

(±)-MDA [(±)-3,4-Methylenedioxyamphetamine]

Novachem Pty Ltd

Chemwatch Hazard Alert Code: 4

Version No: 1.1

Issue Date: 15/02/2018

Safety Data Sheet according to WHS and ADG requirements

Print Date: 15/02/2018

S.GHS.AUS.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	(±)-MDA [(±)-3,4-Methylenedioxyamphetamine]
Chemical Name	3,4-methylenedioxyamphetamine
Synonyms	M-012
Proper shipping name	METHANOL
Chemical formula	C10-H13-N-O2
Other means of identification	Not Available
CAS number	4764-17-4*

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

Relevant identified uses	Laboratory chemicals, Synthesis of substances
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Details of the supplier of the safety data sheet

Registered company name	Novachem Pty Ltd
Address	25 Crissane Road, Heidelberg West Victoria 3081 Australia
Telephone	+61384151255
Fax	+61386250088
Website	www.novachem.com.au
Email	novachem@novachem.com.au

Emergency telephone number

Association / Organisation	Victorian Poisons Information Centre
Emergency telephone numbers	13 11 26
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Poisons Schedule	S6
Classification [1]	Flammable Liquid Category 2, Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Acute Toxicity (Inhalation) Category 3, Specific target organ toxicity - single exposure Category 1
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

Label elements

Hazard pictogram(s)	
SIGNAL WORD	DANGER

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.

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H370	Causes damage to organs.
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Precautionary statement(s) Prevention

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.

Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P307+P311	IF exposed: Call a POISON CENTER or doctor/physician.
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.

Precautionary statement(s) Storage

P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**Substances**

CAS No	%[weight]	Name
67-56-1	99.9	<u>methanol</u>
4764-17-4	0.1	<u>3,4-methylenedioxyamphetamine</u>

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. ▶ 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, 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> <ul style="list-style-type: none"> ▶ 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. <p>NOTE: Wear a protective glove when inducing vomiting by mechanical means.</p> <ul style="list-style-type: none"> ▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

(±)-MDA [(±)-3,4-Methylenedioxyamphetamine]**Indication of any immediate medical attention and special treatment needed**

In the use of psychoactive substances, four recognised chronic reactions have been reported

- ▶ Prolonged psychotic reactions
- ▶ Depression sufficiently severe to be life-threatening
- ▶ Flashbacks
- ▶ Exacerbation of pre-existing psychiatric illness

Some persons who have experienced many psychedelic trips, especially those who have had acute adverse reactions, develop what appears to be serious long-term personality disruption.

These prolonged psychotic reactions have similarities to schizophrenic reactions and appear to occur most often in persons with pre-existing psychological difficulties - primarily pre-psychotic or psychotic personalities.

Psychedelic-induced personality disorders can be severe and prolonged.

Appropriate treatment often requires antipsychotic medication (antipsychotics, neuroleptics, major tranquillisers) and residential care in a mental health facility.

In certain cases, psychedelic-induced chronic psychological problems lead to complicated patterns of polydrug abuse that requires additional treatment approaches.

Note:

Antipsychotics are associated with a range of side effects. It is well-recognized that many people stop taking them (around two-thirds even in controlled drug trials) due in part to adverse effects. Notable and relatively common adverse effects of antipsychotics include extrapyramidal symptoms (which involve motor control) and hyperprolactinaemia primarily in typicals and weight gain and metabolic abnormalities mostly in atypicals. Temporary withdrawal symptoms including insomnia, agitation, psychosis, and motor disorders may occur during dosage reduction of antipsychotics, and can be mistaken for the return of the underlying condition.

Many psychoactives are also monoamine oxidase inhibitors (MAOIs):

Special care should be taken with any drug therapy in view of the many hazards of monoamine oxidase inhibitor interactions. In particular metaraminol and other sympathomimetic agents are not suitable for the treatment of hypotension, which should be managed with intravenous fluids and, in severe shock, intravenous hydrocortisone

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.

for stimulants:

Treatment and Management.

A specific antidote does not exist for acute stimulant intoxication. Activated charcoal should be prescribed in a case of acute overdose. Otherwise the treatment should target specific signs and symptoms such as hypertension, agitation, seizures, and hyperthermia. Rapid supportive treatment may reduce mortality.

Supportive therapy

Acute intoxication usually presents with increased sensitivity to sensorial stimuli and paranoia. As such, decreasing the patient's level of stimulation (keep voice low, dim lights, minimise touch) and working with the patient's paranoid state (reduce eye contact, respect personal space, do not approach from behind) is important.

As in all cases of suspected poisoning, follow the ABCDEs of emergency medicine (airway, breathing, circulation, disability, exposure), then the ABCDEs of toxicology (antidotes, basics, change absorption, change distribution, change elimination).

Decontamination with gastric lavage may be appropriate in cases of recent ingestion.

Monitor vital signs and hydrate with intravenous fluids.

Withdrawal related insomnia may be treated with trazodone (75-200 mg), hydroxyzine (25-50 mg), or diphenhydramine (50-100 mg) at bedtime.

Benzodiazepines should be avoided unless the patient is also in detox from alcohol/benzodiazepines/opiates.

Neuroleptics may be used for the symptomatic treatment of psychosis.

Physical restraints may be required in certain cases.

Common withdrawal symptoms may include dysphoria, anxiety, and irritability, decreased energy (manifested as reported fatigue, psychomotor retardation and hypersomnia), hyperphagia, decreased concentration, and paranoia. The withdrawal symptoms are uncomfortable but not life threatening; consequently, no current recommendations for a stimulant-detoxification regimen are available.

Stimulant withdrawal dysphoria is common and does not in itself represent an indication for an antidepressant. However, a thorough assessment (including consideration of an antidepressant) is recommended for persistent (longer than a week) depressive symptoms at a level of moderate or severe or associated with suicidal ideation/attempts.

Medscape

For acute and short term repeated exposures to methanol:

- ▶ Toxicity results from accumulation of formaldehyde/formic acid.
- ▶ Clinical signs are usually limited to CNS, eyes and GI tract Severe metabolic acidosis may produce dyspnea and profound systemic effects which may become intractable. All symptomatic patients should have arterial pH measured. Evaluate airway, breathing and circulation.
- ▶ Stabilise obtunded patients by giving naloxone, glucose and thiamine.
- ▶ Decontaminate with ipecac or lavage for patients presenting 2 hours post-ingestion. Charcoal does not absorb well; the usefulness of cathartic is not established.
- ▶ Forced diuresis is not effective; haemodialysis is recommended where peak methanol levels exceed 50 mg/dL (this correlates with serum bicarbonate levels below 18 meq/L).
- ▶ Ethanol, maintained at levels between 100 and 150 mg/dL, inhibits formation of toxic metabolites and may be indicated when peak methanol levels exceed 20 mg/dL. An intravenous solution of ethanol in D5W is optimal.
- ▶ Folate, as leucovorin, may increase the oxidative removal of formic acid. 4-methylpyrazole may be an effective adjunct in the treatment. 8-Phenytoin may be preferable to diazepam for controlling seizure.

[Ellenhorn Barceloux: Medical Toxicology]

BIOLOGICAL EXPOSURE INDEX - BEI

Determinant	Index	Sampling Time	Comment
1. Methanol in urine	15 mg/l	End of shift	B, NS
2. Formic acid in urine	80 mg/gm creatinine	Before the shift at end of workweek	B, NS

B: Background levels occur in specimens collected from subjects **NOT** exposed.

NS: Non-specific determinant - observed following exposure to other materials.

SECTION 5 FIREFIGHTING MEASURES**Extinguishing media**

Water may be an ineffective extinguishing media for methanol fires; static explosions are reported for aqueous solutions as dilute as 30%. Water may be used to cool containers.

- ▶ Alcohol stable foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

Special hazards arising from the substrate or mixture

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

Fire Fighting	<ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves in the event of a fire. ▶ Prevent, by any means available, spillage from entering drains or water courses. ▶ Use fire fighting procedures suitable for surrounding area.
Fire/Explosion Hazard	<ul style="list-style-type: none"> ▶ Combustible. ▶ Slight fire hazard when exposed to heat or flame. ▶ Heating may cause expansion or decomposition leading to violent rupture of containers. ▶ On combustion, may emit toxic fumes of carbon monoxide (CO). <p>Combustion products include: carbon dioxide (CO₂) formaldehyde other pyrolysis products typical of burning organic material. May emit poisonous fumes.</p>
HAZCHEM	•2WE

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"> ▶ Remove all ignition sources. ▶ Clean up all spills immediately. ▶ Avoid breathing vapours and contact with skin and eyes. ▶ Control personal contact with the substance, by using protective equipment.
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. ▶ May be violently or explosively reactive. ▶ Wear full body protective clothing with breathing apparatus.

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.
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>Methanol:</p> <ul style="list-style-type: none"> ▶ reacts violently with strong oxidisers, acetyl bromide, alkyl aluminium salts, beryllium dihydride, bromine, chromic acid, 1-chloro-3,3-difluoro-2-methoxycyclopropene, cyanuric chloride, diethylzinc, isophthaloyl chloride, nitric acid, perchloric acid, potassium-tert-butoxide, potassium sulfur diimide, Raney nickel catalysts, 2,4,6-trichlorotriazine, triethylaluminium, 1,3,3-trifluoro-2-methoxycyclopropene ▶ is incompatible with strong acids, strong caustics, alkaline earth and alkali metals, aliphatic amines, acetaldehyde, benzoyl peroxide, 1,3-bis(di-n-cyclopentadienyl iron)-2-propen-1-one, calcium carbide, chloroform, chromic anhydride, chromium trioxide, dialkylzinc, dichlorine oxide, dichloromethane, ethylene oxide, hypochlorous acid, isocyanates, isopropyl chlorocarbonate, lithium tetrahydroaluminate, magnesium, methyl azide, nitrogen dioxide, palladium, pentafluoroguanidine, perchloryl fluoride, phosphorus pentasulfide, phosphorus trioxide, potassium, tangerine oil, triisobutylaluminium ▶ mixtures with lead perchlorate, sodium hypochlorite are explosive ▶ may react with metallic aluminium at high temperatures ▶ slowly corrodes lead and aluminium ▶ may generate electrostatic charges, due to low conductivity, on flow or agitation

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- ▶ attacks some plastics, rubber and coatings.
- Static induced flash fires have happened when filling plastic containers with methanol / water solutions with as low as 30% methanol content
- Alcohols
 - ▶ are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents.
 - ▶ reacts, possibly violently, with alkaline metals and alkaline earth metals to produce hydrogen
 - ▶ react with strong acids, strong caustics, aliphatic amines, isocyanates, acetaldehyde, benzoyl peroxide, chromic acid, chromium oxide, dialkylzincs, dichlorine oxide, ethylene oxide, hypochlorous acid, isopropyl chlorocarbonate, lithium tetrahydroaluminate, nitrogen dioxide, pentafluoroguanidine, phosphorus halides, phosphorus pentasulfide, tangerine oil, triethylaluminium, triisobutylaluminium
 - ▶ should not be heated above 49 deg. C. when in contact with aluminium equipment
 - ▶ Avoid storage with reducing agents.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**Control parameters****OCCUPATIONAL EXPOSURE LIMITS (OEL)****INGREDIENT DATA**


Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	methanol	Methyl alcohol	262 mg/m ³ / 200 ppm	328 mg/m ³ / 250 ppm	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
methanol	Methyl alcohol; (Methanol)	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
methanol	6000 ppm	Not Available
3,4-methylenedioxyamphetamine	Not Available	Not Available

Exposure controls

Appropriate engineering controls	<p>For potent pharmacological agents:</p> <p>Solutions Handling:</p> <ul style="list-style-type: none"> ▶ Solutions can be handled outside a containment system or without local exhaust ventilation during procedures with no potential for aerosolisation. If the procedures have a potential for aerosolisation, an air-purifying respirator is to be worn by all personnel in the immediate area. ▶ Solutions used for procedures where aerosolisation may occur (e.g., vortexing, pumping) are to be handled within a containment system or with local exhaust ventilation. ▶ In situations where this is not feasible (may include animal dosing), an air-purifying respirator is to be worn by all personnel in the immediate area. Enclosed local exhaust ventilation is required at points of dust, fume or vapour generation. <p>HEPA terminated local exhaust ventilation should be considered at point of generation of dust, fumes or vapours.</p> <p>Barrier protection or laminar flow cabinets should be considered for laboratory scale handling.</p> <p>A fume hood or vented balance enclosure is recommended for weighing/ transferring quantities exceeding 500 mg.</p>
Personal protection	
Eye and face protection	<ul style="list-style-type: none"> ▶ Chemical protective goggles with full seal. ▶ Shielded mask (gas-type). ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses 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> <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.
Thermal hazards	Not Available

Recommended material(s)**GLOVE SELECTION INDEX**

Glove selection is based on a modified presentation of the: "Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

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Respiratory protection

Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.

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Material	CPI
BUTYL	A
BUTYL/NEOPRENE	A
PE/EVAL/PE	A
PVDC/PE/PVDC	A
SARANEX-23 2-PLY	A
SARANEX-23	A
TEFLON	A
VITON/NEOPRENE	A
NEOPRENE	B
NAT+NEOPR+NITRILE	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE/NATURAL	C
NITRILE	C
PVA	C
PVC	C

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	A-AUS / Class 1	-
up to 50	1000	-	A-AUS / Class 1
up to 50	5000	Airline *	-
up to 100	5000	-	A-2
up to 100	10000	-	A-3
100+		-	Airline**

* - Continuous Flow

** - Continuous-flow or positive pressure demand.

A(All classes) = Organic vapours, B AUS or B1 = Acid gases, 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 deg C)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Not Available		
Physical state	Liquid	Relative density (Water = 1)	0.79 @ 20 C
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	385- (464 ICI)
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point / freezing point (°C)	-97.8	Viscosity (cSt)	0.59
Initial boiling point and boiling range (°C)	64-65	Molecular weight (g/mol)	32.04
Flash point (°C)	11-12(16.1 OC)	Taste	Not Available
Evaporation rate	2.1 BuAc=1 BuAC = 1	Explosive properties	Not Available
Flammability	HIGHLY FLAMMABLE.	Oxidising properties	Not Available
Upper Explosive Limit (%)	36	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	6	Volatile Component (%vol)	ca 100 @ 20 C
Vapour pressure (kPa)	12.26 @ 20 C	Gas group	Not Available
Solubility in water (g/L)	Miscible	pH as a solution (1%)	Neutral
Vapour density (Air = 1)	1.1	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"> ▶ Static induced flash fires have happened when filling plastic containers with methanol / water solutions with as low as 30% methanol content. ▶ Unstable in the presence of incompatible materials. ▶ 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

Inhaled	<p>There is strong evidence to suggest that this material can cause, if inhaled once, very serious, irreversible damage of organs.</p> <p>The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.</p> <p>Minor but regular methanol exposures may affect the central nervous system, optic nerves and retinae. Symptoms may be delayed, with headache, fatigue, nausea, blurring of vision and double vision. Continued or severe exposures may cause damage to optic nerves, which may become severe with permanent visual impairment even blindness resulting.</p> <p>WARNING: Methanol is only slowly eliminated from the body and should be regarded as a cumulative poison which cannot be made non-harmful [CCINFO]</p> <p>Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce toxic effects.</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>Psychedelic states are a group of experiences including changed perception such as hallucinations, synaesthesia, altered awareness or focused consciousness, change in thought patterns, trance or hypnotic states and mystical states. This can lead to changes in self-identity and cause feelings of revelation, enlightenment, confusion and psychosis. Psychedelic states may be caused by meditation, sensory stimulation or deprivation, and, most commonly, by the use of psychedelic substances. When used for spiritual purposes they are called entheogens.</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> <p>Adverse effects associated with the administration of central nervous system stimulants include shortness of breath, coughing, spasm of the bronchi and spasm of the throat (larynx). Muscular involvement may produce symptoms ranging from twitching to spasticity or seizures. Headache, dizziness and confusion may also result, as can a very high fever or a sensation of warmth. Other symptoms may include nausea, vomiting, diarrhea and difficulty in urination.</p> <p>Phenethylamines are structurally similar to amphetamines.</p> <p>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>Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733)</p> <p>Methanol may produce a burning or painful sensation in the mouth, throat, chest, and stomach. This may be accompanied by nausea, vomiting, headache, dizziness, shortness of breath, weakness, fatigue, leg cramps, restlessness, confusion, drunken behaviour, visual disturbance, drowsiness, coma and death.</p>
Skin Contact	<p>Skin contact with the material may produce toxic effects; systemic effects may result following absorption.</p> <p>The material is not thought to be a skin irritant (as classified by EC Directives using animal models). Temporary discomfort, however, may result from prolonged dermal 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> <p>There is strong evidence to suggest that this material, on a single contact with skin, can cause serious, irreversible damage of organs.</p>
Eye	<p>Although the liquid 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).</p> <p>510meth</p>
Chronic	<p>Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.</p> <p>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>Long-term exposure to methanol vapour, at concentrations exceeding 3000 ppm, may produce cumulative effects characterised by gastrointestinal disturbances (nausea, vomiting), headache, ringing in the ears, insomnia, trembling, unsteady gait, vertigo, conjunctivitis and clouded or double vision.</p> <p>Liver and/or kidney injury may also result.</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>

(±)-MDA [(±)-3,4-Methylenedioxyamphetamine]	TOXICITY	IRRITATION
	Oral (rat) LD50: 13.3 mg/kg ^[2]	Not Available
methanol	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 15800 mg/kg ^[2]	Eye (rabbit): 100 mg/24h-moderate
	Inhalation (rat) LC50: 63926.976 mg/l/4h ^[2]	Eye (rabbit): 40 mg-moderate
	Oral (rat) LD50: 5600 mg/kg ^[2]	Skin (rabbit): 20 mg/24 h-moderate
3,4-methylenedioxyamphetamine	TOXICITY	IRRITATION
	Oral (rat) LD50: 13.3 mg/kg ^[2]	Not Available

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

METHANOL	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
3,4-METHYLENEDIOXYAMPHETAMINE	Eye effects, convulsions, mydriasis, excitement recorded.
Acute Toxicity	✔
Skin Irritation/Corrosion	⊘
Carcinogenicity	⊘
Reproductivity	⊘

Continued...

(±)-MDA [(±)-3,4-Methylenedioxyamphetamine]

Serious Eye Damage/Irritation	☉	STOT - Single Exposure	✓
Respiratory or Skin sensitisation	☉	STOT - Repeated Exposure	☉
Mutagenicity	☉	Aspiration Hazard	☉

Legend: ✗ – Data available but does not fill the criteria for classification
 ✓ – Data available to make classification
 ☉ – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION**Toxicity**

(±)-MDA [(±)-3,4-Methylenedioxyamphetamine]	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
		Not Available	Not Available	Not Available	Not Available

methanol	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	>100mg/L	4
	EC50	48	Crustacea	>10000mg/L	4
	EC50	96	Algae or other aquatic plants	<10000mg/L	4
	BCF	24	Algae or other aquatic plants	0.05mg/L	4
	EC0	168	Algae or other aquatic plants	=530mg/L	1
	NOEC	72	Crustacea	0.1mg/L	4

3,4-methylenedioxyamphetamine	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 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 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

For Methanol: Log Kow: -0.82 to -0.66; Koc: 1; Henry's Law Constant: 4.55x10⁻⁶ atm-cu m/mole; Vapor Pressure: 127 mm Hg; BCF: < 10.

Atmospheric Fate: Methanol is expected to exist solely as a vapor in the ambient atmosphere. Vapor-phase methanol is broken down in the atmosphere by reactions with hydroxyl radicals; the half-life for this reaction in air is estimated to be 17 days.

Terrestrial Fate: Methanol is expected to have very high mobility in soil.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
methanol	LOW	LOW
3,4-methylenedioxyamphetamine	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
methanol	LOW (BCF = 10)
3,4-methylenedioxyamphetamine	LOW (LogKOW = 1.64)

Mobility in soil

Ingredient	Mobility
methanol	HIGH (KOC = 1)
3,4-methylenedioxyamphetamine	LOW (KOC = 345.5)

SECTION 13 DISPOSAL CONSIDERATIONS**Waste treatment methods**

Product / Packaging disposal	Disposal Instructions
	<ul style="list-style-type: none"> Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. Otherwise: <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. 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. <ul style="list-style-type: none"> Consult manufacturer/supplier for recycling options. Decontaminate empty containers with water; incinerate plastic bags.

(±)-MDA [(±)-3,4-Methylenedioxyamphetamine]

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.


A Hierarchy of Controls seems to be common - the user should investigate:

- ▶ Reduction
- ▶ Reuse
- ▶ Recycling
- ▶ Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.

- ▶ **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.

SECTION 14 TRANSPORT INFORMATION**Labels Required**

		
Marine Pollutant	NO	
HAZCHEM	•2WE	

Land transport (ADG)

UN number	1230					
UN proper shipping name	METHANOL					
Transport hazard class(es)	<table border="1"> <tr> <td>Class</td> <td>3</td> </tr> <tr> <td>Subrisk</td> <td>6.1</td> </tr> </table>		Class	3	Subrisk	6.1
Class	3					
Subrisk	6.1					
Packing group	II					
Environmental hazard	Not Applicable					
Special precautions for user	<table border="1"> <tr> <td>Special provisions</td> <td>279</td> </tr> <tr> <td>Limited quantity</td> <td>1 L</td> </tr> </table>		Special provisions	279	Limited quantity	1 L
Special provisions	279					
Limited quantity	1 L					

Air transport (ICAO-IATA / DGR)

UN number	1230															
UN proper shipping name	Methanol															
Transport hazard class(es)	<table border="1"> <tr> <td>ICAO/IATA Class</td> <td>3</td> </tr> <tr> <td>ICAO / IATA Subrisk</td> <td>6.1</td> </tr> <tr> <td>ERG Code</td> <td>3L</td> </tr> </table>		ICAO/IATA Class	3	ICAO / IATA Subrisk	6.1	ERG Code	3L								
ICAO/IATA Class	3															
ICAO / IATA Subrisk	6.1															
ERG Code	3L															
Packing group	II															
Environmental hazard	Not Applicable															
Special precautions for user	<table border="1"> <tr> <td>Special provisions</td> <td>A113</td> </tr> <tr> <td>Cargo Only Packing Instructions</td> <td>364</td> </tr> <tr> <td>Cargo Only Maximum Qty / Pack</td> <td>60 L</td> </tr> <tr> <td>Passenger and Cargo Packing Instructions</td> <td>352</td> </tr> <tr> <td>Passenger and Cargo Maximum Qty / Pack</td> <td>1 L</td> </tr> <tr> <td>Passenger and Cargo Limited Quantity Packing Instructions</td> <td>Y341</td> </tr> <tr> <td>Passenger and Cargo Limited Maximum Qty / Pack</td> <td>1 L</td> </tr> </table>		Special provisions	A113	Cargo Only Packing Instructions	364	Cargo Only Maximum Qty / Pack	60 L	Passenger and Cargo Packing Instructions	352	Passenger and Cargo Maximum Qty / Pack	1 L	Passenger and Cargo Limited Quantity Packing Instructions	Y341	Passenger and Cargo Limited Maximum Qty / Pack	1 L
Special provisions	A113															
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Cargo Only Maximum Qty / Pack	60 L															
Passenger and Cargo Packing Instructions	352															
Passenger and Cargo Maximum Qty / Pack	1 L															
Passenger and Cargo Limited Quantity Packing Instructions	Y341															
Passenger and Cargo Limited Maximum Qty / Pack	1 L															

Sea transport (IMDG-Code / GGVSee)

UN number	1230					
UN proper shipping name	METHANOL					
Transport hazard class(es)	<table border="1"> <tr> <td>IMDG Class</td> <td>3</td> </tr> <tr> <td>IMDG Subrisk</td> <td>6.1</td> </tr> </table>		IMDG Class	3	IMDG Subrisk	6.1
IMDG Class	3					
IMDG Subrisk	6.1					
Packing group	II					
Environmental hazard	Not Applicable					

(±)-MDA [(±)-3,4-Methylenedioxyamphetamine]**Special precautions for user**

EMS Number	F-E , S-D
Special provisions	279
Limited Quantities	1 L

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION**Safety, health and environmental regulations / legislation specific for the substance or mixture****METHANOL(67-56-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

3,4-METHYLENEDIOXYAMPHETAMINE(4764-17-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable

National Inventory	Status
Australia - AICS	N (3,4-methylenedioxyamphetamine)
Canada - DSL	N (3,4-methylenedioxyamphetamine)
Canada - NDSL	N (methanol; 3,4-methylenedioxyamphetamine)
China - IECSC	N (3,4-methylenedioxyamphetamine)
Europe - EINEC / ELINCS / NLP	N (3,4-methylenedioxyamphetamine)
Japan - ENCS	N (3,4-methylenedioxyamphetamine)
Korea - KECI	N (3,4-methylenedioxyamphetamine)
New Zealand - NZIoC	N (3,4-methylenedioxyamphetamine)
Philippines - PICCS	N (3,4-methylenedioxyamphetamine)
USA - TSCA	N (3,4-methylenedioxyamphetamine)
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION**Other information****Ingredients with multiple cas numbers**

Name	CAS No
3,4-methylenedioxyamphetamine	4764-17-4, 51497-09-7, 61614-60-6, 65620-66-8

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
 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

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