

## 1. Identification

**Product identifier** Chemical Reducing Solution (CRS®)  
**Other means of identification** None.  
**Recommended use** Soil and Groundwater Remediation.  
**Recommended restrictions** None known.

### Manufacturer/Importer/Supplier/Distributor information

**Company name** REGENESIS  
**Address** 1011 Calle Sombra  
 San Clemente, CA 92673 USA  
**General information** 949-366-8000  
**E-mail** CustomerService@regenesisis.com

**Emergency phone number** For Dangerous Goods Incidents ONLY (spill, leak, fire, exposure or accident), call CHEMTREC 24/7 at:  
**USA, Canada** (+)1-800-424-9300  
**International** +1 703-741-5970

## 2. Hazard identification

**Physical hazards** Not classified.

**Health hazards** Not classified.

### Label elements

**Hazard symbol** None.  
**Signal word** None.  
**Hazard statement** The mixture does not meet the criteria for classification.

### Precautionary statement

**Prevention** Observe good industrial hygiene practices.  
**Response** Wash hands after handling.  
**Storage** Store away from incompatible materials.  
**Disposal** Dispose of waste and residues in accordance with local authority requirements.

**Supplemental information** None.

**Other hazards** None known.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Water		7732-18-5	85-92
Ferrous Gluconate		299-29-6	8-15

**Composition comments** All concentrations are in percent by weight unless otherwise indicated.

## 4. First-aid measures

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist.  
**Skin contact** Remove contaminated clothing and shoes. Wash off with soap and water. Get medical attention if irritation develops and persists.  
**Eye contact** Rinse with water. Get medical attention if irritation develops and persists.  
**Ingestion** Rinse mouth. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention if symptoms occur.

<b>Most important symptoms/effects, acute and delayed</b>	May cause temporary irritation on skin or eye contact.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.
<b>5. Fire-fighting measures</b>	
<b>Suitable extinguishing media</b>	Small fires: Dry chemical powder. Larger fires: Water spray, fog or foam.
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed. Combustion products may include: carbon monoxide, carbon dioxide, iron oxides.
<b>Special protective equipment and precautions for firefighters</b>	Use protective equipment appropriate for surrounding materials.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted. The product itself does not burn.
<b>6. Accidental release measures</b>	
<b>Personal precautions, protective equipment and emergency procedures</b>	Wear appropriate protective equipment and clothing during clean-up.
<b>Methods and materials for containment and cleaning up</b>	This product is miscible in water.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.
<b>7. Handling and storage</b>	
<b>Precautions for safe handling</b>	Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Avoid breathing spray mist. Use with adequate ventilation. Observe good industrial hygiene practices. Wear appropriate personal protective equipment (See Section 8).
<b>Conditions for safe storage, including any incompatibilities</b>	Store in original tightly closed container. Store in a cool, dry, well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep away from extreme heat and strong oxidizing agents.
<b>8. Exposure controls/personal protection</b>	
<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	Not normally needed. In case of insufficient ventilation wear suitable respiratory equipment. Eye wash fountain and emergency showers are recommended.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Use safety glasses. Where contact with eyes is likely, use chemical goggles.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
<b>Other</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment. Wear respiratory protection during operations where spraying or misting occurs.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties****Appearance**

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Colour</b>	Dark green to black.

**Odour** Odourless.

**Odour threshold** Not available.

**pH** 6 - 8

**Melting point/freezing point** Property has not been measured.

**Initial boiling point and boiling range** Property has not been measured.

**Flash point** Not flammable.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not applicable.

**Upper/lower flammability or explosive limits**

**Explosive limit - lower (%)** Property has not been measured.

**Explosive limit – upper (%)** Property has not been measured.

**Vapour pressure** Property has not been measured.

**Vapour density** Property has not been measured.

**Relative density** 1 - 1.2

**Solubility(ies)**

**Solubility (water)** Miscible

**Partition coefficient (n-octanol/water)** No data available.  
Property has not been measured.

**Auto-ignition temperature** Property has not been measured.

**Decomposition temperature** Product can oxidize in air: iron (II) to iron (III).

**Viscosity** Not available.

**Other information**

**Density** Property has not been measured.

**Kinematic viscosity** Property has not been measured.

**10. Stability and reactivity**

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability** A component of this product can oxidize in air: iron (II) to iron (III).

**Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.

**Conditions to avoid** Contact with incompatible materials. Keep from freezing.

**Incompatible materials** Oxidizing agents.

**Hazardous decomposition products** No hazardous decomposition products are known.

**11. Toxicological information****Information on likely routes of exposure**

**Inhalation** Prolonged inhalation may be harmful.

**Skin contact** Prolonged or repeated skin contact may result in minor irritation.

**Eye contact** Direct contact with eyes may cause temporary irritation.

**Ingestion** Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics** May cause temporary irritation on skin or eye contact.

#### Information on toxicological effects

**Acute toxicity** Not expected to be acutely toxic.

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritation.

#### Respiratory or skin sensitisation

**Respiratory sensitisation** Not a respiratory sensitiser.

**Skin sensitisation** This product is not expected to cause skin sensitisation.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** Not classifiable as to carcinogenicity to humans.

**Reproductive toxicity** Not classified.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence and degradability** Product can oxidize in air: iron (II) to iron (III).

**Bioaccumulative potential** No data available.

**Mobility in soil** This product is miscible in water. Expected to be highly mobile in soil.

**Other adverse effects** None known.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

### TDG

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

## 15. Regulatory information

**Canadian regulations** This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

**Controlled Drugs and Substances Act**

Not regulated.

**Export Control List (CEPA 1999, Schedule 3)**

Not listed.

**Greenhouse Gases**

Not listed.

**Precursor Control Regulations**

Not regulated.

**International regulations****Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Kyoto Protocol**

Not applicable.

**Montreal Protocol**

Not applicable.

**Basel Convention**

Not applicable.

**International Inventories**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information****Issue date** 02-June-2022**Revision date** -**Version No.** 01**List of abbreviations** CEN: European Committee for Standardization (Comité Européen de Normalisation).**Disclaimer** Regenesis cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.