

# SAFETY DATA SHEET

## EDS-ER™



Revision Date: 2021-05-27  
Version 1.2

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### **Product Identifier**

Product Name: EDS-ER™

Synonyms: Electron Donor Solution – Extended Release

Product Form: Mixture

#### **Recommended use of the chemical and restrictions on use**

Recommended Use: Remediation of contaminated groundwater and soils.

Restrictions on Use: Use as recommended by the label

#### **Details of the supplier and of the safety data sheet**

Supplier: Tersus Environmental, LLC  
1116 Colonial Club Rd  
Wake Forest, NC 27587  
Phone: +1-919-453-5577  
Email: [info@tersusenv.com](mailto:info@tersusenv.com)

Contact Person: David F. Alden  
Phone: +1-919-453-5577 x2002  
Email: [david.alden@tersusenv.com](mailto:david.alden@tersusenv.com)

#### **Emergency telephone number**

For leak, fire, spill or accident emergencies, call:

+1-919-453-5577 (Tersus Office Hours, 8:00 AM to 5:00 PM Eastern)

+1-800-424-9300 (Chemtrec 24 Hour Service – Emergency Only)

+1-919-638-7892 Gary M. Birk (Outside office hours)

### 2. HAZARD IDENTIFICATION

#### **Relevant identified uses of the substance or mixture**

No applicable GHS categories. This product is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Other hazards** None known.

**Label element** The product does not require a hazard warning label in accordance with GHS. The normal safety precautions for the handling of chemicals must be observed.

**Hazard statement** Non-Regulated Material

#### **Precautionary statement**

**Prevention** No GHS prevention statements

**Response** No GHS response statements

**Storage** No GHS storage statements  
**Disposal** No GHS disposal statements

**Hazard(s) not otherwise classified (HNOC) None known.**

### Supplemental information

NFPA Ratings (scale 0-4)



Health = 0  
 Fire = 1  
 Reactivity = 0

HMIS Ratings (scale 0-4)

|                 |   |
|-----------------|---|
| HEALTH          | 0 |
| FLAMMABILITY    | 1 |
| PHYSICAL HAZARD | 0 |

Health = 0 Flammability = 1 Reactivity = 0

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical Formula** Mixture

### Hazardous components

| Chemical Name | Concentration (%) | CAS Number |
|---------------|-------------------|------------|
| None          | None              | None       |

### Nonhazardous components

| Chemical Name | Concentration (%) | CAS Number  |
|---------------|-------------------|-------------|
| Soybean Oil   | 90 to 93          | 8001-22-7   |
| Emulsifiers   | 7 to 10           | Proprietary |

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Synonyms are provided in Section 1.

Occupational exposure limits, if available, are listed in Section 8.

## 4. FIRST AID MEASURES

### General Information

Check the vital functions. If unconscious place in recovery position and seek medical advice. In case of respiratory arrest, administer artificial respiration. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Take victim to a doctor if irritation persists.

Remove affected person from source of contamination.

### Eye Contact

Promptly wash eye with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention. Do not apply

(chemical) neutralizing agents. In case of eye irritation consult an ophthalmologist. Remove any contact lenses and open eyelids wide apart.

|  |   |
|--|---|
| Skin Contact   | Wash off promptly and flush contaminated skin with water. Promptly remove clothing of soaked through and flush skin with water. Get medical attention if irritation persists after washing. Do not apply (chemical) neutralizing agents.  |
| Inhalation   | Move the exposed person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Perform artificial respiration if breathing has stopped. Keep the affected person warm and at rest. Get prompt medical attention. |
| Ingestion  | Drink plenty of water. DO NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person. Keep the affected person warm and at rest.   |
| Most important symptoms and effects, both acute and delayed                | Symptoms/injuries after skin contact: Causes skin irritation.<br>Symptoms/injuries after eye contact: Eye damage / irritation.  |
| Indication of any immediate medical attention and special treatment needed | If exposed or concerned, get medical advice and attention.  |

## 5. FIRE-FIGHTING MEASURES

|  |   |
|--|---|
| <b>Suitable Extinguishing Media</b>                          | Alcohol resistant foam. Carbon dioxide (CO <sub>2</sub> ). Dry chemicals, sand, dolomite, etc. Water spray  |
| <b>Specific Hazards Arising from the chemical or mixture</b> | Fire hazard: high.<br>Explosion hazard: Not known.<br>Oxides of the following substances: Carbon, Sulfurous gases (SO <sub>x</sub> )  |
| <b>Special Fire Fighting Procedures</b>                      | Cool containers exposed to flames with water until well after the fire is out. Use water spray to reduce vapors. If risk of water pollution occurs, notify appropriate authorities. Avoid water in straight hose stream; will scatter and spread fire. Keep upwind. Do not inhale explosion and combustion gases. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Cool containers exposed to flames with water until well after the fire is out. Use water spray to reduce vapors. If risk of water pollution occurs, notify appropriate authorities. Avoid water in straight hose stream; will scatter and spread fire. Wear positive-pressure, self-contained breathing apparatus (SCBA) and chemical protective clothing. |

## 6. ACCIDENTAL RELEASE MEASURES

|                             |   |
|-----------------------------|---|
| <b>Personal Precautions</b> | Wear protective clothing as described in Section 8 of this safety data sheet. Do not smoke or use open fire or other sources of ignition. Contact with walking surface may result in formation of slippery film/falling hazard. |
| <b>First Aid:</b>           | In case of contact with skin, wash with soap and water. If symptoms occur, seek medical attention. In case of contact with eyes, rinse with plenty of water for at least 15 minutes and see an eye specialist if                |

|   |  |
|---|--|
| <b>Environmental Precautions</b>            | irritation persists. In case of inhalation, remove to fresh air. In case of ingestion, drink water. If symptoms occur, seek medical assistance. Do not discharge into drains, sewers or watercourses or onto the ground. Inform the relevant authorities if this occurs.             |
| <b>Methods for Containment and Clean Up</b> | Spilled product should be removed immediately. Provide enough ventilation. Recover product for reuse if possible. Avoid contamination of waterways and (if large quantity) vegetation. Absorb in non-combustible material, vermiculite, dry sand or earth and place into containers. |

## 7. HANDLING AND STORAGE

|   |  |
|---|--|
| <b>Precautions for safe handling</b>                                | Contain with applicable regulations. Avoid contact with eyes. Avoid inhalation of vapors and spray/mist. Remove contaminated clothing immediately. Clean contaminated objects and areas thoroughly observing environmental regulations. Keep away from sources of ignition – No smoking. Handle in accordance with good industrial hygiene and safety procedures. Discharge into the environment must be avoided. Keep container tightly closed. Either local exhaust or general room ventilation is usually required.                               |
| <b>Hygiene measures</b>   | Handle in accordance with good industrial hygiene and safety procedures. Use good personal hygiene practices.  |
| <b>Conditions for safe storage, including any incompatibilities</b> | <p><b>Technical measures:</b> Clean bulk tanks periodically to prevent accumulation of bacteria</p> <p><b>Storage conditions:</b> Store in tightly closed, original container in a well-ventilated place. Protect against frost. Protect against direct sunlight.</p> <p><b>Storage temperature:</b> See technical datasheet. Above 10°C (50°F) and away from heat or flame.</p> <p><b>Storage area:</b> Store in a dry area. Comply with applicable regulations. Collect spillage.</p> <p><b>Packaging materials:</b> Stainless steel. Plastic.</p> |

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

### Control parameters

Exposure guidelines, ingredients with workplace control parameters.

### **Components with occupational exposure limits**

Soybean Oil (8001-22-7)

TWA Short-term value: 5 mg/m<sup>3</sup>

Long-term value: 15 mg/m<sup>3</sup>

**Exposure Control****Protective equipment****Appropriate engineering controls**

Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients. Do not allow uncontrolled discharge of product into the environment.

**Eye/face protection**

The following protection should be worn: Chemical splash goggles.

**Respiratory protection**

Not needed

**Hand protection**

Neoprene. Vinyl, Rubber (natural, latex), Butyl rubber. Wear protective gloves made of the following material: Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Polyvinyl chloride (PVC). Manufactured/tested in accordance with EN 374, Avoid the following conditions: Polyvinyl alcohol (PVA).

**Other skin and body protection**

Wear appropriate clothing to prevent any possibility of skin contact.

**Hygiene measures**

Wash promptly if skin becomes contaminated. Wash hands at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

|   |  |
|---|--|
| Appearance                                    | Clear yellow to clear brown, amber               |
| Odor  | Light Vegetable Oil                              |
| Odor threshold                                | Not determined.                                  |
| pH  | Not determined. Natural when diluted with water. |
| Melting point /Freezing Point                 | -2°C   |
| Initial Boiling point and boiling point range | Not determined.                                  |
| Flash Point                                   | 282° C (540° F)                                  |
| Evaporation rate                              | Not determined.                                  |
| Flammability (solid; gas)                     | Not determined.                                  |
| Upper/lower flammability or explosive limits  | Not determined.                                  |
| Vapor pressure                                | Not determined.                                  |
| Vapor density                                 | Not determined.                                  |
| Relative density                              | 0.925 g/cm <sup>3</sup> (7.719 lbs/gal)          |
| Solubility (ies)                              | Dispersible                                      |
| Partition coefficient: n-octanol/water        | Not determined.                                  |
| Initial Boiling point and boiling point range | Not determined.                                  |
| Auto-ignition temperature                     | Unknown  |
| Decomposition temperature                     | Unknown  |

Viscosity

80 cP at 24° C

## 10. STABILITY AND REACTIVITY

|   |  |
|---|--|
| <b>Reactivity</b>                         | No further relevant information available. |
| <b>Chemical stability</b>                 | Stable under normal conditions and use.    |
| <b>Possibility of hazardous reactions</b> | No dangerous reactions known.              |
| <b>Conditions to avoid</b>                | No further relevant information available. |
| <b>Incompatible materials</b>             | No further relevant information available. |
| <b>Hazardous decomposition products</b>   | Oxides of carbon (COx).                    |
| <b>Hazardous Polymerization</b>           | Hazardous polymerization will not occur.   |

## 11. TOXICOLOGICAL INFORMATION

### **Acute Toxicity**

|   |  |
|---|--|
| Acute toxicity (oral)                               | LD50<br>Species: Rat (male/female)<br>Dose: >2.000 mg/kg<br>Method: OECD 423 |
| Skin  | Acute toxicity estimate: 3,571 mg/kg<br>Method: Calculation method           |
| Serious Eye<br>Damage/Irritation                    | Not classified   |
| Respiratory or Skin<br>Sensitization                | Not classified   |
| Ingestion   | Not classified   |
| Germ Cell Mutagenicity                              | Not classified   |
| Carcinogenicity                                     | Not classified   |
| Reproductive Toxicity                               | Not classified   |
| Specific Target Organ<br>Toxicity – Single Exposure | Not classified   |
| Specific Organ Toxicity –<br>Repeated Exposure      | Not classified   |
| Aspiration Hazard                                   | Not classified   |
| General Remarks                                     | Not classified   |

### **Additional Toxicological Information**

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

### **Carcinogenic Categories**

**IRAC** (International Agency for Research on Cancer): No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH** (American Conference of Governmental Industrial Hygienists): No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

**NTP** (National Toxicology Program): No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

**OSHA** (Occupational Safety & Health Administration): No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

## 12. ECOLOGICAL INFORMATION

### **Chemical Fate Information**

Product is readily biodegradable in wastewater treatment systems.

### **Biodegradability**

Slow, not readily degradable Method: OECD 301 D

Chemical Oxygen Demand: 2.324 mg/g DIN 38409 T.31

### **Bioaccumulative potential**

No data available

### **Aquatoxicity, invertebrates**

Species: Daphnia magna

Exposure duration: 48 h

EC50: > 100 mg/l

Method: OECD 202

### **Aquatoxicity, algae / aquatic plants**

Species: Scenedesmus subspicatus

Exposure duration: 72 h

EbC50: 341 mg/l

Method: OECD 201

## 13. DISPOSAL CONSIDERATIONS

### **Waste Disposal Methods**

Dispose according to federal, state and local laws. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Authority. Waste is suitable for incineration.

## 14. TRANSPORTATION INFORMATION

### **U.S. (D.O.T.)**

|                       |   |
|-----------------------|---|
| Proper Shipping Name: | Chemicals not otherwise indexed (NOI) nonhazardous. |
| Hazard Class:         | Not applicable                                      |
| UN/NA:                | Not applicable                                      |
| Labels:               | Not applicable                                      |

### **Canada (T.D.G.)**

|                       |   |
|-----------------------|---|
| Proper Shipping Name: | Chemicals not otherwise indexed (NOI) nonhazardous. |
| Hazard Class:         | Not applicable                                      |
| UN/NA:                | Not applicable                                      |
| Labels:               | Not applicable                                      |

**IMDG**

|                       |   |
|-----------------------|---|
| Proper Shipping Name: | Chemicals not otherwise indexed (NOI) nonhazardous. |
| Hazard Class:         | Not applicable                                      |
| UN/NA:                | Not applicable                                      |
| Labels:               | Not applicable                                      |

**IATA**

|                       |   |
|-----------------------|---|
| Proper Shipping Name: | Chemicals not otherwise indexed (NOI) nonhazardous. |
| Hazard Class:         | Not applicable                                      |
| UN/NA:                | Not applicable                                      |
| Labels:               | Not applicable                                      |

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

|                                   |
|-----------------------------------|
| <b>15. REGULATORY INFORMATION</b> |
|-----------------------------------|

**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 311/312 Hazards:** No SARA Hazards

**SARA 313:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

**California Prop. 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**The components of this product are reported in the following inventories:**

|         |  |
|---------|--|
| CH INV: | On the inventory, or in compliance with the inventory  |
| DSL:    | All components of this product are on the Canadian DSL |
| AICS:   | On the inventory, or in compliance with the inventory  |
| NZIoC:  | On the inventory, or in compliance with the inventory  |
| ENCS:   | On the inventory, or in compliance with the inventory  |
| KECI:   | Not in compliance with the inventory                   |
| PICCS:  | On the inventory, or in compliance with the inventory  |
| IECSC:  | On the inventory, or in compliance with the inventory  |
| TCSI:   | On the inventory, or in compliance with the inventory  |
| TSCA:   | On the inventory, or in compliance with the inventory  |

|                              |
|------------------------------|
| <b>16. OTHER INFORMATION</b> |
|------------------------------|

Components not precisely identified are proprietary or non-hazardous.

Mixture classified as not dangerous according to Regulation (EC) 1272/2008.

Observe employment restrictions for people.



Product is not listed with IARC, NTP, ACGIH or OSHA as a carcinogen.

**Disclaimer:** The information contained in this Safety Data Sheet (SDS), as of the issue date, is believed to be true and correct. However, the accuracy or completeness of this information and any recommendations or suggestions are made without warranty, express or implied, or guarantee. Tersus Environmental, LLC urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. Since we cannot control the application, use or processing of the product, we do not accept responsibility. Therefore, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product and assure that the intended use of the product will not infringe in any party's intellectual property right. The information presented here pertains only to the product as shipped.

All recommendations for the use of our products, whether given by us, orally or to be implied from data or lab tests results by us, are based on the current state of our knowledge at the time those recommendations are made. When additional information is obtained, these recommendations may be updated. They may also be influenced by circumstances outside our control. Notwithstanding, such recommendation the user is responsible that the product as supplied by us is suitable to the process or purpose he/she intends to use it.

Due to the proliferation of sources for information such as manufacturer specific SDSs, we are not and cannot be responsible for SDSs obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.



919.453.5577 • info@tersusenv.com • tersusenv.com

EDS-ER is a Trademark of Tersus Environmental, LLC  
Copyright © 2021 Tersus Environmental, LLC. All Rights Reserved.

**End of Safety Data Sheet**