

Safety Data Sheet

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

Printing date: 12.02.2016

Revision: 12.02.2016

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

- **1.1 Product identifier**
- **Trade name:** Scale Free Closed Loop Inhibitor
- **Product code:** SF6100
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the mixture:** Water treatment
- **Uses advised against:** Contact manufacturer.

- **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.
+1 (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 are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).
The following classifications are applicable only to OSHA (USA) regulations and not the specific CLP regulation: H360.
Met. Corr.1 H290 May be corrosive to metals.
Acute Tox. 4 H302 Harmful if swallowed.
Skin Corr. 1C H314 Causes severe skin burns and eye damage.
Repr. 1B H360 May damage fertility or the unborn child.

- **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**
The following pictograms are only for use within the United States (OSHA): GHS08.



GHS05 GHS07 GHS08

- **Signal word** Danger

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

sodium nitrite
sodium hydroxide
sodium 4(or 5)-methyl-1H-benzotriazolide

· **Hazard statements**

The following classifications are applicable only to OSHA (USA) regulations and not the specific CLP regulation: H360.

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H360 May damage fertility or the unborn child.

· **Precautionary statements**

The following Precautionary Statements are applicable only to the OSHA GHS regulations and not the EU CLP regulations: P201, P202, P308+P313.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe mist.

P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection.

P234 Keep only in original container.

P270 Do not eat, drink or smoke when using this product.

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.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P363 Wash contaminated clothing before reuse.

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

P308+P313 IF exposed or concerned: Get medical advice/attention.

P390 Absorb spillage to prevent material damage.

P405 Store locked up.

P406 Store in corrosive resistant container with a resistant inner liner.

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

· **Additional information:**

Restricted to professional users.

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *3

Fire = 0

Reactivity = 0

· **2.3 Other hazards** There are no other hazards not otherwise classified that have been identified.

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- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components:

| | | |
|--|--|--------|
| CAS: 7632-00-0 EINECS: 231-555-9 Index number: 007-010-00-4 | sodium nitrite ----- ☠ Ox. Sol. 3, H272 ☠ Acute Tox. 3, H301 ☠ Aquatic Acute 1, H400 | 10-20% |
| CAS: 12179-04-3 EINECS: 215-540-4 Index number: 005-011-02-9 | disodium tetraborate pentahydrate ----- ☠ Repr. 1B, H360FD | <5% |
| CAS: 1310-73-2 EINECS: 215-185-5 Index number: 011-002-00-6 | sodium hydroxide ----- ☠ Met. Corr.1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318 | <5% |

SVHC

12179-04-3 | disodium tetraborate pentahydrate

Additional information:

For the listed ingredient(s), the identity and exact percentages are being withheld as a trade secret.
For the wording of the listed Hazard Statements refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation:

Supply fresh air; consult doctor in case of complaints.
Provide oxygen treatment if affected person has difficulty breathing.

After skin contact:

Immediately remove any clothing soiled by the product.
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
Launder contaminated clothing before re-use.
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.

4.2 Most important symptoms and effects, both acute and delayed

Strong caustic effect on skin and mucous membranes.

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Gastric or intestinal disorders when ingested.

· **Hazards:**

Causes serious eye damage.

Harmful in contact with skin.

Harmful if swallowed.

Danger of gastric perforation.

May damage fertility or the unborn child.

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

Medical supervision for at least 48 hours.

If medical advice is needed, have product container or label at hand.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

The product is not flammable.

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.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

Ensure adequate ventilation

· **6.2 Environmental precautions** Avoid release to the environment.

· **6.3 Methods and material for containment and cleaning up**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Send for recovery or disposal in suitable receptacles.

· **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.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Prevent formation of aerosols.

Use only in well ventilated areas.

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- Use personal protective equipment as required.
- Avoid contact with the eyes and skin.
- **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:**
Use only receptacles specifically permitted for this substance/product.
Unsuitable material for receptacle: aluminium.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Do not store together with acids.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· **Ingredients with limit values that require monitoring at the workplace:**

12179-04-3 disodium tetraborate pentahydrate

| | |
|-----------|---|
| REL (USA) | Long-term value: 1 mg/m ³ |
| TLV (USA) | Short-term value: 6* mg/m ³ Long-term value: 2* mg/m ³ *as inhalable fraction |

1310-73-2 sodium hydroxide

| | |
|-----------|--------------------------------------|
| REL (USA) | Long-term value: 2 mg/m ³ |
| REL (USA) | Ceiling limit: 2 mg/m ³ |
| TLV (USA) | Ceiling limit: 2 mg/m ³ |

- **DNELs:** No further relevant information available.
- **PNECs:** No further relevant information available.
- **8.2 Exposure controls**
- **Engineering measures** Provide adequate ventilation.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Avoid contact with the eyes and skin.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Pregnant women should strictly avoid inhalation or skin contact.
- **Respiratory protection:**
Not required under normal conditions of use.
Use suitable respiratory protective device when aerosol or mist is formed.

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· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**

Neoprene gloves
Nitrile rubber, NBR
Butyl rubber, BR

· **Eye protection:**

Contact lenses should not be worn.



Safety glasses

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment:**

No further relevant information available.

SECTION 9: Physical and chemical properties

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

· **Appearance**

| | |
|-------------------------|-----------------|
| Form: | Liquid |
| Colour: | Violet |
| Odour: | Odourless |
| Odour threshold: | Not determined. |

· **pH-value at 20 °C (68 °F):** 11,6

· **Melting point/Melting range:** Not determined.

· **Boiling point/Boiling range:** 104 °C (219 °F)

· **Flash point:** The product is not flammable.

· **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.

· **Oxidising properties** Not determined.

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- | | |
|---|--|
| · Vapour pressure: | Not determined. |
| · Density at 20 °C (68 °F): | 1,1 g/cm ³ (9,18 lbs/gal) |
| · 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. |

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Corrosive action on metals.
Exothermic reaction with acids.
Toxic fumes may be released if heated above the decomposition point.
- **10.4 Conditions to avoid** Avoid acids.
- **10.5 Incompatible materials** Strong acids
- **10.6 Hazardous decomposition products** Possible in traces.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

7632-00-0 sodium nitrite

| | | |
|------|------|----------------|
| Oral | LD50 | 85 mg/kg (rat) |
|------|------|----------------|

1310-73-2 sodium hydroxide

| | | |
|------|------|------------------|
| Oral | LD50 | 2000 mg/kg (rat) |
|------|------|------------------|

- **Primary irritant effect**
- **Skin corrosion/irritation:**
Causes severe skin burns and eye damage.

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- **Serious eye damage/irritation:**
Causes severe skin burns and eye damage.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **Carcinogenic categories**

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

None of the ingredients are listed.

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

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

None of the ingredients are listed.

· **Probable routes of exposure:**

Ingestion.
Inhalation.
Eye contact.
Skin contact.

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

Harmful if swallowed.
Causes severe skin burns and eye damage.

· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

· **Carcinogenicity:** Based on available data, the classification criteria are not met.

· **Reproductive toxicity:**

May damage fertility or the unborn child.

· **STOT-single exposure:** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.

· **Aspiration hazard:** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:** Likely to be toxic to aquatic organisms

· **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.

· **Additional ecological information:**

· **General notes:**

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 increased pH-values. A high pH-value harms aquatic organisms. If the dilution of the use-level pH-value is considerably reduced, 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.

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

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

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.

· Uncleaned packaging:

· **Recommendation:** Disposal must be made according to official regulations.

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

SECTION 14: Transport information

· 14.1 UN-Number

· DOT, ADR, IMDG, IATA

UN1760

· 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

Corrosive liquids, n.o.s. (Sodium hydroxide, sodium 4(or 5)-methyl-1H-benzotriazolide)

· ADR

1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE, SODIUM 4(OR 5)-METHYL-1H-BENZOTRIAZOLIDE)

· IMDG

CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE, SODIUM 4(OR 5)-METHYL-1H-BENZOTRIAZOLIDE)

· IATA

Corrosive liquid, n.o.s. (Sodium hydroxide, sodium 4(or 5)-methyl-1H-benzotriazolide)

· 14.3 Transport hazard class(es)

· DOT



· Class

8 Corrosive substances.

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| | |
|---|--------------------------------|
| · Label | 8 |
| · ADR | |
|  | |
| · Class | 8 (C9) Corrosive substances. |
| · Label | 8 |
| · 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 | Alkalis |
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · ADR | |
| · Transport category | 3 |
| · Tunnel restriction code | E |

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.

· Section 313 (Specific toxic chemical listings):

7632-00-0 | sodium nitrite

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

All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **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)**

12179-04-3 | disodium tetraborate pentahydrate

I (oral)

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

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%)**

7632-00-0 | sodium nitrite

1310-73-2 | sodium hydroxide

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients are listed.

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

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

12179-04-3 | disodium tetraborate pentahydrate

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

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**

H272 May intensify fire; oxidiser.

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H290 May be corrosive to metals.
 H301 Toxic if swallowed.
 H314 Causes severe skin burns and eye damage.
 H318 Causes serious eye damage.
 H360FD May damage fertility. May damage the unborn child.
 H400 Very toxic to aquatic life.

Abbreviations and acronyms:

ADR: 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
 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)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 SVHC: Substances of Very High Concern
 vPvB: very Persistent and very Bioaccumulative
 NIOSH: National Institute for Occupational Safety
 OSHA: Occupational Safety & Health
 Ox. Sol. 3: Oxidising Solids, Hazard Category 3
 Met. Corr. 1: Corrosive to metals, Hazard Category 1
 Acute Tox. 3: Acute toxicity, Hazard Category 3
 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
 Repr. 1B: Reproductive toxicity, Hazard Category 1B
 Repr. 1B: Reproductive toxicity, Hazard Category 1B
 Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

Sources

Website, European Chemicals Agency (echa.europa.eu)
 Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
 Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
 Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: ISBN: 978-0-470-07488-6
 Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
 Safety Data Sheets, Individual Manufacturers

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