se, or by the rigorous skin cleansing procedures necessary for their removal. [ACGIH]

This limit does not apply:

- to brief exposures to higher concentrations

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

· nor does it apply to those substances that may cause physiological impairment at lower concentrations but for which a TLV has as yet to be determined.

This exposure standard applies to particles which

- are insoluble or poorly soluble* in water or, preferably, in aqueous lung fluid (if data is available) and
- have a low toxicity (i.e.. are not cytotoxic, genotoxic, or otherwise chemically reactive with lung tissue, and do not emit ionizing radiation, cause immune sensitization, or cause toxic effects other than by inflammation or by a mechanism of lung overload).

PERSONAL PROTECTION



EYE

- Safety glasses.
- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

Wear general protective gloves, eg. light weight rubber gloves.

OTHER

Overalls.

- Impervious protective clothing.
- Eyewash unit.

RESPIRATOR

Protection Factor	Half- Face Respirator	Full- Face Respirator	Powered Air Respirator
10 x ES	P1 Air- line*	- -	PAPR- P1 -
50 x ES	Air- line**	P2	PAPR- P2
100 x ES	-	P3	-
		Air- line*	-
100+ x ES	-	Air- line**	PAPR- P3

* - Negative pressure demand ** - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

your
Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25- 0.5 m/s (50- 100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5- 1 m/s (100- 200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1- 2.5 m/s (200- 500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5- 10 m/s (500- 2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood- local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

White crystalline solid; mixes with water, alcohol.

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Solid.

Mixes with water.

Molecular Weight: 184.07

Melting Range (°C): 249- 252

Solubility in water (g/L): Miscible

pH (1% solution): Not available

Volatile Component (%vol): Negligible

Relative Vapour Density (air=1): >1

Lower Explosive Limit (%): Not available

Autoignition Temp (°C): Not available

State: Divided solid

Boiling Range (°C): Not available

Specific Gravity (water=1): Not available

pH (as supplied): Not applicable

Vapour Pressure (kPa): Negligible

Evaporation Rate: Not applicable

Flash Point (°C): Not available

Upper Explosive Limit (%): Not available.

Decomposition Temp (°C): Not available.

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

Considered an unlikely route of entry in commercial/industrial environments.

EYE

Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

SKIN

Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.

The material is not thought to be a skin irritant (i.e. is unlikely to produce irritant dermatitis as described in EC Directives using animal models). Temporary discomfort, however, may result from prolonged dermal exposures. Good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational

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Section 11 - TOXICOLOGICAL INFORMATION

setting.

Toxic effects may result from skin absorption.

INHALED

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

Respiratory sensitisation may result in allergic/asthma like responses; from coughing and minor breathing difficulties to bronchitis with wheezing, gasping.

CHRONIC HEALTH EFFECTS

Limited evidence shows that inhalation of the material is capable of inducing a sensitisation reaction in a significant number of individuals at a greater frequency than would be expected from the response of a normal population.

Pulmonary sensitisation, resulting in hyperactive airway dysfunction and pulmonary allergy may be accompanied by fatigue, malaise and aching. Significant symptoms of exposure may persist for extended periods, even after exposure ceases. Symptoms can be activated by a variety of nonspecific environmental stimuli such as automobile exhaust, perfumes and passive smoking.

There exists limited evidence that shows that skin contact with the material is capable either of inducing a sensitisation reaction in a significant number of individuals, and/or of producing positive response in experimental animals.

Principal routes of exposure are usually by skin contact/absorption and inhalation of generated dust.

Injection of histamine as the acid phosphate or hydrochloride produces a range of adverse effects including headache, flushing of the skin, general vasodilation with lowered blood pressure, bronchial constriction and dyspnea, visual disturbance, diarrhoea and other gastrointestinal effects. Reactions may be severe and may result in collapse, shock or fatalities.

TOXICITY AND IRRITATION

TOXICITY

Intraperitoneal (rat) LD50: 1550 mg/kg

Oral (mouse) LD50: 2534 mg/kg

Intraperitoneal (mouse) LD50: 1289 mg/kg

Intravenous (mouse) LD50: 370 mg/kg

Intraperitoneal (g.pig) LD50: 46 mg/kg

Subcutaneous (g.pig) LD50: 12.5 mg/kg

Intravenous (g.pig) LD50: 0.29 mg/kg

Corneal damage, somnolence, convulsions, change in motor activity, rigidity, shock, bronchiolar constriction, dyspnea, cyanosis recorded.

IRRITATION

Nil Reported

Section 12 - ECOLOGICAL INFORMATION

No data for histamine dihydrochloride.

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Section 13 - DISPOSAL CONSIDERATIONS

- Consult manufacturer for recycling options and recycle where possible .
- Consult State Land Waste Management Authority for disposal.
- Incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS:UN, IATA,
IMDG

Section 15 - REGULATORY INFORMATION

REGULATIONS

histamine dihydrochloride (CAS: 56-92-8) is found on the following regulatory lists;
WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have
not been established

Section 16 - OTHER INFORMATION

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

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