

Safety Data Sheet

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


Printing date 03.02.2015


Revision: 03.02.2015

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

- **1.1 Product identifier**
- **Trade name:** Scale Free 2800
- **Article number:** SF 2800
- **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** Reverse Osmosis Antiscalant
- **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

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Classifications listed also are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).
-  corrosion
- Met. Corr.1 H290 May be corrosive to metals.
Skin Corr. 1C H314 Causes severe skin burns and 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.
- **Additional information:**
There are no other hazards not otherwise classified that have been identified.
0 percent of the mixture consists of component(s) of unknown toxicity

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· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is additionally classified and labelled according to the Globally Harmonized System within the United States (GHS).

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS05

· Signal word Danger

· Hazard-determining components of labelling:

(1-hydroxyethane-1,1-diyl)bis(phosphonic acid)
phosphonic acid

· Hazard statements

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

· Precautionary statements

P260 Do not breathe mist/vapours/spray.

P280 Wear protective gloves / eye protection.

P234 Keep only in original container.

P303+P361+P353 IF ON SKIN (or hair): Remove/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.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

· Hazard description:

· WHMIS-symbols:

D2B - Toxic material causing other toxic effects

E - Corrosive material



· NFPA ratings (scale 0 - 4)



Health = 3

Fire = 0

Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 3

Fire = 0

Reactivity = 0

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· HMIS Long Term Health Hazard Substances

None of the ingredients are listed.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

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

· Dangerous components:

CAS: 2809-21-4 EINECS: 220-552-8	(1-hydroxyethane-1,1-diyl)bis(phosphonic acid) ☒ Xn R22; ☒ Xi R41 ☞ Met. Corr. 1, H290; Eye Dam. 1, H318 ☠ Acute Tox. 4, H302	10-25%
CAS: 10294-56-1 EINECS: 233-663-1 Index number: 015-157-00-0	phosphonic acid ☠ C R35; ☒ Xn R22 ☞ Met. Corr. 1, H290; Skin Corr. 1A, H314 ☠ Acute Tox. 4, H302	< 1,0%

· Additional information:

For the listed ingredients, the identity and exact percentages are being withheld as a trade secret.

For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· After skin contact:

Immediately remove any clothing soiled by the product.

Immediately rinse with water.

If skin irritation continues, consult a doctor.

Seek immediate medical help for blistering or open wounds.

· After eye contact:

Protect unharmed eye.

Remove contact lenses if worn.

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

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

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

Headache
Dizziness
Coughing
Gastric or intestinal disorders.
Nausea in case of ingestion.
Strong caustic effect on skin and mucous membranes.

- **Hazards**

Causes serious eye damage.
Danger of gastric perforation.

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

Medical supervision for at least 48 hours.

SECTION 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**

During heating or in case of fire poisonous gases are produced.

- **5.3 Advice for firefighters**

- **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

- **Additional information** No further relevant information available.

SECTION 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.

Send for recovery or disposal in suitable receptacles.

Dispose contaminated material as waste according to item 13.

- **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.

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SECTION 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:**
 Store only in the original receptacle.
 Unsuitable material for receptacle: aluminium.
 Unsuitable material for receptacle: steel.
- **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 oxidising agents.
- **Further information about storage conditions:**
 Store in cool, dry conditions in well sealed receptacles.
 Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 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.
 Do not inhale gases / fumes / aerosols.
 Avoid contact with the eyes and skin.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
- **Respiratory protection:**
 Not required under normal conditions of use.
 Use suitable respiratory protective device when high concentrations are present.

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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.

· **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.

· **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

· **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.

SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form:

Liquid

Colour:

Amber coloured

· **Odour:**

Disinfectant

Disinfectant Odor

· **Odour threshold:**

Not determined.

· **pH-value at 20 °C (68 °F):**

< 1

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- **Change in condition**
 - Melting point/Melting range:** 0 °C (32 °F)
 - Boiling point/Boiling range:** 100 °C (212 °F)
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not applicable.
- **Auto/Self-ignition temperature:** Not determined.
- **Decomposition temperature:** Not determined.
- **Self-igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Vapour pressure at 20 °C (68 °F):** 18 mmHg
- **Density at 20 °C (68 °F):** 1,1 - 1,2 g/cm³ (9,18 - 10,014 lbs/gal)
- **Relative density:** Not determined.
- **Vapour density at 20 °C (68 °F):** > 1 g/cm³ (> 8,345 lbs/gal) (air= 1)
- **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.

SECTION 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 strong oxidising agents.
Toxic fumes may be released if heated above the decomposition point.
Corrosive action on metals.
- **10.4 Conditions to avoid:** Store away from oxidising agents.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide

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Phosphorus oxides (e.g. P₂O₅)

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

· **LD/LC50 values relevant for classification:** None.

Primary irritant effect:

· **on the skin:** Caustic effect on skin and mucous membranes.

· **on the eye:** Strong irritant with the danger of severe eye injury.

· **Sensitisation:** No sensitising effects known.

· **Subacute to chronic toxicity:** No further relevant information available.

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

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· **Acute effects (acute toxicity, irritation and corrosivity):** May be harmful if swallowed.

· **Repeated dose toxicity:** No further relevant information available.

SECTION 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:** After neutralisation a reduction of the harming action may be recognised

Additional ecological information:

General notes:

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

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 unneutralised.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. If the dilution of the use-level pH-value is considerably increased after use, the aqueous waste, emptied into drains, is only low water-dangerous.

12.5 Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Small amounts may be diluted with plenty of water and washed away. Dispose of larger 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: Packaging may be reused or recycled after cleaning.

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

SECTION 14: Transport information

14.1 UN-Number

DOT, ADR, IMDG, IATA

UN3265

14.2 UN proper shipping name



Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 5 L (1.3 gal).

DOT, IATA

Corrosive liquid, acidic, organic, n.o.s. (1-hydroxyethane-1,1-diyl)bis(phosphonic acid)

ADR

3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1-hydroxyethane-1,1-diyl)bis(phosphonic acid)

IMDG

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1-hydroxyethane-1,1-diyl)bis(phosphonic acid)

14.3 Transport hazard class(es)

DOT



Class

8 Corrosive substances.

Label

8

ADR



Class

8 (C3) Corrosive substances.

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· Label	8
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· IMDG, IATA	
	
· Class	8 Corrosive substances.
· Label	8
· 14.4 Packing group	
· DOT, ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Danger code (Kemler):	80
· 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.
<hr/>	
· Transport/Additional information:	
<hr/>	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	E
<hr/>	
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN3265, CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1-hydroxyethane-1,1-diyl)bis(phosphonic acid), 8, III

SECTION 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 are listed.

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

None of the ingredients are listed.

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

All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

Present in trace quantities.

107-13-1 | acrylonitrile

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

None of the ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

· **Canada**

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

All ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

· **Other regulations, limitations and prohibitive regulations**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

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

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SECTION 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.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

R22 Harmful if swallowed.

R35 Causes severe burns.

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 Harmonised 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

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C

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

· Sources

SDS Prepared by:

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