# MATERIAL SAFETY DATA SHEET

## AQUI-S® 20E

### Section 1: IDENTIFICATION OF THE SUBSTANCE & SUPPLIER

**Product Name:** **AQUI-S® 20E**

**Recommended use:** Aquatic Anaesthetic

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**Date of Preparation:** November 2010

### Section 2: HAZARD IDENTIFICATION

**US DOT Hazard Classification: Not regulated as a hazardous substance**

Hazard classifications:
May be harmful if swallowed
May cause skin irritation
May cause eye irritation
May cause an allergic skin reaction

Primary identifiers
**Keep out of reach of children.**
**For animal treatment only.**

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS Number | Concentration |
|---|---|---|
| Eugenol | 97-53-0 | ~ 10% |
| Other ingredients determined not to be hazardous | - | ~ 90% |

## Section 4: FIRST AID MEASURES

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| **Necessary First Aid Measures:** | **SKIN CONTACT:** If skin contact occurs, remove contaminated clothing and wash the affected area with soap and water. If irritation occurs or persists, seek medical attention.<br><br>**EYE CONTACT:** In case of eye contact, immediately rinse eyes thoroughly with plenty of water. If wearing contact lenses, remove only after initial rinse, and continue rinsing eyes for at least 15 minutes. If irritation occurs or persists, consult a doctor.<br><br>**INGESTION:** Give up to two glasses of water or milk. Seek medical advice immediately.<br><br>**INHALATION:** If inhaled, move the victim to fresh air immediately. If irritation occurs or persists, seek medical attention. |
| **Required instructions:** | For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor. |
| **Workplace facilities:** | Emergency showers and eyewashes may be warranted depending on quantity and type of use. |
| **Hygiene instructions:** | Avoid ingestion, inhalation and contact with skin and eyes. Do not eat, drink or smoke while using this product. Wash hands and exposed skin before eating, drinking or smoking and after work. Wash any protective clothing after use. |
| **Notes for Medical Personnel:** | Treat symptomatically. |

## Section 5: FIRE FIGHTING MEASURES

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| **Flammability:** | Do not use close to ignition sources. |
| **Extinguishing media & Methods:** | Use Foam, carbon dioxide or dry chemical extinguishers. |
| **Recommended protective clothing:** | This product is not very flammable but toxic vapours may be released during fire. Wear full protective clothing and self-contained breathing apparatus (SCBA). |
| **Hazchem code:** | None allocated |

## Section 6: ACCIDENTAL RELEASE MEASURES

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| **Emergency procedures:** | Personnel involved in clean-up should wear appropriate personal protective equipment to minimise exposure. This may include the use of eye protection, chemically resistant gloves, boot and/or overalls.<br>Evacuate the spill area and deny entry to unnecessary and unprotected personnel.<br><br>Prevent further spillage & prevent material from entering surface water drains or waterways. If a significant quantity of material enters drains, advise emergency services. |
| **Spill Procedure:** | Small spills can be wiped up with cloth or paper. Standard absorbants (sand, sawdust, vermiculite, etc) can be used to contain large spills. Wash area with water after mop up.<br><br>Remove all ignition sources. |

## Section 7: HANDLING & STORAGE

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| **Precautions for Safe Handling:** | Avoid contact with skin, & eyes. Keep containers adequately sealed during material transfer, transport, or when not in use. |
| **Regulatory Requirements:** | Not applicable. |
| **Handling Practices:** | Change work clothes regularly. Avoid ingestion, inhalation and contact with skin and eyes. Do not eat, drink or smoke while using this product.<br><br>Wash hands and exposed skin before eating, drinking or smoking and after handling. |
| **Approved Handlers:** | Not required. |
| **Conditions for Safe Storage:** | Keep out of reach of children.<br>Store in original container & keep tightly sealed when not in use. |
| **Storage Site Requirements:** | Store below 30℃ (Room Temperature) in a cool dry a rea, away from direct heat or direct sunlight. |
| **Packaging:** | HDPE containers. |

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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| **Workplace Exposure Standards:** | No WES have been set for this substance. |
| **Application in the Workplace:** | Ensure adequate ventilation. Keep container sealed when not in use. |
| **Exposure Standards** | No TEL is set for this substance at this time. |
| **Outside the Workplace:** | EEL – Not applicable. |
| **Engineering Controls:** | Engineering controls should be used as the primary means to control exposures. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. |
| **Personal Protection:** | Wear chemical resistant gloves, overalls, & a face-shield or safety glasses. A respirator may be required if using in confined or poorly ventilated conditions. |

## Section 9: PHYSICAL & CHEMICAL PROPERTIES

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| **Appearance:** | Clear viscous yellow liquid |
| **Odour:** | Floral carnation, clove |
| **Boiling Point:** | Not available |
| **Vapour Pressure:** | Not available |
| **Specific Gravity:** | 1.085 |
| **Flash Point:** | Not available |
| **Flammability Limits:** | Not available, combustible |
| **Solubility:** | Dispersible and slightly soluble in water.<br>Soluble in ethanol |

## Section 10: STABILITY & REACTIVITY

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| **Stability of the Substance:** | Stable under normal temperatures and pressures |
| **Conditions to Avoid:** | Avoid high temperatures |
| **Material to Avoid:** | Strong oxidisers |
| **Hazardous Decomposition Products:** | Carbon monoxide, carbon dioxide |

## Section 11: TOXICOLOGICAL INFORMATION

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| **Oral:** | Eugenol - LD50 (rats) = 1930 mg/kg;<br>Eugenol - LD50 (mice) = 3000 mg/kg;<br>Eugenol - LD50 (guinea pigs) = 2130 mg/kg |
| **Dermal:** | Eugenol - Human, skin: 40 mg/48H mild irritation<br>Rabbit, skin: 100 mg/24H severe irritation |
| **Other Toxicity Info:** | Not Available |

## Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity:**

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| *Tricoplusia ni* | Owlt moth caterpillar (24h) | $LC_{50}$ (ppm) 63,000 |
| *Ochlerotatus caspius* | Mosquito larvae (24h) | $LC_{50}$ (mg/L) 7.53 |
| **Oncorhynchus mykiss* | Rainbow trout (96h) | $LC_{50}$ (mg/L) 9.0 |
| * *Silurus glanis* | European catfish (96h) | $LC_{50}$ (mg/L) 18.4 |
| **Penaeus semisulactus* | Tiger Prawn (24h) | $LC_{50}$ (mg/L) 30.0 |
| *Biomphalaria alexandrina* | Aquatic snail (Time not reported) | $LC_{50}$ (mg/L) 28.0 |

* These studies were carried out with clove oil

## Section 13: DISPOSAL CONSIDERATIONS

**Disposal:** Incineration or landfill in accordance with local authority & Government regulations.

## Section 14: TRANSPORT INFORMATION

**Relevant Information:** No special transport requirements necessary.

## Section 15: REGULATORY INFORMATION

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| **HSNO Approval No:** | HSR003486 |
| **HSNO Controls:** | See http://www.ermanz.govt.nz/search/registers.html for controls. |
| **ACVM Reg. Number:** | Not available |
| **ACVM Controls:** | Not available |

## Section 16: OTHER INFORMATION

**Additional Information:** AQUI-S® is a registered trademark of AQUI-S New Zealand Ltd.

AQUI-S NZ Ltd urges each user or recipient of this MSDS to read the entire data sheet to become aware of the potential hazards associated with this material. This MSDS summarizes, at the date of issue, our best knowledge of the health and safety hazard information. Although reasonable care has been taken in the preparation of this document, AQUI-S NZ Ltd extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequence of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).