

(±)- METHAMPHETAMINE HCL (METHAMPHETAMINE HYDROCHLORIDE)

ChemWatch Review SDS

Chemwatch Hazard Alert Code: 3

Chemwatch: 39848-7

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Safety Data Sheet according to Work Health and Safety Regulations (Hazardous Chemicals) 2023 and ADG requirements

S.GHS.AUS.EN

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

Product Identifier

Product name	(±)- METHAMPHETAMINE HCL (METHAMPHETAMINE HYDROCHLORIDE)
Chemical Name	Not Available
Synonyms	C10-H15-N.Cl-H; C6H4CH2CH(NHCH3)CH3.HCl; phenethylamine, N-alpha-dimethyl-, hydrochloride; benzeneethanamine, N,alpha-dimethyl-, hydrochloride, (S)-; d-deoxyephedrine hydrochloride; d-desoxyephedrine hydrochloride; (+)-methamphetamine hydrochloride; (+/-)-methamphetamine hydrochloride (CAS RN: 64-11-9); d-methamphetamine chloride; methamphetaminium chloride; methedrine hydrochloride; methylamphetamine hydrochloride; d-methylamphetamine hydrochloride; d-N-methyl-beta-phenylisopropylamine hydrochloride; dl-methamphetamine HCl (CAS RN: 300-42-5); l-methamphetamine HCl (CAS RN: 826-10-8); rac-4-methylamphetamine hydrochloride (CAS RN: 41632-56-8); Adipex Deofed Desoxyfed Desoxyn Destin Desyphed Dexoval; Dextim Doxyfed Drinalfa Efxoxine Eufodrinol Gerovit Isophen; Methylisomyn Norodin hydrochloride Pervitin Philopon Soxysympamine; Syndrox Tonedron; amphetamine-like anorectic/ stimulant
Proper shipping name	MEDICINE, SOLID, TOXIC, N.O.S. (contains (±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride))
Chemical formula	C10-H15-N .Cl-H C10H16ClN C10H15N.ClH C10-H15-N.Cl-H C10H15N
Other means of identification	Not Available
CAS number	51-57-0

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

Relevant identified uses	An indirect-acting sympathomimetic agent with alpha- and beta-adrenergic activity. Produces a profound stimulating effect on the central nervous system, particularly the cerebral cortex. Used clinically in the treatment of narcolepsy and in the treatment of hyperkinetic states in children. Diet suppressant. An anorectic or anorexic (appetite suppressant) is a drug which reduces appetite, resulting in lower food consumption, leading to weight loss. Epidemics of fatal pulmonary hypertension and heart valve damage associated with some pharmaceutical anorectic agents have led to the withdrawal of products from the market.
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Details of the manufacturer or supplier of the safety data sheet

Registered company name	ChemWatch
Address	Australia
Telephone	Not Available
Fax	Not Available
Website	Not Available
Email	Not Available

Emergency telephone number

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE (24/7)
Emergency telephone number(s)	+61 1800 951 288
Other emergency telephone number(s)	+61 3 9573 3188

SECTION 2 Hazards identification

Classification of the substance or mixture

HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

Chemwatch Hazard Ratings


	Min	Max	
Flammability	1	1	
Toxicity	3	3	
Body Contact	3	3	
Reactivity	1	1	
Chronic	0	0	

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

Poisons Schedule	S8
Classification [1]	Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Acute Toxicity (Inhalation) Category 3
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

Label elements

(±)- METHAMPHETAMINE HCL (METHAMPHETAMINE HYDROCHLORIDE)

Hazard pictogram(s)	
Signal word	Danger
Hazard statement(s)	
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
Precautionary statement(s) Prevention	
P264	Wash all exposed external body areas thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves and protective clothing.
Precautionary statement(s) Response	
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider.
P330	Rinse mouth.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Precautionary statement(s) Storage	
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
Precautionary statement(s) Disposal	
P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients**Substances**

CAS No	%[weight]	Name
51-57-0	>98	(±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride)

Legend: 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available

Mixtures

See section above for composition of Substances

SECTION 4 First aid measures**Description of first aid measures**

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ 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 Contact	<p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> ▶ Quickly but gently, wipe material off skin with a dry, clean cloth. ▶ Immediately 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.
Inhalation	<ul style="list-style-type: none"> ▶ If fumes or combustion products are inhaled remove from contaminated area. ▶ Lay patient down. Keep warm and rested. ▶ Prosthesis 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, without delay.
Ingestion	<ul style="list-style-type: none"> ▶ IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. ▶ For advice, contact a Poisons Information Centre or a doctor. ▶ Urgent hospital treatment is likely to be needed. ▶ In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. ▶ If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist. ▶ If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS. <p>Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:</p>

Continued...

(±)- METHAMPHETAMINE HCL (METHAMPHETAMINE HYDROCHLORIDE)

▶ **INDUCE** vomiting with fingers down the back of the throat, **ONLY IF CONSCIOUS**. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

NOTE: Wear a protective glove when inducing vomiting by mechanical means.

Indication of any immediate medical attention and special treatment needed

The management of overdose with amphetamines generally involves supportive and symptomatic therapy. Sedation is usually sufficient. Forced acid diuresis has been advocated to increase amphetamine excretion but should only be considered in severely poisoned patients and requires close supervision and monitoring. MARTINDALE: The Extra Pharmacopoeia, 27th Ed.

Amphetamines may be monoamine oxidase inhibitors (MAOIs). Monoamine oxidase inhibitors produce postural hypotension, dizziness, drowsiness, weakness and fatigue, dryness of the mouth, constipation and other gastrointestinal disturbances (including nausea and vomiting) and oedema. Other symptoms may include agitation and tremors, insomnia and restless sleep, blurred vision, difficulty in urinating, convulsions, skin rashes, leucopenia, sexual disturbances and weight gain with inappropriate appetite. Psychotic episodes may be characterised by hypomanic behavior, confusion and hallucinations. Jaundice has been reported and infrequently this may lead to fatal progressive hepatocellular necrosis.

Treatment of overdose of oral sympathomimetics should be symptomatic and supportive and may include the following:

1. Consider gastric lavage within one hour of ingestion. Induced vomiting may not be advisable because of the potential for seizures and worsening hypertension.
2. Administer activated charcoal slurry.
3. Monitor EKG, ECG, serum electrolytes, blood sugar, blood pressure, urinary output, and renal function. Pharmacological action is required only in severely symptomatic patients.
4. For pulmonary edema (noncardiogenic) - Maintain ventilation and oxygenation with close arterial blood gas monitoring.
5. For seizures or severe agitation - Administer benzodiazepines.
6. For dystonic reactions - Administer benzotropine or diphenhydramine.
7. For ventricular tachycardia - Administer lidocaine.
8. For severe hypertension - Nitroprusside, labetalol, or phentolamine may be necessary.
9. For hypotension - Infuse patient with isotonic solution; if condition persists, administer dopamine or norepinephrine.
10. For rhabdomyolysis - Administer sufficient 0.9% saline to maintain urine output of 2 to 3 l/kg/hour. Diuretics may be necessary; urinary alkalization is NOT routinely recommended.
11. For hyperthermia - Manage with external cooling; avoid phenothiazines. [Meditext 2006]

SECTION 5 Firefighting measures**Extinguishing media**

- ▶ Water spray or fog.
- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).

Special hazards arising from the substrate or mixture

Fire Incompatibility ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Advice for firefighters

Fire Fighting	<ul style="list-style-type: none"> ▶ 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. ▶ Use fire fighting procedures suitable for surrounding area.
Fire/Explosion Hazard	<ul style="list-style-type: none"> ▶ Combustible solid which burns but propagates flame with difficulty; it is estimated that most organic dusts are combustible (circa 70%) - according to the circumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions. ▶ Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions). ▶ 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 (420 micron or less) may burn rapidly and fiercely if ignited - particles exceeding this limit will generally not form flammable dust clouds; once initiated, however, larger particles up to 1400 microns diameter will contribute to the propagation of an explosion. <p>Combustion products include: carbon monoxide (CO) carbon dioxide (CO₂) hydrogen chloride phosgene nitrogen oxides (NO_x) other pyrolysis products typical of burning organic material. May emit poisonous fumes.</p>
HAZCHEM	2X

SECTION 6 Accidental release measures**Personal precautions, protective equipment and emergency procedures**

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	<ul style="list-style-type: none"> ▶ Clean up waste regularly and abnormal spills immediately. ▶ Avoid breathing dust and contact with skin and eyes. ▶ Wear protective clothing, gloves, safety glasses and dust respirator. ▶ Use dry clean up procedures and avoid generating dust.
Major Spills	<ul style="list-style-type: none"> ▶ 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.

(±)- METHAMPHETAMINE HCL (METHAMPHETAMINE HYDROCHLORIDE)

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

SECTION 7 Handling and storage**Precautions for safe handling**

Safe handling	<ul style="list-style-type: none"> ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs. ▶ Use in a well-ventilated area. ▶ Prevent concentration in hollows and sumps. ▶ Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions) ▶ Minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame. ▶ Establish good housekeeping practices. ▶ Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds.
Other information	<p>NOTE: Special security requirements may be mandated under Federal/State Regulation(s).</p> <ul style="list-style-type: none"> ▶ Store in original containers. ▶ Store in vault fitted with warning devices or detectors recommended by various Federal/State authorities. ▶ Store in vault used only for the purpose of storage of drugs of addiction.

Conditions for safe storage, including any incompatibilities


Suitable container	<ul style="list-style-type: none"> ▶ Packaging as recommended by manufacturer. ▶ Check that containers are clearly labelled. ▶ Tamper-proof containers. ▶ Polyethylene or polypropylene containers. ▶ Glass container is suitable for laboratory quantities <p>For low viscosity materials</p> <ul style="list-style-type: none"> ▶ Drums and jerricans must be of the non-removable head type. ▶ Where a can is to be used as an inner package, the can must have a screwed enclosure. <p>For materials with a viscosity of at least 2680 cSt. (23 deg. C) and solids (between 15 C deg. and 40 deg C.):</p> <ul style="list-style-type: none"> ▶ Removable head packaging; ▶ Cans with friction closures and ▶ low pressure tubes and cartridges <p>may be used.</p>
Storage incompatibility	<p>Avoid exposure to light and air.</p> <ul style="list-style-type: none"> ▶ Avoid strong bases. ▶ Avoid reaction with oxidising agents

SECTION 8 Exposure controls / personal protection**Control parameters****Occupational Exposure Limits (OEL)****INGREDIENT DATA**

Not Available

Ingredient	Original IDLH	Revised IDLH
(±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride)	Not Available	Not Available

Exposure controls

Appropriate engineering controls	<p>For potent pharmacological agents:</p> <p>Powders</p> <p>To prevent contamination and overexposure, no open handling of powder should be allowed.</p> <ul style="list-style-type: none"> ▶ Powder handling operations are to be done in a powders weighing hood, a glove box, or other equivalent ventilated containment system. ▶ In situations where these ventilated containment hoods have not been installed, a non-ventilated enclosed containment hood should be used. ▶ Pending changes resulting from additional air monitoring data, up to 300 mg can be handled outside of an enclosure provided that no grinding, crushing or other dust-generating process occurs. <p>Unless written procedures, specific to the workplace are available, the following is intended as a guide:</p> <ul style="list-style-type: none"> ▶ For Laboratory-scale handling of Substances assessed to be toxic by inhalation. Quantities of up to 25 grams may be handled in Class II biological safety cabinets*; Quantities of 25 grams to 1 kilogram may be handled in Class II biological safety cabinets* or equivalent containment systems; Quantities exceeding 1 kg may be handled either using specific containment, a hood or Class II biological safety cabinet*. ▶ HEPA terminated local exhaust ventilation should be considered at point of generation of dust, fumes or vapours. ▶ The need for respiratory protection should also be assessed where incidental or accidental exposure is anticipated. Dependent on levels of contamination, PAPR, full face air purifying devices with P2 or P3 filters or air supplied respirators should be evaluated.
Individual protection measures, such as personal protective equipment	
Eye and face protection	<p>For laboratory, larger scale or bulk handling or where regular exposure in an occupational setting occurs:</p> <ul style="list-style-type: none"> ▶ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent] ▶ Face shield. Full face shield may be required for supplementary but never for primary protection of eyes ▶ 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.
Skin protection	See Hand protection below
Hands/feet protection	<p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care.</p>

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(±)- METHAMPHETAMINE HCL (METHAMPHETAMINE HYDROCHLORIDE)

	<ul style="list-style-type: none"> ▶ Rubber gloves (nitrile or low-protein, powder-free latex, latex/ nitrile). Employees allergic to latex gloves should use nitrile gloves in preference. ▶ Double gloving should be considered. ▶ PVC gloves.
Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> ▶ For quantities up to 500 grams a laboratory coat may be suitable. ▶ For quantities up to 1 kilogram a disposable laboratory coat or coverall of low permeability is recommended. Coveralls should be buttoned at collar and cuffs. ▶ For quantities over 1 kilogram and manufacturing operations, wear disposable coverall of low permeability and disposable shoe covers.

Respiratory protection

Type -P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

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

* - Negative pressure demand ** - Continuous flow

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.
- Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
- Use approved positive flow mask if significant quantities of dust becomes airborne.
- Try to avoid creating dust conditions.

SECTION 9 Physical and chemical properties**Information on basic physical and chemical properties**

Appearance	White or almost white, odourless, crystalline powder with bitter taste; mixes with water, alcohol, chloroform. +/-methamphetamine hydrochloride mp 153-156 C. The minimum requirement for adrenergic agents is a primary or secondary amine separated from a substituted benzene ring by one or two carbons. This configuration results in strong agonist activity. As the size of the substituent attached to the amine becomes greater, particularly with respect to a tert-butyl group, then the molecule typically is found to have receptor affinity without intrinsic activity, and is therefore an antagonist.		
Physical state	Divided Solid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Applicable	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	170-175	Viscosity (cSt)	Not Applicable
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	185.72
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Negligible
Vapour pressure (kPa)	Negligible	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Applicable	VOC g/L	Not Available
Heat of Combustion (kJ/g)	Not Available	Ignition Distance (cm)	Not Available
Flame Height (cm)	Not Available	Flame Duration (s)	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	▶ Unstable in the presence of incompatible materials.

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(±)- METHAMPHETAMINE HCL (METHAMPHETAMINE HYDROCHLORIDE)

	<ul style="list-style-type: none"> ▶ Product is considered stable. ▶ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information**Information on toxicological effects**

a) Acute Toxicity	There is sufficient evidence to classify this material as acutely toxic.
b) Skin Irritation/Corrosion	Based on available data, the classification criteria are not met.
c) Serious Eye Damage/Irritation	Based on available data, the classification criteria are not met.
d) Respiratory or Skin sensitisation	Based on available data, the classification criteria are not met.
e) Mutagenicity	Based on available data, the classification criteria are not met.
f) Carcinogenicity	Based on available data, the classification criteria are not met.
g) Reproductivity	Based on available data, the classification criteria are not met.
h) STOT - Single Exposure	Based on available data, the classification criteria are not met.
i) STOT - Repeated Exposure	Based on available data, the classification criteria are not met.
j) Aspiration Hazard	Based on available data, the classification criteria are not met.

Inhaled	<p>Inhalation of dusts, generated by the material, during the course of normal handling, may produce toxic effects. The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of dusts, or fumes, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. 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.</p> <p>If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures. Sympathomimetics, which mimic stimulation of the sympathetic nerves, cause a stimulatory effect on the heart and central nervous system, constriction of blood vessels supplying the skin and mucous membranes, dilation of blood vessels supplying muscles of movement, and widening of the airways. These drugs may act on the receptor or the release of the neurotransmitter noradrenaline. Stimulating alpha-adrenergic receptors causes blood vessels to dilate, sometimes to the extent that gangrene occurs in the fingers and toes, and there is increased blood pressure. This can also cause swelling of the lungs and bleeding in the brain.</p>
Ingestion	<p>Toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual.</p> <p>Phenethylamines are structurally similar to amphetamines. Side effects of amphetamine treatment are associated with overstimulation of the central nervous system and include sleeplessness, nervousness, restlessness, irritability and a feeling of well-being, followed by fatigue and depression. There may be dry mouth, poor appetite, abdominal cramps and other gastrointestinal disturbances, headache, dizziness, tremor, sweating, fast heartbeat, palpitations, increased blood pressure, difficulty urinating, altered sex drive and impotence. Psychotic reactions and muscle damage (associated with kidney complications) have also occurred.</p> <p>Anorectic agents can cause overstimulation of the central nervous system, leading to hyperventilation, tremor, motor difficulties, dilated pupils, blurred vision, insomnia and dream disturbances. They also cause weakness, fatigue, drowsiness, depression, inco-ordination, difficulty speaking, confusion and hallucinations.</p> <p>Phenethylamines produce effects similar to amphetamines. They excite the nervous system, causing shortness of breath, cough, narrowing of the airways and throat spasms.</p>
Skin Contact	<p>Skin contact with the material may produce toxic effects; systemic effects may result following absorption. The material is not thought to be a skin irritant (as classified by EC Directives using animal models). Abrasive damage however, may result from prolonged exposures.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>
Eye	<p>Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may cause transient discomfort characterised by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result.</p>
Chronic	<p>Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.</p> <p>There is some evidence from animal testing that exposure to this material may result in toxic effects to the unborn baby. Long-term use of amphetamines can lead to tolerance developing to some of its effects, leading to an urge to increase dose and habituation. However, amphetamines generally do not cause physical dependence.</p> <p>Chronic effects associated with the use of anorectic stimulants include severe skin disorders, inability to sleep, irritability, hyperactivity, personality changes, urinary frequency, painful urination and impotence.</p> <p>Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis, caused by particles less than 0.5 micron penetrating and remaining in the lung.</p> <p>Chronic exposure to phenethylamines excite the central nervous system and induce tolerance; in extreme cases they produce amphetamine-like responses including personality changes, compulsive and stereotyped behaviour and may induce psychosis with auditory and visual hallucinations and paranoid delusions.</p> <p>Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).</p>

(±)- METHAMPHETAMINE HCL (METHAMPHETAMINE HYDROCHLORIDE)	TOXICITY	IRRITATION
	Oral (Guinea) LD50; 90 mg/kg ^[2]	Eye (Rodent - rabbit): 2 - Mild
Legend:	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances	

(±)- METHAMPHETAMINE HCL (METHAMPHETAMINE)	Convulsions, excitement, transplacental tumourigenesis, effects on newborn, maternal effects, specific developmental abnormalities (endocrine system, central nervous system, musculoskeletal system) recorded. Neoplastic by RTECS criteria
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(±)- METHAMPHETAMINE HCL (METHAMPHETAMINE HYDROCHLORIDE)

HYDROCHLORIDE)	<p>alpha-Adrenergic receptors have actions in common, but also individual effects. Common (or still receptor unspecified) actions include:</p> <ul style="list-style-type: none"> - vasoconstriction - decreased motility of smooth muscle in gastrointestinal tract <p>Subtype unspecific alpha agonists can be used to treat rhinitis (they decrease mucus secretion). Subtype unspecific alpha antagonists can be used to treat pheochromocytoma (they decrease vasoconstriction caused by norepinephrine).</p> <p>Alpha-agonist toxicity may occur accidentally or intentionally. Toxicity is often due to intentional overdose and accidental pediatric ingestion. The substance exhibits effects on the adrenergic receptors</p> <p>The adverse effects seen with adrenergic drugs are broad. The most common side effects are changes in heart rate and blood pressure. Non-selective binding to the adrenergic receptors can cause different side effects that vary based on the specific agent as well as the dosage. The common non-selective agonists are norepinephrine, epinephrine, and isoproterenol (isoprenaline).</p> <p>Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).</p>
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Acute Toxicity	✓	Carcinogenicity	✗
Skin Irritation/Corrosion	✗	Reproductivity	✗
Serious Eye Damage/Irritation	✗	STOT - Single Exposure	✗
Respiratory or Skin sensitisation	✗	STOT - Repeated Exposure	✗
Mutagenicity	✗	Aspiration Hazard	✗

Legend: ✗ – Data either not available or does not fill the criteria for classification
 ✓ – Data available to make classification

SECTION 12 Ecological information**Toxicity**

(±)- METHAMPHETAMINE HCL (METHAMPHETAMINE HYDROCHLORIDE)	Endpoint	Test Duration (hr)	Species	Value	Source
		Not Available	Not Available	Not Available	Not Available

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
(±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride)	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
(±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride)	LOW (LogKOW = 2.2213)

Mobility in soil

Ingredient	Mobility
(±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride)	LOW (Log KOC = 1610)

SECTION 13 Disposal considerations**Waste treatment methods**

Product / Packaging disposal	<ul style="list-style-type: none"> ▶ Containers may still present a chemical hazard/ danger when empty. ▶ Return to supplier for reuse/ recycling if possible. <p>Otherwise:</p> <ul style="list-style-type: none"> ▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. ▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product. <p>Valuable substance, hold all residues for recovery. Disposal of the material must be carried out in accordance with the requirements of the relevant Federal/State Act(s) or Code(s) regulating the disposal of Drugs of Addiction.</p> <ul style="list-style-type: none"> ▶ Consult manufacturer/supplier for recycling options. ▶ Decontaminate empty containers with water; incinerate plastic bags. <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> ▶ Reduction ▶ Reuse ▶ Recycling ▶ Disposal (if all else fails) <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.</p> <ul style="list-style-type: none"> ▶ DO NOT allow wash water from cleaning or process equipment to enter drains. ▶ It may be necessary to collect all wash water for treatment before disposal. ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▶ Where in doubt contact the responsible authority.
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(±)- METHAMPHETAMINE HCL (METHAMPHETAMINE HYDROCHLORIDE)**SECTION 14 Transport information****Labels Required**

Marine Pollutant	NO
HAZCHEM	2X

Land transport (ADG)

14.1. UN number or ID number	3249	
14.2. UN proper shipping name	MEDICINE, SOLID, TOXIC, N.O.S. (contains (±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride))	
14.3. Transport hazard class(es)	Class	6.1
	Subsidiary Hazard	Not Applicable
14.4. Packing group	III	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Special provisions	221 223
	Limited quantity	5 kg

Air transport (ICAO-IATA / DGR)

14.1. UN number	3249	
14.2. UN proper shipping name	Medicine, solid, toxic, n.o.s. (contains (±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride))	
14.3. Transport hazard class(es)	ICAO/IATA Class	6.1
	ICAO / IATA Subsidiary Hazard	Not Applicable
	ERG Code	6L
14.4. Packing group	III	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Special provisions	A3
	Cargo Only Packing Instructions	677
	Cargo Only Maximum Qty / Pack	200 kg
	Passenger and Cargo Packing Instructions	670
	Passenger and Cargo Maximum Qty / Pack	100 kg
	Passenger and Cargo Limited Quantity Packing Instructions	Y645
	Passenger and Cargo Limited Maximum Qty / Pack	5 kg

Sea transport (IMDG-Code / GGVSee)

14.1. UN number	3249	
14.2. UN proper shipping name	MEDICINE, SOLID, TOXIC, N.O.S. (contains (±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride))	
14.3. Transport hazard class(es)	IMDG Class	6.1
	IMDG Subsidiary Hazard	Not Applicable
14.4. Packing group	III	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	EMS Number	F-A , S-A
	Special provisions	221 223
	Limited Quantities	5 kg

14.7. Maritime transport in bulk according to IMO instruments**14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code**

Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
(±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride)	Not Available

(±)- METHAMPHETAMINE HCL (METHAMPHETAMINE HYDROCHLORIDE)**14.7.3. Transport in bulk in accordance with the IGC Code**

Product name	Ship Type
(±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride)	Not Available

SECTION 15 Regulatory information**Safety, health and environmental regulations / legislation specific for the substance or mixture**

(±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride) is found on the following regulatory lists

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 8

Additional Regulatory Information

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIC / Australia Non-Industrial Use	No ((±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride))
Canada - DSL	Yes
Canada - NDSL	Yes
China - IECSC	No ((±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride))
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	No ((±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride))
Korea - KECl	No ((±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride))
New Zealand - NZIoC	Yes
Philippines - PICCS	No ((±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride))
USA - TSCA	All chemical substances in this product have been designated as TSCA Inventory 'inactive'
Taiwan - TCSI	Yes
Mexico - INSQ	No ((±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride))
Vietnam - NCl	Yes
Russia - FBEPH	No ((±)- METHAMPHETAMINE HCl (methamphetamine hydrochloride))
Legend:	<i>Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.</i>

SECTION 16 Other information

Revision Date	23/12/2022
Initial Date	05/07/2001

SDS Version Summary

Version	Date of Update	Sections Updated
9.1	31/12/2018	CAS Number, Disposal considerations - Disposal, Handling and storage - Storage (storage incompatibility), Handling and storage - Storage (storage requirement), Toxicological information - Toxicity and Irritation (Other), Identification of the substance / mixture and of the company / undertaking - Use
10.1	23/12/2022	Classification review due to GHS Revision change.

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

- ▶ PC - TWA: Permissible Concentration-Time Weighted Average
- ▶ PC - STEL: Permissible Concentration-Short Term Exposure Limit
- ▶ IARC: International Agency for Research on Cancer
- ▶ ACGIH: American Conference of Governmental Industrial Hygienists
- ▶ STEL: Short Term Exposure Limit
- ▶ TEEL: Temporary Emergency Exposure Limit,
- ▶ IDLH: Immediately Dangerous to Life or Health Concentrations
- ▶ ES: Exposure Standard
- ▶ OSF: Odour Safety Factor
- ▶ NOAEL: No Observed Adverse Effect Level
- ▶ LOAEL: Lowest Observed Adverse Effect Level
- ▶ TLV: Threshold Limit Value
- ▶ LOD: Limit Of Detection
- ▶ OTV: Odour Threshold Value
- ▶ BCF: BioConcentration Factors
- ▶ BEI: Biological Exposure Index

Continued...

(±)- METHAMPHETAMINE HCL (METHAMPHETAMINE HYDROCHLORIDE)

- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
- ▶ MARPOL: International Convention for the Prevention of Pollution from Ships
- ▶ IMSBC: International Maritime Solid Bulk Cargoes Code
- ▶ IGC: International Gas Carrier Code
- ▶ IBC: International Bulk Chemical Code

- ▶ AIIC: Australian Inventory of Industrial Chemicals
- ▶ DSL: Domestic Substances List
- ▶ NDSL: Non-Domestic Substances List
- ▶ IECSC: Inventory of Existing Chemical Substance in China
- ▶ EINECS: European INventory of Existing Commercial chemical Substances
- ▶ ELINCS: European List of Notified Chemical Substances
- ▶ NLP: No-Longer Polymers
- ▶ ENCS: Existing and New Chemical Substances Inventory
- ▶ KECI: Korea Existing Chemicals Inventory
- ▶ NZIoC: New Zealand Inventory of Chemicals
- ▶ PICCS: Philippine Inventory of Chemicals and Chemical Substances
- ▶ TSCA: Toxic Substances Control Act
- ▶ TCSI: Taiwan Chemical Substance Inventory
- ▶ INSQ: Inventario Nacional de Sustancias Químicas
- ▶ NCI: National Chemical Inventory
- ▶ FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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