

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 29.01.2014

Revision: 29.01.2014

1 Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name: Scale Free 2850 Reverse Osmosis Antiscalant**
- **Article number: SF 2850**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Descaling compound/ Scale solvent
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Scale Free Company, Inc.
16420 West Hardy Rd.
Houston, TX 77060
Phone: (281) 873-5555
- **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585

2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



corrosion

Met. Corr.1 H290 May be corrosive to metals.
Eye Dam. 1 H318 Causes serious eye damage.

-
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



C; Corrosive

R34: Causes burns.

- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
 - **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.
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- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

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- **Hazard pictograms**



GHS05

- **Signal word** Danger

- **Hazard-determining components of labelling:**

1-Hydroxyethylidene-1,1-Diphosphonic Acid (HEDP) 60%

- **Hazard statements**

H290 May be corrosive to metals.

H318 Causes serious eye damage.

- **Precautionary statements**

P280 Wear protective gloves / eye protection.

P264 Wash thoroughly after handling.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Additional information:** Repeated exposure may cause skin dryness or cracking.

- **Hazard description:**

- **WHMIS-symbols:**

D2B - Toxic material causing other toxic effects

E - Corrosive material



- **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 0

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 2

Fire = 0

Reactivity = 0

- **HMIS Long Term Health Hazard Substances**

None of the ingredients is listed.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

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· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 2809-21-4	1-Hydroxyethylidene-1,1-Diphosphonic Acid (HEDP) 60%	NR%
EINECS: 220-552-8	 Xn R22;  Xi R37/38-41  Met. Corr. 1, H290; Eye Dam. 1, H318  Acute Tox. 4, H302	

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· **4.1 Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:**

Supply fresh air; consult doctor in case of complaints.

Provide oxygen treatment if affected person has difficulty breathing.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

Seek immediate medical help for blistering or open wounds.

· **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

Do not remove contact lenses if worn.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

· **4.2 Most important symptoms and effects, both acute and delayed**

Danger of severe eye injury.

Gastric or intestinal disorders.

Breathing difficulty

Acidosis

· **Hazards**

Danger of gastric perforation.

Danger of severe eye injury.

· **4.3 Indication of any immediate medical attention and special treatment needed**

If necessary oxygen respiration treatment.

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5 Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information** No further relevant information available.

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Use limestone to neutralize and absorb spill.
Pick up mechanically.
Send for recovery or disposal in suitable receptacles.
Dispose contaminated material as waste according to item 13.
Clean the affected area carefully; suitable cleaners are:
Warm water
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **7.1 Precautions for safe handling**
Use only in well ventilated areas.
Prevent formation of aerosols.
Avoid splashes or spray in enclosed areas.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Unsuitable material for receptacle: aluminium.
Unsuitable material for receptacle: steel.
Store only in the original receptacle.

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- **Information about storage in one common storage facility:**
 - Store away from foodstuffs.
 - Do not store together with alkalis (caustic solutions).
 - Store away from metals.
 - Store away from oxidizing agents.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients 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.
- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - The usual precautionary measures are to be adhered to when handling chemicals.
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes and skin.
 - Do not inhale gases / fumes / aerosols.
- **Respiratory protection:**
 - Not required under normal conditions of use.
 - Use suitable respiratory protective device in case of insufficient ventilation.
 - Use suitable respiratory protective device when aerosol or mist is formed.
 - For spills, respiratory protection may be advisable.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Sensibilization by the components in the glove materials is possible.

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **For the permanent contact gloves made of the following materials are suitable:**

Butyl rubber, BR
Nitrile rubber, NBR
Neoprene gloves
Natural rubber, NR
Fluorocarbon rubber (Viton)

- **Eye protection:**

Contact lenses should not be worn.



Safety glasses

- **Body protection:** Acid resistant protective clothing

- **Limitation and supervision of exposure into the environment**

No further relevant information available.

- **Risk management measures**

See Section 7 for additional information.

No further relevant information available.

9 Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Liquid
Colour:	Amber coloured
Odour:	Characteristic
Odour threshold:	Not determined.

pH-value at 20 °C:	1
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- **Change in condition**

Melting point/Melting range:	Not Determined.
Boiling point/Boiling range:	212° F / 100 °C

Flash point:	Not applicable.
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Flammability (solid, gaseous):	Not applicable.
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Ignition temperature:	Not determined.
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Decomposition temperature:	Not determined.
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Self-igniting:	Product is not self-igniting.
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Danger of explosion:	Product does not present an explosion hazard.
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· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not determined.
· Density at 20 °C:	1,2 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· 9.2 Other information	No further relevant information available.

10 Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with alkali (lyes).
Reacts with certain metals.
Reacts with strong oxidizing agents.
Toxic fumes may be released if heated above the decomposition point.
- **10.4 Conditions to avoid** Store away from oxidizing agents.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Phosphorus oxides (e.g. P₂O₅)

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.

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· **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:

Irritant

· **Acute effects (acute toxicity, irritation and corrosivity):** Harmful

12 Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:** The product contains materials that are harmful to the environment.

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**

· **Remark:**

The product causes an alteration of the pH-value within the testing system. The result refers to the non-neutralised sample.

After neutralization a reduction of the harming action may be recognized

· **Additional ecological information:**

· **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

Dilute concentrate with water and neutralize afterwards with suitable material (lime or chalk). The formed salts are inert and pose little hazard.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

· **Uncleaned packaging:**

· **Recommendation:**

Disposal must be made according to official regulations.

Packaging may be reused or recycled after cleaning.

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· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

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14 Transport information

· 14.1 UN-Number · DOT, ADR, IMDG, IATA	UN1760
· 14.2 UN proper shipping name · DOT · ADR · IMDG, IATA	Corrosive liquids, n.o.s. (1-Hydroxyethylidene-1,1-Diphosphonic Acid (HEDP) 60%, phosphonic acid) 1760 CORROSIVE LIQUID, N.O.S. (1-Hydroxyethylidene-1,1-Diphosphonic Acid (HEDP) 60%, phosphonic acid) CORROSIVE LIQUID, N.O.S. (1-Hydroxyethylidene-1,1-Diphosphonic Acid (HEDP) 60%, phosphonic acid)
· 14.3 Transport hazard class(es) · DOT	
	
· Class · Label	8 Corrosive substances. 8
· ADR	
	
· Class · Label	8 (C9) Corrosive substances. 8
· IMDG, IATA	
	
· Class · Label	8 Corrosive substances. 8
· 14.4 Packing group · DOT, ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Danger code (Kemler):	Warning: Corrosive substances. 80

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· EMS Number:	F-A,S-B
· Segregation groups	Acids
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Transport category	3
· Tunnel restriction code	E
· UN "Model Regulation":	UN1760, CORROSIVE LIQUID, N.O.S. (1-Hydroxyethylidene-1,1-Diphosphonic Acid (HEDP) 60%, phosphonic acid), 8, III

15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

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· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Canada**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

R22 Harmful if swallowed.

R37/38 Irritating to respiratory system and skin.

R41 Risk of serious damage to eyes.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

Met. Corr. 1: Corrosive to metals, Hazard Category 1

Acute Tox. 4: Acute toxicity, Hazard Category 4

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

· **Sources**

SDS Prepared by:

ChemTel Inc.

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