SAFETY DATA SHEET

ESAR – Acid Replacement

I. IDENTIFICATION

GHS Product Identifier: ESAR – Acid Replacement
Other means of identification: Cleaning & Odour Solutions
Product Type: Free-flowing Liquid
Application: Acid Replacement
IHC: 3402.20.51.00
Manufacturer Details: Earth Smart Solutions
130 – 60 Industry Way S.E., Calgary, AB., CA. T3S 0A2
Toll Free: 1-866-444-7174
Fax: 403-264-9606
Email: info@earth-smart-solutions.com

II. HAZARD IDENTIFICATION

Classification of the substance or mixture:

GHS05 Corrosion - Skin Corrosion - Category 1A - H314 Causes severe skin burns and eye damage.
Serious Eye Damage - Category 1 - H318 Causes serious eye damage

GHS label elements: the product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms

GHS05

Signal word: Danger

Hazard-determining components of labeling: Organic Salt

Hazard statements: H314 Causes severe skin burns and eye damage.

Precautionary statements:

➢ Do not breathe dust/fume/gas/mist/vapours/spray.
➢ Wash thoroughly after handling.
➢ Wear protective gloves/protective clothing/eye protection/face protection.
➢ IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
➢ IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
➢ IF INHALED: Remove person to fresh air and keep comfortable for breathing.
➢ IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
➢ Immediately call a poison center/doctor.
➢ Specific treatment (see on this label).
➢ Wash contaminated clothing before reuse.
➢ Store locked up.
➢ Dispose of contents/container in accordance with local/regional/national/international regulations.

III. COMPOSITION

Chemical characterization: Mixtures

Description: Mixture of the substance listed below with nonhazardous additions

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>%</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic Salt</td>
<td>30-60% w/w*</td>
<td>506-89-8</td>
</tr>
</tbody>
</table>

*Actual concentration ranges are withheld as a trade secret

Additional Information: The specific chemical identity and/or exact percentage composition has been withheld as a trade secret.
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IV. FIRST AID MEASURES

Eye Contact: May cause irritation. Contact lenses should not be worn when working with chemicals.
First Aid: Immediately flush eyes with water, continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Recommended Precautions: Wear appropriate safety goggles and limit exposure.

Skin Contact: Exposure may cause irritation if a person has a history of dermal allergic reaction.
First Aid: Remove contaminated clothing. Wash affected area with soap and water. Wash clothing before reuse.
Recommended Precautions: Limit exposure.

Ingestion: Considered non-toxic but may lead to nausea or diarrhea.
First Aid: Wash out mouth with water. If material has been swallowed, give two glasses of water to dilute product, do not induce vomiting. Contact physician immediately.
Recommended Precautions: Store in safe place. Wear protective mask.

Inhalation: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat & lungs.
First Aid: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie, belt or waistband.
Recommended Precautions: Avoid creating dust in non-ventilated areas.

General Precautions: Wash hands after handling free product.

V. FIRE – FIGHTING MEASURES

Suitable Extinguishing Media: Water, carbon dioxide, dry chemical at temperatures above 60℃.
Unsuitable Extinguishing Media: Acid action on most metals may release hydrogen, a highly flammable and explosive gas.

VI. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective equipment & emergency Procedures:
Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation.
Environmental Precautions: Do not allow undiluted product to enter sewer/surface or ground water

Small Spill: Small spills may be absorbed with non-reactive absorbent (sand) and placed in suitable covered labeled containers. Do not allow to enter waterways.

Large Spill: Move containers from spill area. May be absorbed with non-reactive absorbent (sand) and placed in suitable covered labeled containers. Do not allow to enter waterways. Check disposal regulations when disposing of large quantities.

VII. STORAGE & HANDLING

Storage: Store in dry, cool, and well-ventilated area, and out of direct sunlight. Storage temperature should be between 41°F & 104°F (5℃ & 40℃). Do not freeze.
Handling: No special handling required.
Advice on General occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

VIII. EXPOSURE CONTROL / PERSONAL PROTECTION

Components with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

information: The lists that were valid during the creation were used as basis.

Exposure controls Use local exhaust ventilation to control airborne concentrations below exposure limits.

Hand protection: Chemical-resistant, Impervious gloves should be worn always when handling chemical products.

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risk involved.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.

Respiratory protection: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification.
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IX. PHYSICAL / CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Free-flowing liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Whiteish - Yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not determined</td>
</tr>
<tr>
<td>PH</td>
<td>1.1 – 1.5 (1% dilution)</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Boiling point</td>
<td>100°C (212°F)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower and upper explosive</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor pressure at 20 °C</td>
<td>23 hPa</td>
</tr>
<tr>
<td>Density at 20°C</td>
<td>1.15 – 1.25 g/cm³</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Moderate – disperses in water</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not determined</td>
</tr>
<tr>
<td>Organic solvents</td>
<td>0.0%</td>
</tr>
<tr>
<td>Solvent contents - water</td>
<td>45.0 - 55.0%</td>
</tr>
</tbody>
</table>

X. STABILITY & REACTIVITY INFORMATION

Reactivity: Reacts with Alkalis
Chemical stability: Stable under recommended storage conditions
Possibility of hazardous reactions: No dangerous reactions known
Conditions to avoid: No further relevant information available
Incompatible materials: Alkaline materials.
Hazardous decompositions products: Sulfur oxides (SOx), Carbon monoxide and carbon dioxide

XI. TOXICOLOGICAL INFORMATION

Acute toxicity
LD/LC50 values that are relevant for classification:
506-89-8 Organic Salt
<table>
<thead>
<tr>
<th>Route</th>
<th>LD50/LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>1, 120.9 mg/kg (Rat)</td>
</tr>
</tbody>
</table>

Primary irritant effect
on the skin: Caustic effect on skin and mucous membranes.
on the eye: Strong caustic effect. Strong irritant with the danger of severe eye injury.
Sensitization: No sensitizing effects known.

Additional toxicological information: The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Corrosive, Irritant, Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
Carcinogen: No – IARC, NTP, OSHA
Mutagen: Not known to be a mutagen

XII. ECOLOGICAL INFORMATION

Aquatic toxicity
506-89-8 Organic Salt
<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>71 Ceriodaphnia dubia (48 Hours)</td>
</tr>
<tr>
<td>LC0</td>
<td>&gt;142 mg/L (Oncorhynchus mykiss (rainbow trout)) (96 hours)</td>
</tr>
</tbody>
</table>

Persistence and degradability: Biodegradable

Behavior in environmental systems
Bio accumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
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Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

XIII. DISPOSAL INFORMATION

Disposal Methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should always comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirement of all authorities with jurisdiction. Waste packaging should be recycled.

XIV. TRANSPORT CONSIDERATIONS

Special precautions for user: Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

<table>
<thead>
<tr>
<th>UN Number</th>
<th>TDG Classification</th>
<th>DOT Classification</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1760</td>
<td>Corrosive</td>
<td>Corrosive</td>
<td></td>
<td>CORROSIVE LIQUID, N.O.S.</td>
<td>CORROSIVE LIQUID, N.O.S.</td>
</tr>
<tr>
<td></td>
<td>Corrosive</td>
<td>Corrosive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Substances</td>
<td>Substances</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Special precautions for user: Warning: Corrosive substances
Danger code (Kemler): 80
EMS Number: F-A,S-B
Stowage Category A
Stowage Code SW2 Clear of living quarters.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

Transport/Additional information:

TDG
Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

IMDG
Limited quantities (LQ) 5L
Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

UN "Model Regulation":
UN 1760 CORROSIVE LIQUIDS, N.O.S. (ORGANIC SALT), 8, III

XV. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
TSCA (Toxic Substances Control Act) (Substances not listed): All ingredients are listed.

Canadian substance listings:
Canadian Domestic Substances List (DSL) (Substances not listed): All ingredients are listed.

GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.
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Fully complies with EPA Toxic Substance Control Act (TSCA) and the rules, orders and regulations promulgated there under including:

a) Sections 4, 5, 6 & 7; Title 40 Chapter 1, 707.20 thru 707.75;

b) 40 CFR Sections 704.3, 710.2(e) and 720.3(c); and

c) Sections 5 and 13, reference 42FR64583

d) Does not contain marine pollutants as defined in 49 CFR 171.8.

XVI. OTHER INFORMATION

Information sources: Suppliers MSDSs, DSL, TSCA, EPA, IARC, NTP, OSHA.

Prepared By: SDS Coordinator

Date: February 15, 2018 - Last Rev: August 26, 2019

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bio accumulative and Toxic
vPvB: very Persistent and very Bio accumulative