

MATERIAL SAFETY DATA SHEET

PRODUCT: CATHOLYTE
PRODUCED AT A CONTROLLED 12.0 pH.

April 2011

Note: This information only relates to catholyte produced by EcaFlo® equipment at the stated salt concentration.

SECTION I. PRODUCT IDENTITY

Chemical Name: Catholyte
Common name: Electrochemically activated water containing **0.5%** NaCl
Product Type: Aqueous dilute mixed reductants

Composition

Ingredient	CAS-No	EINECS-NO	Wt/Vol %
Water			99.5%
Sodium chloride	7647-14-5	231-598-3	0.5%

After activation

OH ⁻ /OH [•]	< 126 ppm (0.0126 %)
Na ⁺ as NaOH	<170ppm (0.017%)
Na ⁺ as NaCl	<1.796ppm (0.1796%)
H ₂	4ml/L
HO ₂ ⁻ /O ₂ ²⁻	<3000ppm (0.3%)

The mixed reductants are in dynamic equilibrium initially, and gradually after time revert to their original alkalized ingredients. Figures given are maximum values.

Product Name: CATHOLYTE

SECTION 2. PHYSICAL /CHEMICAL CHARACTERISTICS

Appearance: Homogeneous clear, liquid.
Boiling point: 100°C
Sp Gravity: 1.02 – 1.06g/ml
Odour: No odour
Taste: Mild saline/soapy
Chemical: pH =12.0 ±0.3
Oxidation Reduction Potential: ORP = -900 ±100mV
Solubility: Same as water

SECTION 3. FIRE HAZARD AND CONTROL

Flammability:	Not applicable
Flash point (°C):	Not applicable
Extinguishing media:	Not applicable
Special fire-fighting procedures:	Not applicable

SECTION 4. REACTIVITY DATA

Stability:	CATHOLYTE is an aqueous solution containing metastable reductants which lose activity immediately on encountering reactants or during approximately 7 to 14 days storage when the ORP will decline from approximately -900 mV to near 0 mV. No hazardous reactions are known when used for its intended purposes
Incompatibility (material to avoid):	CATHOLYTE, like water, is reactive with acid solutions.
Hazardous decomposition or by-products:	CATHOLYTE deactivates to its original components: water, added Sodium Chloride of 5000 ppm and Sodium Hydroxide at 800 - 1000 ppm, which was formed during the electrochemical activation process.

SECTION 5. ENVIRONMENTAL CHARACTERISTICS

Degradability:	Best when used immediately upon being produced. A shelf life of 7 to 14 days is possible if stored between 40-95° F and kept in a closed plastic container. CATHOLYTE deactivates to its original components: water, added Sodium Chloride of 5000 ppm and Sodium Hydroxide at 800 – 1000 ppm, which was formed during the electrochemical activation process. Should not be stored in a glass container!
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Hazards:	CATHOLYTE, generated at pH≤12.0 is non-hazardous to human and animal tissue.
Other effects:	Not applicable

SECTION 6. HEALTH HAZARD DATA

Acute oral toxicity:	None observed
Acute dermal irritation:	Non-irritating
Acute eye irritation:	Non-irritating
Inhalation:	Non-irritating
Occupational exposure limits:	None
Health hazards:	There are no known health hazards.

SECTION 7. EMERGENCY AND FIRST AID PROCEDURES

Signs and symptoms of poisoning:	Not applicable
First Aid procedures:	None specified
Skin contact:	No reports of adverse skin reactions after exposure
Eye contact:	No reports of adverse ocular reactions after exposure
Ingestion:	No reports of adverse reactions after ingestion
Inhalation:	No reports of adverse reactions after inhalation
Emergency antidote:	None (Water)

SECTION 8. MEDICAL ADVICE

CATHOLYTE has been extensively tested in both humans and animals, and poses no known threat to the welfare of either.

SECTION 9. PRECAUTIONS FOR SAFE HANDLING AND USE

Handling concentrated product:	None
Handling or applying diluted product:	None
Leaks and Spills:	Leaks and spills can be removed the same as for ordinary water.
Waste disposal:	CATHOLYTE can be disposed of in municipal drains without adverse effects after use. Local environmental regulatory requirements should be followed, which may require CATHOLYTE to be

Storage:

deactivated. This can be done by mixing with ANOLYTE or water.

Optimal efficacy of the product will be prolonged if stored away from direct sunlight, in sealed opaque or tinted plastic containers and avoiding high temperatures.

Avoid storing in glass container!

Other precautions:

None

FOR FURTHER INFORMATION REFER TO:

Integrated Environmental Technologies, LTD

4235 Commerce Street

Little River, SC 29566

(843)390-2500

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.
