Hi-Tec Oil Traders Pty Ltd ABN 28 053 837 362
5 Tarlington Place Smithfield NSW 2164
Correspondence: P.O Box 322 Castle Hill NSW 1765
Ph: 1300 796 009 | **Fax:** (02) 9604 1611 | **Email:** hitecoils@hi-tecoils.com.au
www.hi-tecoils.com.au

SAFETY DATA SHEET

Product name: **Premium Blue Coolant Concentrate**

1. COMPANY DETAILS AND PRODUCT IDENTIFICATION

COMPANY: ADDRESS:	Hi-Tec Oil Traders Pty Ltd. (ABN 28 053 837 362) PO Box 322 Castle Hill NSW 1765 5 Tarlington Place, Smithfield NSW 2164
TELEPHONE NUMBER:	1300 796 009
FAX NUMBER:	(02) 9604 1611
EMERGENCY TELEPHONE NUMBER:	1300 796 009
PRODUCT NAME:	Premium Blue Coolant Concentrate
OTHER NAMES:	None
MANUFACTURER'S PRODUCT CODE:	HI8-3372
USE:	Engine Coolant Concentrate
ADDITIONAL INFORMATION:	Refer to Product Information Sheet for additional information.
OTHER INFORMATION:	Visit our website: www.hi-tecoils.com.au Email: hitecoils@hi-tecoils.com.au

2. HAZARDS IDENTIFICATION

HAZARD CLASSIFICATION:	HAZARDOUS SUBSTANCE NON-DANGEROUS GOODS Hazard classification according to criteria of NOHSC and GHS. Dangerous goods classification according to Australian Dangerous Goods Code.
POISONS SCHEDULE:	S5, Caution
CLASSIFICATION:	Acute Toxicity – Oral Categary 4
GHS LABEL ELEMENTS:	

SIGNAL WORD:	WARNING
HAZARD STATEMENT:	H302 Harmful if swallowed

2. HAZARDS IDENTIFICATION (CONT.)

PREVENTATIVE:	P264 Wash thoroughly after handling P270 Do not eat, drink or smoke when using this product
RESPONSE:	P301 + P312 IF SWALLOWED: Call the POISON INFORMATION CENTER on 131126 or a doctor if you feel unwell. P330 Rinse mouth
DISPOSAL:	P501 Dispose of contents/container in accordance with local regulations
OTHER INFORMATION:	Used coolants may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and environment on disposal. All used oils should be handled with caution and skin contact avoided as far as possible.

3. IDENTIFICATION / COMPOSITION OF INGREDIENTS

CHEMICAL CHARACTERISTICS**:** Liquid

INGREDIENTS:-

CHEMICAL ENTITY:	CAS No.	PROPORTION
Ethylene Glycol	107-21-1	> 60%
Bittering Agent		<0.1%
Ingredients determined not to be hazardous hazardous		<15%

4. FIRST AID MEASURES

HEALTH EFFECTS

SWALLOWED:	If a large quantity is ingested seek immediate medical attention. Give water to drink. Never give anything by mouth to an unconscious person. DO NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. If vomiting occurs get immediate medical attention due to aspiration into lungs risk.
EYE:	Immediately irrigate with copious amounts of water for at least 15 minutes. Eyelids to be held open. Obtain medical attention if irritation occurs. In all cases of eye contamination it is a sensible precaution to seek medical advice. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
SKIN:	Remove contaminated clothing and wash skin thoroughly with plenty of soap and water. Obtain medical attention if irritation occurs. High pressure injection through the skin requires **URGENT** medical attention for possible incision, irrigation and/or debridement.

4. FIRST AID MEASURES (CONT)

INHALED:	Remove victim from exposure to fresh air – avoid becoming a casualty. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.If breathing laboured and patient cyanotic (blue), ensure airways are clear and have qualified person give oxygen through face mask. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage and seek urgent medical aid.
FIRST AID FACILITIES:	Normal washroom facilities are generally suitable. Ensure an eye wash station and safety shower is available and ready for use.
ADVICE TO DOCTOR:	For acute or short term repeated exposures to ethylene glycol: Early treatment of ingestion is important. Ensure emesis is satisfactory. Test and correct for metabolic acidosis and hypocalcaemia. Apply sustained diuresis when possible with hypertonic mannitol. Evaluate renal status and begin haemodialysis if indicated. [I.L.O] Rapid absorption is an indication that emesis or lavage is effective only in the first few hours. Cathartics and charcoal are generally not effective. Correct acidosis, fluid/electrolyte balance and respiratory depression in the usual manner. Systemic acidosis (below 7.2) can be treated with intravenous sodium bicarbonate solution. Ethanol therapy prolongs the half-life of ethylene glycol and reduces the formation of toxic metabolites. Pyridoxine and thiamine are cofactors for ethylene glycol metabolism and should be given (50 to 100 mg respectively) intramuscularly, four times per day for 2 days. Magnesium is also a cofactor and should be replenished. The status of 4-methylpyrazole, in the treatment regime, is still uncertain. For clearance of the material and its metabolites, haemodialysis is much superior to peritoneal dialysis. [Ellenhorn and Barceloux: Medical Toxicology] It has been suggested that there is a need for establishing a new biological exposure limit before a workshift that is clearly below 100 mmol ethoxy-acetic acids per mole creatinine in morning urine of people occupationally exposed to ethylene glycol ethers. This arises from the finding that an increase in urinary stones may be associated with such exposures. Laitinen J., et al: Occupational & Environmental Medicine 1996; 53, 595-600.
OTHER INFORMATION:	Keep water and mild soap near work site.

5. FIRE FIGHTING MEASURES

FIRE/EXPLOSION HAZARD

HAZARDS OF USE/STORAGE:	Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.
HAZARDS FROM COMBUSTION PRODUCTS:	The material is not readily combustible under normal conditions. However, it will break down under fire conditions and the organic component may burn. Not considered to be a significant fire risk. Heat may cause expansion or decomposition with violent rupture of containers. Decomposes on heating and may produce toxic fumes of carbon monoxide (CO). May emit acrid smoke and carbon dioxide (CO2).

5. FIRE FIGHTING MEASURES (CONT.)

FIRE-FIGHTING RECOMMENDATIONS:	Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves for fire only. Prevent, by any means available, spillage from entering drains or water courses. 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.
SUITABLE EXTINGUISHING MEDIA:	The product is miscible in water; therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas. Options include water spray (fog), foam, dry chemical and carbon dioxide.
PROTECTIVE MEASURES:	Fire fighters should wear self-contained breathing apparatus in positive pressure mode if at risk of exposure to products of combustion. In addition all other persons present should wear safety glasses, PVC chemical resistant gloves and type A-P filter respirators of sufficient capacity.

6. ACCIDENTAL RELEASE MEASURES

SPILLS & DISPOSAL:

Slippery when spilt. Avoid accidents, clean up immediately. Avoid creating dusty conditions and prevent wind dispersal.

CLEAN-UP PROCEDURE - SMALL SPILLS (20L or less): 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.

CLEAN-UP PROCEDURES - LARGE SPILLS (Greater than 20L): Clear area of personnel. Alert Fire Brigade and tell them location and nature of hazard. Control personal contact by using protective equipment as required. Prevent spillage from entering drains or water ways. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal. Wash area and prevent runoff into drains or waterways. If contamination of drains or waterways occurs, advise emergency services.

PERSONAL PRECAUTIONS: Extinguish naked flames. Remove ignition sources. No smoking. Avoid sparks. Take precautionary measures against static discharges. Avoid contact with skin, eyes and clothing. Evacuate the area of non-essential personnel. Shut off leaks, if possible without personal risk. Do not breathe vapours. Ventilate contaminated area thoroughly. Dispose of according to local regulations.

6. ACCIDENTAL RELEASE MEASURES (CONT.)

OTHER INFORMATION:

PROCEDURES IN CASES OF LEAKAGE OR BREAKAGE: Stop the source of the leak or release and contain spill if possible. Ventilate area. Use respirator and protective clothing outlined in this MSDS. Cover spill with inert absorbent earth. Use a stiff brush to mix thoroughly. Sweep up and place in a sound labelled disposable container. Scrub contaminated area with detergent and water using a stiff brush. Pick up liquid with additional absorbent material and place in a sound labelled disposable container. Prevent contamination of groundwater or surface water.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:

DO NOT allow clothing wet with material to stay in contact with skin. Limit all unnecessary personal contact. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Use good occupational work practice. Observe manufacturer's storing and handling recommendations. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

SAFE STORAGE CONDITIONS:

Polyethylene or polypropylene container. Keep containers closed at all times. Store in a cool place out of direct sunlight. Store away from oxidising agents and strong acids. Check containers are clearly labelled and free from leaks.

CORROSIVENESS:

Not corrosive.

STORAGE REGULATIONS:

Do not store in aluminium or galvanised containers: use steel cans or the original plastic 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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

OCCUPTAIONAL EXPOSURE LIMITS (OEL)

Ingredient Data

Ingredient	TWA	STEL	Peak	Source
Ethylene glycol(vapour)	20ppm	40ppm	Not Available	Australia Exposure Standards

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
Ethylene glycol	10 ppm	40 ppm	60 ppm

8. EXPOSURE CONTROLS / PERSONAL PROTECTION (CONT)

OTHER EXPOSURE INFORMATION:	Exposure Standard means the average concentration of a particular substance in the worker's breathing zone, exposure to which, according to current knowledge, should not cause adverse health effects nor cause undue discomfort to nearly all workers. It can be of three forms; time-weighted average (TWA), peak limitation, or short term exposure limit (STEL). No exposure standards have been established for this material by the Australian National Occupational Health & Safety Commission (NOHSC). However, the available exposure limits on the ingredients are given above.
ENGINEERING CONTROLS:	Maintain concentration below recommended exposure limit. Special ventilation is not normally required. However, in the operation of certain equipment or at elevated temperatures mists or vapour may be generated and localised exhaust ventilation should be provided to maintain airborne concentration levels below the exposure standard or the Manufacturer's recommended exposure standard.
RESPIRATORY PROTECTION:	A respirator is not normally required. Airborne concentrations should be kept at lowest level possible. If vapours, mists or dusts are generated and the recommended exposure limit for the product is exceeded, use appropriate AS/NZS 1715/1716 approved half –face filter respirator suitable for organic vapours or air supplied respirator is worn. Air supplied respirators should always be worn when the airborne concentration of the contaminant or the oxygen content of the air is unknown
EYE PROTECTION:	Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for eachworkplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained intheir removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly.
HAND PROTECTION:	PVC, butyl rubber, natural rubber (latex), nitrile rubber gloves.
FOOTWEAR:	Enclosed footwear.
BODY PROTECTION:	Overalls or similar protective apparel.
HYGIENE MEASURES:	Always wash hands before eating, drinking, smoking or using the toilet. If contamination occurs, change clothing. Launder contaminated clothing before reuse. Discard internally contaminated gloves.
SPECIAL PROTECTIVE MEASURES:	The product will not burn but the residue may if preheated to dryness. Isolate from sources of heat, naked flames or sparks.

9. PHYSICAL AND CHEMICAL PROPERTIES

FORM:	Liquid
APPEARANCE:	Blue liquid
MELTING POINT:	Not Available
BOILING POINT:	>165ºC
RELATIVE DENSITY (WATER = 1)	1.121-1.123
MOLECULAR WEIGHT	Not Available
FLASHPOINT:	120ºC
FLAMMABILITY:	Not Applicable
SOLUBILITY IN WATER:	Miscible
SOLUBILITY IN ORGANIC SOLVENTS:	Not available
VAPOUR PRESSURE:	2.14 kPa @ 20 C
VAPOUR DENSITY (Air = 1):	2.14
VOC g/L:	667.11
VISCOSITY @ 40 ^{0}C (mm^2/s):	Not available
pH (as supplied)	7.1 – 7.3
EVAPORATION RATE:	Not Available
AUTO-IGNITION TEMPERATURE:	>200ºC
UPPER EXPLOSIVE LIMIT (%):	15
LOWER EXPLOSIVE LIMIT (%):	3
OTHER INFORMATION:	These physical data and other properties do not constitute a specification.

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:	Stable under normal conditions of use.
CONDITIONS TO AVOID:	No additional remark.
INCOMPATIBLE MATERIALS:	Avoid strong acids, bases
HAZARDOUS REACTIONS:	Only small quantities of decomposition products are expected from this product at temperatures normally achieved in a fire. This will only occur after heating to dryness. Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.
HAZARDOUS POLYMERISTION:	Will not occur.

11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

INHALATION:	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. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo. Inhalation of vapour is more likely at higher than normal temperatures.
INGESTION:	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. The toxic effects of glycols (dihydric alcohols), following ingestion are similar to those of alcohol, with depression of the central nervous system (CNS), nausea, vomiting and degenerative changes in liver and kidney.
SKIN:	The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds 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.
EYE:	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

11. TOXICOLOGICAL INFORMATION (CONT)

CHRONIC EFFECTS:

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.
There is some evidence to provide a presumption that human exposure to the material may result in impaired fertility on the basis of: some evidence in animal studies of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects but which is not a secondary non-specific consequence of other toxic effects.
There is some evidence that human exposure to the material may result in developmental toxicity. This evidence is based on animal studies where effects have been observed in the absence of marked maternal toxicity, or at around the same dose levels as other toxic effects but which are not secondary non-specific consequences of the other toxic effects.
Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).

TOXICITY – PRODUCT
ORAL (RAT) LD50: >2000 mg/kg

IRRITATION
NOT AVAILABLE

TOXICITY – ETHYLENE GLYCOL
DERMAL (RABBIT) LD50: 9530 mg/kg
INHALATION (RAT) LC50: 50.1 mg/L/8 hr
ORAL (RAT) LD50: 4700 mg/kg

IRRITATION
EYE (RABBIT): 100 mg/1h - mild
EYE (RABBIT): 12 mg/m3/3D
EYE (RABBIT): 1440mg/6h-moderate
EYE (RABBIT): 500 mg/24h - mild
SKIN (RABBIT): 555 mg(open)-mild

ETHYLENE GLYCOL:

Ethylene glycol is quickly and extensively absorbed through the gastrointestinal tract. Limited information suggests that it is also absorbed through the respiratory tract; dermal absorption is apparently slow. Following absorption, ethylene glycol is distributed throughout the body according to total body water. In most mammalian species, including humans, ethylene glycol is initially metabolised by alcohol. [Estimated Lethal Dose (human) 100 ml; RTECS quoted by Orica] Substance is reproductive effector in rats (birth defects). Mutagenic to rat cells.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

Ingredient	Endpoint	Test Duration (hr)	Species	Value
Ethylene glycol	LC50	96	Fish	2284.940mg/L
Ethylene glycol	EC50	48	Crustacea	>100mg/L
Ethylene glycol	EC50	96	Algae or other aquatic plants	3536mg/L
Ethylene glycol	EC50	Not Applicable	Crustacea	=10mg/L
Ethylene glycol	NOEC	72	Algae or other aquatic plants	>100mg/L

PERSISTENCE AND DEGRADABILITY:

Ingredient	Persistence: Water/Soil	Persistence: Air
Ethylene glycol	LOW (Half-life = 24 days)	LOW (Half-life = 3.46 days)

12. ECOLOGICAL INFORMATION (CONT)

BIOACCUMULATIVE POTENTIAL:

Ingredient	**Bioaccumulation**
Ethylene glycol	LOW (BCF = 200)

MOBILITY IN SOIL

Ingredient	**Mobility**
Ethylene glycol	HIGH (KOC = 1)

13. DISPOSAL CONSIDERATIONS

DISPOSAL CONSIDERATIONS: Dispose of according to federal, E.P.A. and state regulations.
Recycle where possible.
Bury or incinerate residue at approved site.

14. TRANSPORT INFORMATION

ROAD & RAIL TRANSPORT:
ADG REQUIREMENT: Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

MARITIME TRANSPORT:
IMO/IMDG REQUIREMENT: Not classified as a Dangerous Good according to the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

AIR TRANSPORT:
ICAO/IATA REQUIREMENT: Not classified as a Dangerous Good according to the criteria of the International Maritime Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL AND THE IBC CODE: Not Applicable.

15. REGULATORY INFORMATION

POISON SCHEDULE: S5

PACKING & LABELLING: No special packaging or labelling requirements.

AUSTRALIAN INVENTORY STATUS: All components are listed.

16. OTHER INFORMATION

CONTACT PERSON/POINT: General Manager 1300 796 009

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

Safety Data Sheets are updated frequently. Please ensure you have a current copy.

LITERATURE REFERENCES:

* NOHSC: 2011 National Code of Practice for the preparation of Material Safety Data Sheets.
* NOHSC: 1008 Approved Criteria for Classifying Hazardous Substances.
* NOHSC: 10005 List of Designated Hazardous Substances.
* NOHSC: 1005 Control of Workplace Hazardous Substances, National Code of Practice.
* NOHSC: 2007 Control of Workplace Hazardous Substances, National Code of Practice.
* NOHSC: 1003 Exposure Standards for Atmospheric Contaminants in the Occupational Environment, National Exposure Standards.
* NOHSC: 3008 Exposure Standards for Atmospheric Contaminants in the Occupational Environment, Guidance Note.
* NOHSC: 1015 Storage and Handling of Workplace Dangerous Goods, National Standard.
* NOHSC: 2017 Storage and Handling of Workplace Dangerous Goods, National Code of Practice.
* SUSDP: Standard for the Uniform Scheduling of Drugs and Poisons
* ADG: Australian Dangerous Goods Code
* MSDS of component materials.

LAST CHANGE: Supercedes document issued 4 January 2016
Reason/s for revision: Minor editorial changes to comply with GHS requirements.

MR712030/1

END OF SDS