Service Wing Organic Solutions, LLC

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# MATERIAL SAFETY DATA SHEET

## PRODUCT: S1 NEUTRAL ANOLYTE (pH = 7.0±0.5, ORP = 750±150mV)

### SECTION I. PRODUCT IDENTITY

Chemical Name: Electrically Activated Neutral Anolyte
Common name: Neutral Anolyte
Product Type: Oxidising disinfectant
Composition:

| Ingredient | CAS-No. | EINECS-No | Weight / Volume % |
|---|---|---|---|
| Water | 7732-18-5 | 231-791-2 | 99.69% |
| Sodium chloride | 7647-14-5 | 231-598-3 | 0.26% |
| Hypochlorous Acid | 7790-92-3 | 232-232-5 | 0,05% |
| Hypochlorite ion | 7681-52-9 | 231-668-3 | |

The activated mixed oxidants are in disequilibrium immediately after activation, and gradually revert to the primary ingredients.

### SECTION 2. COMPOSITION

This product is a preparation of Potable Water and Food grade Salt (Sodium Chloride)
Chemical Nature of the product – Weak Acid

### SECTION 3. HAZARD IDENTIFICATION

**Emergency overview**

Physical Appearance: Colourless liquid
Immediate concerns: No hazard expected under normal conditions of use.
Dangerous components of the product: Identification: - None
Danger Symbol:- None

### SECTION 4. FIRST AID MEASURES

Signs and symptoms of poisoning: None detected – refer to water intoxication
First-Aid procedures: Non-specific. Use good personal hygiene practices.
Skin contact: Remove contaminated clothing including shoes immediately and drench affected skin with plenty of water. Seek medical attention if irritation develops and persists. Wash contaminated clothing and shoes before reuse.
Eye contact: Immediately flush eyes with copious quantities of water for several minutes. Seek medical advice if irritation persists.
Ingestion: Do not induce vomition: give plenty of water to drink. Seek medical assistance if illceffects occur.
Inhalation: Remove patient to fresh air – Seek medical assistance if ill effects occur.
Emergency antidote: None

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## SECTION 5. FIRE-FIGHTING MEASURES

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|---|---|
| Extinguishing media suitable: | Chemical type foam, Powder, Sand, water spray |
| Hazardous combustion products: | Oxides of Chlorine |
| Hazards and methods: | General hazard – evacuate personnel downwind of fire to avoid inhalation of irritating and/or harmful fumes or smoke. |
| Protection of fire fighters: | |
| Flammability: | Neutral Anolyte is not inflammable |
| Special fire-fighting procedures: | This product is a non-flammable substance. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

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| Spillages: | Leaks and spills can be removed in accordance with methods employed for ordinary water. Wash to waste with plenty of water. |

## SECTION 7. HANDLING AND STORAGE

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| Handling concentrated product: | No special precautions necessary |
| Handling or applying diluted product: | No special precautions necessary |
| Storage: | Optimal efficacy of the product will be prolonged if Neutral Anolyte is stored away from direct sunlight and in sealed, airtight opaque or tinted glass containers |
| Other precautions: | Keep out of reach of uninformed persons, children and animals. |

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Wear safety glasses when handling this material. Avoid prolonged contact with the skin. Use good personal hygiene practices.

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| MEDICAL ADVICE: | Neutral Anolyte has been extensively tested in animals, and poses no threat to the welfare of the operator or test animal. |

## SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

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| Physical stat: | Liquid. Chemical pH = 7.0 ± 0.5 |
| Appearance: | Homogeneous clear, liquid Oxidation Reduction Potential ORP = 750 ± 150mV |
| Colour: | Colourless Solubility Complete in water |
| Odour: | Mild chlorine/ozone odour Boiling point 100degC |

## SECTION 10. STABILITY AND REACTIVITY

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| Stability: | The product is stable under normal ambient conditions of temperature and pressure. Neutral Anolyte retains its optimal [i.e. sporicidal activity] Oxidation Reduction Potential (ORP) for a period of up to 48 hours, where after it progressively degrades to the ORP of source water. |
| Incompatibility (material to avoid): | As a dilute aqueous solution Neutral Anolyte is reactive with concentrated acid and alkaline solutions as per standard chemical practices. |
| Hazardous decomposition or bi-products: | Neutral Anolyte degrades to the quality of source water. May produce Oxides of Chlorine vapours. |
| Hazardous polymerisation: | No hazardous polymerisation products have been detected. |
| Corrosion Potential: | Stainless Steel grades – 304=<$10^{-3}$mm/annum, 316=<$10^{-3}$mm/annum, 3CR12=<$10^{-1}$mm/annum, mild steel =0.35mm/annum, Galvanised steel=0.24mm/annum. |

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## SECTION 11. TOXICOLOGICAL INFORMATION

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|---|---|
| Acute toxicity: | LD50 (oral: Rat)> 20,000mg/kg |
| Acute dermal irritation: | Negative |
| Acute eye irritation: | Negative |
| Dermal Sensitisation – Guinea Pig: | Negative |
| Mutagenicity (Ames test): | Negative for In-vitro Salmonella typhimurium mutagenic studies |
| Cytogenicity: | At 500ppm available chlorine, no Cytogenetic activity on mice bone marrow chromosomes was induced. |
| Carcinogenicity: | No conclusion on the carcinogenicity of chlorine can be made from the limited information available from human and animal studies. |
| Inhalation: | Not available |
| Occupational exposure limits: | None |
| Health hazards: | There are no known health hazards. |

## SECTION 12. ECOLOGICAL INFORMATION

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| Environmental data: | Presents no hazard to the environment |
| Degradability: | Neutral Anolyte degrades to source water quality with a low sodium chloride mineralisation allied to the input concentration of the salt. |
| Hazards: | Neutral Anolyte generated at pH=7, is non-hazardous to human and animal tissue. |

## SECTION 13. DISPOSAL CONSIDERATIONS

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| Waste disposal: | Where permitted, Neutral Anolyte can be disposed of in municipal drains without adverse effects. However, where required, local environmental regulatory requirements should be followed. The oxidant activity of Anolyte can be neutralised with surplus organic matter/soiling - Dilute to waste with plenty of water. |

## SECTION 14. TRANSPORT INFORMATION

Packaging in black plastic containers, and no specific transport requirements are necessary.

## SECTION 15. REGULATORY INFORMATION

Regulations specific to the product. Refer to sections 1, 2, 3 & 4.

DISCLAIMER:
This information is based on our current knowledge and is intended to describe the product for the purposes of health and safety requirements only. It should not, therefore, in itself be construed as a guarantee of any specific quality relating to the product, which will depend on the terms of the contract of trial or sale. The user must satisfy himself/herself that the product is suitable for his/her purpose.