

## SAFETY DATA SHEET

Product Name **SODIUM MOLYBDATE DIHYDRATE**

### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Supplier Name** IMPACT FERTILISERS AUSTRALIA PTY LTD, IMPACT FERTILISERS PTY LTD  
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**Synonym(s)** MOLY • SODIUM MOLYBDATE • SODIUM MOLYBDATE DIHYDRATE • TE-MOLY.1 - STOCK CODE

**Use(s)** FERTILISER  
**SDS Date** 03 May 2011

### 2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

#### RISK PHRASES

R36/37/38 Irritating to eyes, respiratory system and skin.

#### SAFETY PHRASES

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice  
S36 Wear suitable protective clothing.

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

**UN No.** None Allocated      **DG Class** None Allocated      **Subsidiary Risk(s)** None Allocated  
**Packing Group** None Allocated      **Hazchem Code** None Allocated

### 3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS No.	Content
DISODIUM MOLYBDATE DIHYDRATE	Mo-O4.2Na.2H2-O	10102-40-6	>99%

### 4. FIRST AID MEASURES

**Eye** If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

**Inhalation** If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

**Skin** If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

**Ingestion** For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

**Advice to Doctor** Treat symptomatically.

**First Aid Facilities** Eye wash facilities and safety shower are recommended.

## 5. FIRE FIGHTING MEASURES

<b>Flammability</b>	Non flammable. May evolve toxic gases (molybdenum oxides) when heated to decomposition. Dust may form explosive mixtures with air.
<b>Fire and Explosion</b>	Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.
<b>Extinguishing</b>	Prevent contamination of drains or waterways.
<b>Hazchem Code</b>	None Allocated

## 6. ACCIDENTAL RELEASE MEASURES

<b>Spillage</b>	Contact emergency services where appropriate. Use personal protective equipment. Clear area of all unprotected personnel. Prevent spill entering drains or waterways. Contain spillage, then collect and place in suitable containers for reuse or disposal. Avoid generating dust.
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## 7. STORAGE AND HANDLING

<b>Storage</b>	Store in a cool, dry, well ventilated area, removed from oxidising agents, acids, alkalis, active metals, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should have appropriate ventilation systems.
<b>Handling</b>	Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

## 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

### Exposure Stds

Ingredient	Reference	TWA		STEL	
Molybdenum soluble compounds	SWA (AUS)	--	5 mg/m <sup>3</sup>	--	--

**Biological Limits** No biological limit allocated.

**Engineering Controls** Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard.

**PPE** Wear dust-proof goggles and PVC or rubber gloves. When using large quantities or where heavy contamination is likely, wear: coveralls. At high dust levels, wear: a Class P1 (Particulate) respirator.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	WHITE CRYSTALS	<b>Solubility (water)</b>	SOLUBLE
<b>Odour</b>	SLIGHT ODOUR	<b>Specific Gravity</b>	3.28
<b>pH</b>	NOT AVAILABLE	<b>% Volatiles</b>	NOT AVAILABLE
<b>Vapour Pressure</b>	NOT AVAILABLE	<b>Flammability</b>	NON FLAMMABLE
<b>Vapour Density</b>	NOT AVAILABLE	<b>Flash Point</b>	NOT RELEVANT
<b>Boiling Point</b>	NOT AVAILABLE	<b>Upper Explosion Limit</b>	NOT RELEVANT
<b>Melting Point</b>	687°C	<b>Lower Explosion Limit</b>	NOT RELEVANT
<b>Evaporation Rate</b>	NOT AVAILABLE	<b>Decomposition Temperature</b>	NOT AVAILABLE
<b>Autoignition Temperature</b>	NOT AVAILABLE	<b>Viscosity</b>	NOT AVAILABLE
<b>Partition Coefficient</b>	NOT AVAILABLE		

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## 10. STABILITY AND REACTIVITY

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<b>Chemical Stability</b>	Stable under recommended conditions of storage.
<b>Conditions to Avoid</b>	Avoid heat, sparks, open flames and other ignition sources.
<b>Material to Avoid</b>	Incompatible with oxidising agents (eg. hypochlorites), acids (eg. nitric acid), alkalis (eg. hydroxides), metals, heat and ignition sources.
<b>Hazardous Decomposition Products</b>	May evolve toxic gases (molybdenum oxides) when heated to decomposition.
<b>Hazardous Reactions</b>	Polymerization is not expected to occur.

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## 11. TOXICOLOGICAL INFORMATION

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<b>Health Hazard Summary</b>	Low to moderate toxicity - irritant. This product has the potential to cause adverse health effects with over exposure. Chronic exposure may result in liver and blood damage.
<b>Eye</b>	Irritant. Contact may result in irritation, lacrimation, pain and redness.
<b>Inhalation</b>	Low to moderate irritant. Over exposure may result in irritation of the nose and throat, coughing, dizziness and headache.
<b>Skin</b>	Irritant. Contact may result in irritation, redness, pain and rash.
<b>Ingestion</b>	Low to moderate toxicity. Ingestion may result in gastrointestinal irritation, nausea, vomiting, loss of appetite and diarrhoea. Ingestion of large quantities may result in lack of coordination, breathing difficulties, anaemia, liver damage and gout-like symptoms.
<b>Toxicity Data</b>	DISODIUM MOLYBDATE DIHYDRATE (10102-40-6) LD50 (Intraperitoneal): 257 mg/kg (mouse) TDLo (Intravenous): 968 g/kg (mouse)

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## 12. ECOLOGICAL INFORMATION

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<b>Environment</b>	SOIL: Terrestrial plants can contain enough molybdenum to be toxic to animals but still grow normally. Adding lime to soil increases molybdenum solubility and availability.
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## 13. DISPOSAL CONSIDERATIONS

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<b>Waste Disposal</b>	Solutions: Cover with sodium carbonate (soda ash), lime or similar alkali to ensure pH greater than 8.5. Collect precipitated solids in sealable containers and label accordingly. Solids: Dampen if necessary and avoid dust generation. Collect solids and store in sealable labelled containers. Absorb with soil and contact the manufacturer for disposal instructions.
<b>Legislation</b>	Dispose of in accordance with relevant local legislation.

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## 14. TRANSPORT INFORMATION

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### NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

<b>Shipping Name</b>	None Allocated			
<b>UN No.</b>	None Allocated	<b>DG Class</b>	None Allocated	<b>Subsidiary Risk(s)</b> None Allocated
<b>Packing Group</b>	None Allocated	<b>Hazchem Code</b>	None Allocated	

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## 15. REGULATORY INFORMATION

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<b>Poison Schedule</b>	A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).
<b>AICS</b>	All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

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## 16. OTHER INFORMATION

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<b>Additional Information</b>	RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.
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EXPOSURE STANDARDS - TIME WEIGHTED AVERAGE (TWA) or WES (WORKPLACE EXPOSURE STANDARD) (NZ): Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to

**Product Name****SODIUM MOLYBDATE DIHYDRATE**

eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

**ABBREVIATIONS:**

ACGIH - American Conference of Industrial Hygienists.

ADG - Australian Dangerous Goods.

BEI - Biological Exposure Indice(s).

CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.

CNS - Central Nervous System.

EC No - European Community Number.

HSNO - Hazardous Substances and New Organisms.

IARC - International Agency for Research on Cancer.

mg/m<sup>3</sup> - Milligrams per Cubic Metre.

NOS - Not Otherwise Specified.

pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).

ppm - Parts Per Million.

RTECS - Registry of Toxic Effects of Chemical Substances.

STEL - Short Term Exposure Limit.

SWA - Safe Work Australia.

TWA - Time Weighted Average.

**HEALTH EFFECTS FROM EXPOSURE:**

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a Chem Alert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

**PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:**

The recommendation for protective equipment contained within this Chem Alert report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

**Report Status**

This document has been compiled by RMT on behalf of the manufacturer of the product and serves as the manufacturer's Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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**End of Report**