

# Material Safety Data Sheet

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## 1. Chemical Product and Company Identification

**Product name:** EcaFlo™ Anolyte

Electro-Chemically Activated solution of sodium chloride (0.9% or less)

**Chemical Family:** Diluted Mixture of Oxychlorine Compounds

**CAS #:** None (Mixture)

**Company:** Integrated Environmental Technologies, Ltd

4235 Commerce St.

Little River, SC 29566

(843)390-2500

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## 2. Composition / Information on Ingredients

0.9% or less aqueous sodium chloride solution,  
0.03% - 0.05% oxidizer as hypochlorous acid/sodium hypochlorite

### 2.1 Dangerous Components of the Product

**2.1.1. Identification:** none

**2.1.2. 2.1.2. Danger symbol:** none

**2.1.3. Toxicity and exposure limits to chlorine:**

- - TLV/TWA: 1ppm (3mg/cubic meter);
- - TLV/STEL: 3ppm (9mg/cubic meter);
- - Acute Oral LD<sub>50</sub> in rats g/kg 0.73;
- - Dermal LD<sub>50</sub> in rats g/kg 1.26-2.0.

## 3. Physical Data of the Material:

**Physical state:** liquid

**Boiling point:** 100°C

**Melting point/Range:** N/A

**Specific gravity:** 1.02 – 1.06 g/ml

**Appearance / Color / Odor:** Clear water with faint chlorinous / ozonous odor

**Evaporation rate:** Comparable to Water

**Solubility in water:** complete

**pH:** 6.8 – 8.5

## 4. Fire and Explosive Hazard Information

Not flammable or explosive. In a fire, cool containers to prevent release of free

chlorine at the level of available chlorine 500ppm or less and pH 7.5 or less, and chlorate at the level of available chlorine higher than 500ppm and pH value 7.5 or higher.

#### **5. Reactivity Data.**

**Stability:** Loses the level of available chlorine at high temperature and under direct sun light.

**Condition to Avoid:** Avoid accidental or uncontrolled contact of solution with acids and hydrogen peroxide.

#### **6. Health Hazard Data.**

Under normal use conditions the likelihood of any adverse health effect are low.

**Skin contact:** Solution is recommended for the treatment of infected or purulent wounds. If any irritation appears, wash area with water.

**Eye contact:** If irritated, flush eyes with plenty of water.

**Ingestion:** Drink a glass full of water.

**Inhalation:** If breathing problems develop, move into fresh air.

**Toxicity:**

**LD 50 of product:** undetermined;

**LC 50 of product:** undetermined;

**Developmental/Reproductive Toxicity:**

No conclusion has been made based on human and animal studies.

**Carcinogenicity:** No conclusion on the carcinogenicity of chlorine has been made based on the limited information available from human and animal studies.

**Mutagenicity:** EcaFlo™ (under applied conditions) does not possess mutagenous activity from in-vitro (*Salmonella typhimurium*) studies.

**Cytogenicity:** EcaFlo™ (500ppm of available chlorine or less) does not possess Cytogenetic activity based on the test results on chromosome induction operations in the bone marrow cells of mice.

#### **7. Control Measures/ Personal Protective Equipment**

No personal protective equipment is required under normal conditions. The following suggestions should be considered in case of accidental chlorine release due to acidification.

**Ventilation:** Open air or good room ventilation is normally adequate for the safe use of the product. Avoid breathing any vapors or fumes resulting from acid ventilation.

**Respiratory Protection:** In accordance with OSHA regulations (29 CFR 1910.134 and 29 CFR 1910.1000) fogging or spraying applications may require worker respiratory protection, such as: (1) NIOSH/MSHA approved air-purifying respirators, or (2) NIOSH/MSHA approved canister/cartridge facial respirators for chlorine/acid vapors.

**EYE Protection:** Although EcaFlo™ is a decontaminant designed to be safe for eyes, skin and wounds, good manufacturing / laboratory practice recommends use of chemical safety goggles for all applications involving chemical handling.

**Protective Clothing:** Although EcaFlo™ is a decontaminant designed to be safe for eyes, skin and wounds, good manufacturing / laboratory practice recommends that, at a minimum, rubber, neoprene, or other chemically impervious gloves be worn for all applications involving chemical handling.

## **8. Spill, Leak, and Disposal Procedures:**

**Spills, Leaks, Effluent Handling Procedures:** EcaFlo™ is <0.9% sodium chloride (salt) solution and less than 0.05% available chlorine. Some localities allow this to be sent to open storm sewers, however local environmental regulatory requirements should be followed. If desired, spills can be washed to sewer with plenty of water, or neutralized by sodium sulfite or sodium thiosulfate.

## **9. Additional Information/comments:**

EcaFlo™ was designed to be a less hazardous biocidal agent than those now in use.