

Chemwatch Material Safety Data Sheet  
 Issue Date: 14-Apr-2010  
 XC9317SC

Hazard Alert Code: HIGH

CHEMWATCH 23-2976  
 Version No:2.0  
 CD 2011/2 Page 1 of 8

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

Austech AC-9 [AUSTECH AC-9 LONG LIFE ORGANIC COOLANT][Austech AC-9 Long Life Organic Coolant]

### PRODUCT USE

■ Used according to manufacturer's directions.  
 Automotive applications; concentrate; engine coolant.

### SUPPLIER

Company: Austech Chemicals Pty Ltd  
 Address:  
 45 Magnesium Street  
 Narangba  
 QLD, 4504  
 Australia  
 Telephone: +61 73 204 8511  
 Fax: +61 73 204 8522  
 Email: nicholas@auschem.com

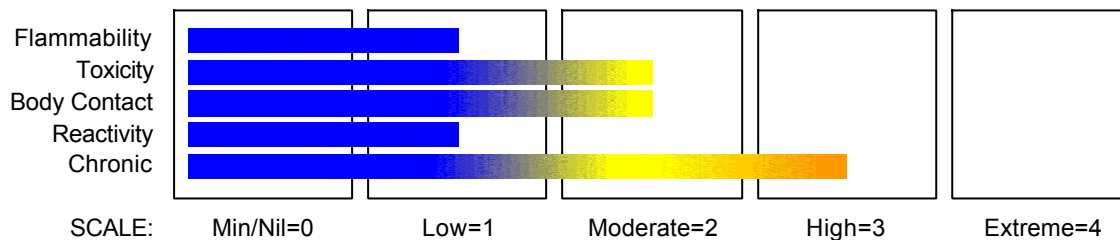
## Section 2 - HAZARDS IDENTIFICATION

### STATEMENT OF HAZARDOUS NATURE

**HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.**

COMBUSTIBLE LIQUID, regulated under AS1940 for Bulk Storage purposes only.

### CHEMWATCH HAZARD RATINGS



### RISK

- Harmful if swallowed.
- HARMFUL- May cause lung damage if swallowed.
- Inhalation may produce health damage\*.
- Cumulative effects may result following exposure\*.
- May produce discomfort of the eyes and skin\*.

### SAFETY

- Do not breathe gas/fumes/vapour/spray.
- Avoid contact with skin.
- Avoid contact with eyes.
- Wear suitable protective clothing.
- Wear suitable gloves.

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Chemwatch Material Safety Data Sheet  
Issue Date: 14-Apr-2010  
XC9317SC

CHEMWATCH 23-2976

Version No:2.0

CD 2011/2 Page 2 of 8

Section 2 - HAZARDS IDENTIFICATION

- May affect fertility\*.
  - May be harmful to the foetus/embryo\*.
  - Repeated exposure potentially causes skin dryness and cracking\*.
  - Vapours potentially cause drowsiness and dizziness\*.
- \* (limited evidence).
- Wear eye/face protection.
  - Use only in well ventilated areas.
  - Keep container in a well ventilated place.
  - Avoid exposure - obtain special instructions before use.
  - To clean the floor and all objects contaminated by this material, use water.
  - Keep container tightly closed.
  - Keep away from food, drink and animal feeding stuffs.
  - In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
  - If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
ethylene glycol	107-21-1	>60
corrosion inhibitor(s)		<10
anti- foam		<1
denatonium benzoate	3734-33-6	<1
dye		<1
additives		NotSpec

### Section 4 - FIRST AID MEASURES

#### SWALLOWED

- If swallowed 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.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Avoid giving milk or oils.
- Avoid giving alcohol.
- If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

#### EYE

- If this product comes in contact with the eyes:
  - Wash out immediately with fresh 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.
  - Seek medical attention without delay; if pain persists or recurs seek medical attention.
  - 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.
- Prosthesis 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.

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Chemwatch Material Safety Data Sheet  
 Issue Date: 14-Apr-2010  
 XC9317SC

CHEMWATCH 23-2976

Version No:2.0

CD 2011/2 Page 3 of 8

Section 4 - FIRST AID MEASURES

**NOTES TO PHYSICIAN**

- Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically.
- Polyethylene glycols are generally poorly absorbed orally and are mostly unchanged by the kidney.
- Dermal absorption can occur across damaged skin (e.g. through burns) leading to increased osmolality, anion gap metabolic acidosis, elevated calcium, low ionised calcium, CNS depression and renal failure.
- Treatment consists of supportive care.  
 [Ellenhorn and Barceloux: Medical Toxicology].
- To treat poisoning by the higher aliphatic alcohols (up to C7):
  - Gastric lavage with copious amounts of water.
  - It may be beneficial to instill 60 ml of mineral oil into the stomach.
  - Oxygen and artificial respiration as needed.
  - Electrolyte balance: it may be useful to start 500 ml. M/6 sodium bicarbonate intravenously but maintain a cautious and conservative attitude toward electrolyte replacement unless shock or severe acidosis threatens.

**Section 5 - FIRE FIGHTING MEASURES****EXTINGUISHING MEDIA**

- Water spray or fog.
- Alcohol stable foam.
- Dry chemical powder.
- 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 water delivered as a fine spray to control fire and cool adjacent area.

**FIRE/EXPLOSION HAZARD**

- 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).
- Combustion products include: carbon dioxide (CO<sub>2</sub>), other pyrolysis products typical of burning organic material.  
 May emit poisonous fumes.

**FIRE INCOMPATIBILITY**

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

**HAZCHEM**

None

**Personal Protective Equipment**

Gloves, boots (chemical resistant).  
 Breathing apparatus.

**Section 6 - ACCIDENTAL RELEASE MEASURES****MINOR SPILLS**

- Slippery when spilt.
- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.

**MAJOR SPILLS**

- Slippery when spilt.
- Moderate hazard.
- Clear area of personnel and move upwind.
  - Alert Fire Brigade and tell them location and nature of hazard.

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Chemwatch Material Safety Data Sheet  
Issue Date: 14-Apr-2010  
XC9317SC

CHEMWATCH 23-2976

Version No:2.0

CD 2011/2 Page 4 of 8

Section 6 - ACCIDENTAL RELEASE MEASURES

- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

## Section 7 - HANDLING AND STORAGE

### PROCEDURE FOR HANDLING

- DO NOT allow clothing wet with material to stay in contact with skin.
- 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.

### SUITABLE CONTAINER

- DO NOT use aluminium or galvanised containers.
- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

### STORAGE INCOMPATIBILITY

- Avoid reaction with oxidising agents.  
strong acids.  
strong alkalis.  
Avoid reaction with phosphorus pentasulfide.

### STORAGE REQUIREMENTS

- Material is hygroscopic, i.e. absorbs moisture from the air. Keep containers well sealed in storage.
- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>	Peak ppm	Peak mg/m <sup>3</sup>	TWA F/CC	Notes
Australia Exposure Standards	ethylene glycol (Ethylene glycol (vapour))	20	52	40	104				Sk
Australia Exposure Standards	ethylene glycol (Ethylene glycol (particulate))		10						Sk

The following materials had no OELs on our records

- denatonium benzoate:

CAS:3734- 33- 6

### PERSONAL PROTECTION



### RESPIRATOR

- Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

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Chemwatch Material Safety Data Sheet  
Issue Date: 14-Apr-2010  
XC9317SC

CHEMWATCH 23-2976  
Version No:2.0  
CD 2011/2 Page 5 of 8

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

**EYE**

- 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 each workplace 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 in their 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. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

**HANDS/FEET**

- Wear chemical protective gloves, eg. PVC.
  - Wear safety footwear or safety gumboots, eg. Rubber.
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:
- frequency and duration of contact,
  - chemical resistance of glove material,
  - glove thickness and
  - dexterity.

**OTHER**

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

**ENGINEERING CONTROLS**

■ Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE**

Clear to hazy green liquid with a slight odour; miscible with water.

**PHYSICAL PROPERTIES**

Liquid.

Mixes with water.

State	Liquid	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	Not Available
Boiling Range (°C)	Not Available	Solubility in water (g/L)	Miscible
Flash Point (°C)	60.6- 150	pH (1% solution)	Not Available
Decomposition Temp (°C)	Not Available	pH (as supplied)	8.0- 9.7
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	Not Available
Upper Explosive Limit (%)	15.6 (ethylene glycol)	Specific Gravity (water=1)	1.105- 1.115
Lower Explosive Limit (%)	3.2 (ethylene glycol)	Relative Vapour Density (air=1)	Not Available
Volatile Component (%vol)	Not Available	Evaporation Rate	Not Available
ethylene glycol			
log Kow (Prager 1995):		- 1.36	
log Kow (Sangster 1997):		- 1.36	

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Chemwatch Material Safety Data Sheet  
Issue Date: 14-Apr-2010  
XC9317SC

CHEMWATCH 23-2976  
Version No:2.0  
CD 2011/2 Page 6 of 8

## Section 10 - STABILITY AND REACTIVITY

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
  - Product is considered stable.
  - Hazardous polymerisation will not occur.
- For incompatible materials - refer to Section 7 - Handling and Storage.

## Section 11 - TOXICOLOGICAL INFORMATION

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

- Harmful if swallowed.
- HARMFUL- May cause lung damage if swallowed.
- Vapours may cause dizziness or suffocation.
- Inhalation may produce health damage\*.
- May produce discomfort of the eyes and skin\*.
- Vapours potentially cause drowsiness and dizziness\*.
- \* (limited evidence).

#### CHRONIC HEALTH EFFECTS

- May affect fertility\*.
- May be harmful to the foetus/ embryo\*.
- Cumulative effects may result following exposure\*.
- Repeated exposure potentially causes skin dryness and cracking\*.
- \* (limited evidence).

### TOXICITY AND IRRITATION

- For 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.

### SKIN

ethylene glycol	Australia Exposure Standards - Skin	Notes	Sk
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## Section 12 - ECOLOGICAL INFORMATION

No data

### Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
Austech AC- 9 Long Life Organic Coolant	No Data Available	No Data Available		
ethylene glycol	LOW	MED	LOW	HIGH
denatonium benzoate	No Data Available	No Data Available		

## Section 13 - DISPOSAL CONSIDERATIONS

- Containers may still present a chemical hazard/ danger when empty.
  - Return to supplier for reuse/ recycling if possible.
- Otherwise:
- 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 MSDS and observe all notices pertaining to the product.

continued...

Chemwatch Material Safety Data Sheet  
Issue Date: 14-Apr-2010  
XC9317SC

CHEMWATCH 23-2976

Version No:2.0

CD 2011/2 Page 7 of 8

Section 13 - DISPOSAL CONSIDERATIONS

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.

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

- Reduction.
- 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.
- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- Bury or incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

## Section 14 - TRANSPORTATION INFORMATION



Labels Required: COMBUSTIBLE LIQUID, regulated under AS1940 for Bulk Storage purposes only.

### HAZCHEM:

None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

## Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE S5

### REGULATIONS

#### Regulations for ingredients

**ethylene glycol (CAS: 107-21-1) is found on the following regulatory lists;**

"Australia Exposure Standards", "Australia Hazardous Substances", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "Australia National Pollutant Inventory", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix C", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Fragrance Association (IFRA) Survey: Transparency List"

**denatonium benzoate (CAS: 3734-33-6) is found on the following regulatory lists;**

"Australia Inventory of Chemical Substances (AICS)", "International Fragrance Association (IFRA) Survey: Transparency List"

**No data for Austech AC-9 Long Life Organic Coolant (CW: 23-2976)**

## Section 16 - OTHER INFORMATION

### Denmark Advisory list for selfclassification of dangerous substances

Substance	CAS	Suggested codes
denatonium benzoate	3734- 33- 6	Xn; R22

■ 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.

continued...

Chemwatch Material Safety Data Sheet  
Issue Date: 14-Apr-2010  
XC9317SC

CHEMWATCH 23-2976  
Version No:2.0  
CD 2011/2 Page 8 of 8  
Section 16 - OTHER INFORMATION

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A list of reference resources used to assist the committee may be found at:  
[www.chemwatch.net/references](http://www.chemwatch.net/references).

■ The (M)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.

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*This is the end of the MSDS.*