



# CHEMAG DSMA FLOWABLE LIQUID HERBICIDE

ChemWatch Material Safety Data Sheet  
Issue Date: Mon 11-Aug-2003

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## IDENTIFICATION ...

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Subsidiary Risk: None, None  
Hazchem Code: None  
Poisons Schedule Number: S7

### USE

Herbicide.

## PHYSICAL DESCRIPTION/PROPERTIES

### APPEARANCE

Grey coloured liquid with no specific odour; soluble in water.

Boiling Point (°C): 105  
Melting Point (°C): Not Available  
Vapour Pressure (kPa): Not Applicable  
Specific Gravity: Not Available  
Flash Point (°C): Not Applicable  
Lower Explosive Limit (%): Not Applicable  
Upper Explosive Limit (%): Not Applicable  
Solubility in Water (g/L): Miscible

## INGREDIENTS

NAME	CAS RN	%
disodium methylarsonate (526 g/kg)	144-21-8	30-60
surfactant proprietary		10-30
inert material proprietary		10-30

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## HEALTH HAZARD

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### ACUTE HEALTH EFFECTS

#### SWALLOWED

Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.

#### EYE

Limited evidence or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals. Prolonged eye contact may cause inflammation characterised by a temporary redness of the conjunctiva (similar to windburn).

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

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## HEALTH HAZARD ..

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### SKIN

There is some evidence to suggest that the material may cause mild but significant inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.

Skin contact is not thought to produce harmful health effects (as classified under EC Directives using animal models). Systemic harm, however, has been identified following exposure of animals by at least one other route and the material may still produce health damage following entry through wounds, lesions or abrasions. Good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

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.

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.

### INHALED

Inhalation of vapours or aerosols (mists, fumes), 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 vapours, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.

### CHRONIC HEALTH EFFECTS

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.

Long-term exposure to arsenic and its inorganic salts may produce loss of appetite, nausea and vomiting, low fever, persistent headache, pallor, weakness and phlegm. Skin effects include redness, eczema, pigmentation, diffuse hair loss, scaling of the palms and soles, sloughing, brittle nails, white lines or bands on the nails, loss of hair and nails, and localised swelling. Kidney damage can occur and liver enlargement with jaundice may develop into cirrhosis (hardening of the liver), with fluid in the abdomen. Nervous system effects involving the extremities (numbness, tingling, burning pain, weakness, inco-ordination) may also occur. Arsenic is well-known to cause cancer in humans.

Arsenic can cause skin irritation characterised by eczema, scaling, Sensitisation, and discoloration and thickening of the palms and soles.

### FIRST AID

#### SWALLOWED

- IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.
- For advice, contact a Poisons Information Centre or a doctor.

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## HEALTH HAZARD ..

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- Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:
  - For advice, contact a Poisons Information Centre or a doctor.
  - Urgent hospital treatment is likely to be needed.
  - If conscious, give water to drink.
  - 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.
- 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 MSDS 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 MSDS.

## 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 contact occurs:

- Immediately remove all contaminated clothing, including footwear
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

## 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, without delay.

## ADVICE TO DOCTOR

For acute or short term repeated exposures to arsenic, soluble compounds: Treat

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## HEALTH HAZARD ..

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as per arsenic poisoning.

- Acute skin lesions such as contact dermatitis usually do not require other treatment than removal from exposure.
- If more severe symptoms of the respiratory system, the skin or the gastro-intestinal tract occur, British Anti-Lewisite (BAL, dimercaprol) may be given. Prompt administration in such cases is vital; to obtain maximum benefit such treatment should be administered within 4 hours of poisoning.
- In addition, general treatment such as prevention of further absorption from the gastro-intestinal tract are mandatory.
- General supportive therapy such as maintenance of respiration and circulation, maintenance of water and electrolyte balance and control of nervous system effects, as well as elimination of absorbed poison through dialysis and exchange transfusion, may be used if feasible.
- Dimercaprol is given by deep intramuscular injection as a 5% solution in peanut oil (or a 10% solution with benzyl-benzoate in vegetable oil). It is usually given in a dose of 3 mg/kg, 4-hourly, for the first two days, or twice daily for up to seven days. [ILO Encyclopedia]
- BAL Therapy is effective for haematological manifestations of chronic arsenic poisoning but not for neurological symptoms. Watch for side effects (e.g. urticaria, burning sensation in the lips, mouth and throat, fever, conjunctivitis etc).
- Some relief results from administration of diphenhydramine (Benadryl) (1.5 mg/kg intramuscularly or by mouth every 6 hour). [Ellenhorn and Barceloux: Medical Toxicology]

### BIOLOGICAL EXPOSURE INDEX - BEI (Notice of Intent to Establish)

BEIs represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
Inorganic arsenic metabolites in urine	35 ug/gm creatinine	End of workweek	B

B: Background levels occur in specimens collected from subjects NOT exposed  
Consult specific documentation.

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## PRECAUTIONS FOR USE

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### EXPOSURE STANDARDS

No data for ChemAg DSMA Flowable Liquid Herbicide.

### EXPOSURE STANDARDS FOR MIXTURE

"Worst Case" computer-aided prediction of spray/ mist or fume/ dust components and concentration:

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## PRECAUTIONS FOR USE ...

Composite Exposure Standard for Mixture (TWA) :0.05 mg/m<sup>3</sup>.

Operations which produce a spray/mist or fume/dust, introduce particulates to the breathing zone.

If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.

Component	Breathing Zone ppm	Breathing Zone mg/m <sup>3</sup>	Mixture Conc (%)
disodium methylarsonate	0.05	60	0

## INGREDIENT DATA

### DISODIUM METHYLARSONATE:

arsenic soluble compounds, as As (A.Wt: 74.92)

ES TWA: 0.05 mg/m<sup>3</sup>

WARNING: Classified by NOHSC as Category 1 - ESTABLISHED HUMAN CARCINOGEN

Use control measures / protective gear to avoid any personal contact. The ES-TWA is based solely on the prevention of systemic effects due to inhalation and is not protective against the substantial risk of cancer produced by exposure to inorganic arsenic. Some jurisdictions require health surveillance be performed on occupationally exposed workers.

Such surveillance should emphasise

- demography, occupational and medical history and health advice
- physical examination with emphasis on the peripheral nervous system and skin
- urinary total arsenic
- records of personal exposure

## ENGINEERING CONTROLS

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection.

Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.

An approved self contained breathing apparatus (SCBA) may be required in some situations.

Provide adequate ventilation in warehouse or closed storage area. 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:

solvent, vapours, degreasing etc.,  
evaporating from tank (in still air).  
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)

Air Speed:

0.25-0.5 m/s (50-100 f/min.)

0.5-1 m/s (100-200 f/min.)

direct spray, spray painting in shallow  
booths, drum filling, conveyer loading,

1-2.5 m/s (200-500 f/min.)

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## PRECAUTIONS FOR USE ...

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crusher dusts, gas discharge (active generation into zone of rapid air motion)

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

- 1: Room air currents minimal or favourable to capture
- 2: Contaminants of low toxicity or of nuisance value only.
- 3: Intermittent, low production.
- 4: Large hood or large air mass in motion

Upper end of the range

- 1: Disturbing room air currents
- 2: Contaminants of high toxicity
- 3: High production, heavy use
- 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.

## PERSONAL PROTECTION

### EYE

Safety glasses with side shields.

Chemical goggles.

Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them. DO NOT wear contact lenses.

### HANDS/FEET

Wear chemical protective gloves, eg. PVC.

Wear safety footwear or safety gumboots, eg. Rubber

NOTE: The material may produce skin sensitisation in predisposed individuals.

Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.

### OTHER

Overalls.

Eyewash unit.

Barrier cream.

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## PRECAUTIONS FOR USE ...

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Skin cleansing cream.

### RESPIRATOR

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.

Breathing Zone Level ppm (volume)	Maximum Protection Factor	Half-face Respirator	Full-Face Respirator
1000	10	-AUS P	-
1000	50	-	-AUS P
5000	50	Airline *	-
5000	100	-	-2 P
10000	100	-	-3 P
	100+		Airline**

\* - Continuous Flow \*\* - Continuous-flow or positive pressure demand

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

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## SAFE HANDLING

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### STORAGE AND TRANSPORT

#### SUITABLE CONTAINER

- Lined metal can, Lined metal pail/ can
- Plastic pail
- Polyliner drum
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

#### STORAGE INCOMPATIBILITY

None known

#### STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

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## SAFE HANDLING ...

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### TRANSPORTATION

No restrictions.

### SPILLS AND DISPOSAL

#### MINOR SPILLS

Environmental hazard - contain spillage.

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.
- Place in a suitable labelled container for waste disposal.

#### MAJOR SPILLS

Environmental hazard - contain spillage.

- 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.
- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- 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.

#### DISPOSAL

Puncture containers to prevent re-use and bury at an authorised landfill.

#### FIRE FIGHTERS' REPORT

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## SAFE HANDLING ...

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### EXTINGUISHING MEDIA

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

### 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.
- . Use fire fighting procedures suitable for surrounding area.
- . 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.
- . Equipment should be thoroughly decontaminated after use.

### FIRE/EXPLOSION HAZARD

- . Non combustible.
- . Not considered a significant fire risk, however containers may burn.  
May emit poisonous fumes.

### FIRE INCOMPATIBILITY

None known.

### HAZCHEM

None

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## CONTACT POINT

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COMPANY CONTACT  
(+61 8) 9368 7474

AUSTRALIAN POISONS INFORMATION CENTRE  
24 HOUR SERVICE: 13 11 26  
POLICE, FIRE BRIGADE OR AMBULANCE: 000

NEW ZEALAND POISONS INFORMATION CENTRE  
24 HOUR SERVICE: 0800 764 766  
NZ EMERGENCY SERVICES: 111

End of Report

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CONTACT POINT ...

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