

## Material Safety Data Sheet

### 1. IDENTIFICATION OF MATERIAL AND SUPPLIER

**PRODUCT NAME: HD 50**

Synonyms: None

Recommended Use: Synthetic Cutting Fluid

**Supplier:** Minehan Agencies Pty Ltd

**Address:** 29 Camuglia Street GARBUTT Townsville Queensland Australia 4814

**Telephone:** (07) 4774 4626

**Facsimile:** (07) 4774 4616

**E-mail:** inquiry@minehanagencies.com.au

**Emergency telephone number:** 0408 777 800 (24Hrs Australia)

### 2. HAZARDS IDENTIFICATION

This product is classified as:

**Hazardous Substance** according to criteria of the National Occupational Health and Safety Commission (NOHSC).

**Dangerous Goods** according to the Australian Dangerous Goods Code (ADG Code).

<b>Approved Criteria Classification</b> (Calculated).	<b>TOXIC R25, IRRITANT R36/38</b> <b>Safety Phrases S1/2, S36/37/39</b>
<b>SUSDP Classification</b>	<b>Poison S6 (Sodium Nitrite)</b>
<b>ADG Classification</b>	<b>Class 5.1 (Oxidizing Agent) subrisk Class 6.1(Toxic Substance)</b>
<b>Un Number</b>	<b>1500</b>

### EMERGENCY OVERVIEW

<b>COLOUR</b>	Blue
<b>PHYSICAL DESCRIPTION</b>	LIQUID
<b>ODOUR</b>	Amine
<b>MAJOR HEALTH HAZARD</b>	Toxic if swallowed. Skin, eye, and respiratory irritant.

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### POTENTIAL HEALTH EFFECTS

**Inhalation: Short term exposure.** If concentrate is atomised it may cause irritation of air ways, nausea, vomiting, difficulty breathing, headache, drowsiness, symptoms of drunkenness, lung congestion. **Long term Exposure.** Possible lung and respiratory tract damage, may trigger pre-existing respiratory complaints.

**Skin Contact: Short term exposure.** Redness and irritation. **Long-term exposure.** Prolonged exposure to a diluted form may cause irritation, redness and dermatitis.

**Eye Contact: Short term exposure.** Severe irritation, serious eye damage. **Long-term exposure.** Permanent damage to eyes including blindness.

**Ingestion: Short term exposure.** Very toxic, large doses may cause death. Small dose may cause headaches, nausea, and severe abdominal pain. **Long-term exposure** to small amounts may cause permeant Gastrointestinal damage.

#### Carcinogen Status

NOHSC	Not Classified
NTP	Not Classified
IARC	Not Classified

#### 3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL ENTITY	CAS No	PROPORTION W/W %
Sodium Nitrite	7632-00-0	6%
Triethanolamine	102-71-6	10-20%
Ethanolamine	141-43-5	1-5%
Propylene/ethylene oxide block polymer	9003-11-6	1-5%
Borate amine	---	1-5%
Other ingredients determined not to be hazardous		to 100%

#### 4. FIRST AID MEASURES

Poison Information Centres in each State capital city can provide additional assistance for Scheduled Poisons: Phone (Australia 13 1126).

**Inhalation:** Remove victim from exposure. Remove contaminated clothing and loosen remaining clothing. Perform artificial respiration if needed. Allow patient to assume most comfortable position and keep warm. Seek medical attention.

**Skin Contact:** Remove contaminated clothing. Wash contaminated skin for at least 15-20mins with of water, or until no evidence of the chemical remains (this product will feel slippery or soapy on the skin.). If swelling, redness, blistering, or irritation occurs seek medical advice. Wash clothing before re-use.

**Eye Contact:** Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. If present, remove contact lenses. Seek medical attention. **Note to Physician.** Can cause corneal burns.

**Ingestion:** Immediately rinse mouth with water. Do NOT induce vomiting. Seek urgent medical attention.

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**Notes to Physician:** Treat symptomatically. Suggest intubation BEFORE any emesis due to foaming properties of this product.

### 5. FIRE FIGHTING MEASURES

**Flash Point:** Not a Flammable or Combustible liquid

**Fire and Explosion Hazard:** Non-combustible material. Closed containers exposed to heat may explode.

**Specific Hazards:** Oxidizing Agent. May produce heat and ignition source when in contact with flammable materials.

**Fire Fighting:** Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Dam for later disposal. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. **Suitable Extinguishing Media:** Not combustible, however, if material is involved in a major fire use water fog to keep drums cool. Use foam, CO<sub>2</sub> or dry chemical powder to extinguish surrounding fire.

**Hazardous Decomposition in Products:** On burning may emit fumes including carbon monoxide, carbon dioxide, and partially burned hydrocarbons. Fire fighters to wear self-contained breathing apparatus if risk of exposure to vapour or products of combustion.

**Hazchem Code:** 1[Z]

### 6. ACCIDENTAL RELEASE MEASURES

Oxidizing Agent. Stop leak if possible without personal risk. Wear protective equipment to prevent personal injury (see section 8). **Small spills (< 5L)** Cover with an absorbent material (soil, sand or other inert material). Collect and seal in properly labelled containers for disposal. Hose down area with large amounts of water. Caution, Slip Hazard. **Large spills (>5L)** Prevent run off into drains and waterways. Dam material. Cover with absorbent material. Collect and seal in properly labelled containers for disposal. Hose down area with large amounts of water. Keep unnecessary people away, isolate hazard area and deny entry. If contamination of sewers or waterways has occurred, advise local emergency services.

### 7. HANDLING AND STORAGE

Store in a well-ventilated area. Store in a cool, dry place and out of direct sunlight. Store away from foodstuffs and strong acids. Store in original containers. Do not store in aluminium containers. Keep containers closed when not in use – check regularly for leaks. This material is a Scheduled Poison and a Class 5.1 Oxidizing Agent and must be stored, maintained and used in accordance with the relevant regulations. Handle using good industrial hygiene practices (see section 8 on personal protection).

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Limits:** No value has been assigned for this specific material by NOHSC.

Ingredient	TWA	STEL	Notices
General	1000ppm		

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TWA – the Time-Weighted Average airborne concentrations over an eight hour working day, for a five day week over an entire working life.

STEL (Short Term Exposure Limit) – the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight hour work day. According to current knowledge, these concentrations should neither impair the health of, nor cause undue discomfort to, nearly all workers.

Sk Notice – absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

Sen Notice- Sensitiser. The substance can cause a specific immune response in some people. An affected individual may subsequently react to minute levels of that substance.

These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. Exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

**Biological Limit Value:** No biological limit allocated

**Engineering Controls:** Ensure ventilation is adequate to maintain air concentrations below Exposure Standards and prevent exposure to vapours, mists and fumes. Use in well ventilated area. Keep containers closed when not in use.

### Personal Protection Equipment

**Respirator Type (AS 1716):** If inhalation risk exists, wear organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

**Eye Protection:** Safety glasses with side shields or goggles should be worn as described in Australian Standard AS/NZS 1337 – Eye Protectors for Industrial Applications.

**Glove Type:** Impervious PVC or rubber gloves should be worn.

**Clothing:** Suitable protective clothing should be worn eg: cotton overalls buttoned at neck and wrist.

**Work/Hygienic Practices:** Avoid skin and eye contact. Always wash hands before smoking, eating, drinking or using the toilet.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid		Water Solubility	Soluble
Colour	Blue		Vapour Pressure	Not Known
Odour	Amine		Vapour Density	Above 1 (air =1)
Boiling Point	>100 °C		Evaporation Rate	Slower than butyl acetate
Melting Point	NA		% Volatiles	65%
Freezing Point	Not Known		Flash Point	Not Flammable
Specific Gravity	1.2g/ml (water =1)		Flammability Limits	NA
Ph (neat)	10-11		Ignition Temperature	NA

## 10. STABILITY AND REACTIVITY

**Reactivity:** Stable at normal temperatures and pressure.

**Conditions to Avoid:** Avoid contact with incompatible materials.

**Incompatibilities:** Strong Oxidising Agents, Strong Acids, Flammable liquids  
Explosive reactions may occur with strong oxidising agents.

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Violent heat producing reactions may occur with strong acids.  
Reactions may generate enough heat to cause ignition.

**Hazardous Decomposition:** Thermal decomposition products include, sulphur dioxide, carbon dioxide, carbon monoxide, and Nitrous oxides.

**Polymerisation:** Will not polymerise.

### 11. TOXICOLOGICAL INFORMATION

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**Local Effects:** Toxic by ingestion.

**Target Organs:** Blood (methaemoglobinaemia), CNS, and Kidneys.

### Classification of Hazardous Ingredients

Ingredients	R Phrases
Sodium Nitrite	R25
Ethanolamine	R20 R36/37/38

### Individual Ingredient Information

#### Sodium Nitrite

**Irritation Data:** Moderate eye irritant.

**Toxicity Data:** LD 50 oral rats 214mg/kg

**Local Effects:** methaemoglobinaemia

**Acute Toxicity Level:** The primary acute effect of sodium nitrite in rats and mice is methaemoglobinaemia. Methaemoglobin concentrations in SD rats increased from 45% to 80% over 1 hour after an oral dose of sodium nitrite at 150 mg/kg bw and they returned to normal levels within 24 hours in surviving rats.

**Target Organs:** Nitrite in blood is highly reactive with haemoglobin and causes methaemoglobinaemia. Ferrous iron associated with haemoglobin is oxidized by nitrite to ferric iron, leading to the formation of methaemoglobin. Humans are considered to be more sensitive than rats in this respect.

**Mutagenic Data:** No clinical findings during chronic toxicity/carcinogenicity studies.

**Reproduction Effects Data:** Reproductive success in the F1 generation was not affected.

**Other Data:** In humans, sodium nitrite causes smooth muscle relaxation, methaemoglobinaemia, and cyanosis. Infants are particularly sensitive. A large proportion of haemoglobin in infants is in the foetal haemoglobin form, which is more readily oxidised to methaemoglobin than adult haemoglobin. Further, reduced nicotinamide-adenine dinucleotide (NADH)-dependent methaemoglobin reductase, the enzyme responsible for reduction of methaemoglobin back to normal haemoglobin, has only about half the activity present in adults.

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### 12. ECOLOGICAL INFORMATION

**General Statement:** Considered Toxic to aquatic life. Do not allow large quantities (>10L) of this product to enter the waterways.

**Ecotoxicity:** The LC<sub>50</sub> values for the acute toxicity of sodium nitrite to fish reported in the literature vary widely between the species tested; LC<sub>50</sub> (96h) = 0.54 mg NaNO<sub>2</sub>/L for *Oncorhynchus mykiss*; LC<sub>50</sub> (96h) = 35 mg NaNO<sub>2</sub>/L for *Ictalurus punctatus*; LC<sub>50</sub> (96h) = 691.0 mg NaNO<sub>2</sub>/L for *Micropterus salmoides*; and LC<sub>50</sub> (96h) = 1010.4 mg NaNO<sub>2</sub>/L for *Anguilla japonica*, for example. This difference has been attributed to the ability of certain species, such as eels, bass and sunfish to prevent nitrite from crossing the gill membrane and entering the blood, whilst other species such as rainbow trout concentrate nitrite in their blood. The range of toxicity values reported for some species of fish varies widely and is believed to be dependant on the quality of the water used in the test with pH, chloride and calcium ion concentration all having an influence. In particular, chloride ion concentration has been shown to be important, with increasing concentrations leading to a decrease in the toxicity of nitrite. As with fish, there is variation in toxicity between invertebrate species. Sodium nitrite is toxic to invertebrates such as *Cherax quadricarinatus* (LC<sub>50</sub> (96h) = 4.93 mg NaNO<sub>2</sub>/L and *Thamnocephalus platyurus* (LC<sub>50</sub> (24h) = 3.9 mg NaNO<sub>2</sub>/L), whereas other species, such as *Procambarus clarkii* (LC<sub>50</sub> (96h) = 18.7 mg NaNO<sub>2</sub>/L) and *Penaeus paulensis* are much less sensitive (LC<sub>50</sub> (96h) = 539.2 mg NaNO<sub>2</sub>/L). The presence of chloride ions has been found to mitigate nitrite toxicity in some species. Acute toxicity to green alga (*Desmodesmus subspicatus*) is > 100 mg/L (72-h E<sub>r</sub>C<sub>50</sub> and E<sub>b</sub>C<sub>50</sub>) [OECD TG 201].

**Persistence and Degradability:** No specific information available for this product

**Mobility:** Very mobile in soil and very soluble in water. No transport to air

### 13. DISPOSAL CONSIDERATIONS

Refer to State/Territory Land Waste Management Authority for disposal, show this MSDS for their consideration. Empty containers not to be recycled or used for any other purpose. Dispose in accordance with local regulations.

### 14. TRANSPORTATION INFORMATION

<b>UN No</b>	1500
<b>Proper Shipping Name</b>	Oxidizing Agent N.O.S.
<b>ADG Code</b>	Class 5.1
<b>Sub Risk</b>	Class 6.1
<b>Packing Group</b>	III
<b>Special Precautions</b>	None
<b>Hazchem Code</b>	1[Z]
<b>EPG</b>	5A1 & 6A6
<b>Segregations</b>	Yes

### 15. REGULATORY INFORMATION

**SUSDP: Poison S6**

**AICS:** All of the constituents of this material are listed on the ACIS.

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### 16. OTHER INFORMATION

**Issue Date:** May 2007

**Reason(s) For Issue:** Initial issue

#### Labelling Details

**First line of Label must read:** POISON

#### Other statements to include

<b>R25</b>	Toxic if swallowed
<b>R36/37/38</b>	Irritating to eyes, skin, and respiratory system
<b>R20/22</b>	Harmful by inhalation and if swallowed
<b>S1/2</b>	Keep locked up and out of reach of children.
<b>S26</b>	In case of contact with eye/s, do NOT rub eyes as this may scratch the cornea, rinse immediately with plenty of water and seek medical advice.
<b>S36/37/39</b>	Wear Suitable protective clothing, gloves and eye/face protection
<b>S45</b>	In case of accident or if you feel unwell, seek medical advice immediately (show the label wherever possible).

#### Abbreviations & Acronyms

**SUSPD:** Standard for the Uniform Scheduling of Drugs and Poisons  
**ADG:** Australian Code for the Transport of Dangerous Goods by Road and rail  
**N.O.S.** Not Otherwise Specified  
**CAS No:** Chemical Abstracts Service Registry Number  
**UN No:** United Nations Number  
**R-Phrases:** Risk Phrases  
**S-Phrases:** Safety Phrases  
**HAZCHEM Code:** Hazardous Chemical emergency action code  
**NOHSC:** National Occupational Health and Safety Commission  
**IARC:** International Agency for Research into Cancer  
**ACIS:** Australian Inventory of Chemical Substances  
**NTP:** National Toxicology Program (USA)

#### Literary references:

Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(41999)]  
National Code of Practice for the Preparation of Material Safety Data Sheets 2<sup>nd</sup> Edition [NOHSC: 2011(2003)]  
Exposure Standards for Atmospheric Contaminants in the Occupational Environment  
Guidance Note [NOHSC: 3008(1995)] National Exposure Standards [NOHSC: 10005(1999)]  
List of Designated Hazardous Substances [NOHSC: 10005(1999)]  
Standard for the Uniform Scheduling of Drugs and Poison No. 17  
The Australian Code for the Transport of Dangerous Goods by Road and Rail EDITION 6

#### Disclaimer

This MSDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product and in particular how to safely handle and use the product in the workplace.  
Since Minehan Agencies Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this MSDS in the context of how the user intends to handle and use the product in the workplace i.e. a risk analysis.  
If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact Minehan Agencies Pty Ltd.