

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

1.1. Product identifier

Product form : Mixture
 Product name : Star San

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Acid Anionic Sanitizer

1.3. Details of the supplier of the safety data sheet

Five Star Chemicals & Supply Inc
 4915 E 52nd Ave
 Commerce City, CO 80022

1.4. Emergency telephone number

Emergency number : 800-535-5053
 INFOTRAC

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Skin Corr. 1A H314
 Aquatic Acute 3 H402

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US) : Danger
 Hazard statements (GHS-US) : H314 - Causes severe skin burns and eye damage
 H402 - Harmful to aquatic life
 Precautionary statements (GHS-US) : P260 - Do not breathe vapors, mist, spray
 P264 - Wash hands, forearms and face thoroughly after handling
 P273 - Avoid release to the environment
 P280 - Wear protective gloves, eye protection
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P310 - Immediately call a POISON CENTER
 P321 - Specific treatment (see first aid on this label)
 P363 - Wash contaminated clothing before reuse
 P405 - Store locked up
 P501 - Dispose of contents/container to in accordance with local regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
phosphoric acid, conc=75%, aqueous solution	(CAS No) 7664-38-2	50	Skin Corr. 1B, H314
dodecylbenzenesulphonic acid	(CAS No) 27176-87-0	15	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314 Aquatic Acute 2, H401

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Causes severe skin burns and eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Reactivity : Corrosive vapors.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe vapors, mist, spray. Avoid contact during pregnancy/while nursing.
- Hygiene measures : Wash hands and forearms thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight. Keep container closed when not in use.
- Incompatible products : Strong bases.
- Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Star San	
ACGIH	Not applicable
OSHA	Not applicable

phosphoric acid, conc=75%, aqueous solution (7664-38-2)

ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³
ACGIH	ACGIH STEL (mg/m ³)	3 mg/m ³
ACGIH	Remark (ACGIH)	URT, eye, & skin irr
OSHA	OSHA PEL (TWA) (mg/m ³)	1 mg/m ³

dodecylbenzenesulphonic acid (27176-87-0)

ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

- Personal protective equipment : Avoid all unnecessary exposure.
- Hand protection : Wear protective gloves.
- Eye protection : Chemical goggles or face shield.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Wear appropriate mask.
- Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Color : amber
- Odor : No data available
- Odor threshold : No data available
- pH : 1
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available
- Flash point : > 142 °F
- Auto-ignition temperature : No data available

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Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.36
Solubility	: Soluble in water. Water: 100
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive vapors.

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

phosphoric acid, conc=75%, aqueous solution (7664-38-2)

LD50 oral rat	4400 mg/kg (Rat)
ATE US (oral)	4400.000 mg/kg body weight

dodecylbenzenesulphonic acid (27176-87-0)

LD50 oral rat	650 mg/kg (Rat; Literature study)
ATE US (oral)	650.000 mg/kg body weight

Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 1
Serious eye damage/irritation	: Not classified pH: 1
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

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Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Harmful to aquatic life.

phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
LC50 fish 1	138 mg/l (96 h; Pisces; Pure substance)
LC50 other aquatic organisms 1	240 mg/l (96 h; Protozoa; Pure substance)
LC50 fish 2	100 - 1000 mg/l (Pisces; Pure substance)
LC50 other aquatic organisms 2	100 - 1000 mg/l (Pure substance)
TLM fish 1	138 ppm (24 h; Gambusia affinis; Pure substance)
Threshold limit other aquatic organisms 1	240 mg/l (96 h; Protozoa; Pure substance)
Threshold limit other aquatic organisms 2	100 - 1000, Pure substance

dodecylbenzenesulphonic acid (27176-87-0)	
LC50 fish 1	3.2 - 5.6 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	1 - 10 mg/l (48 h; Daphnia magna; GLP)
LC50 fish 2	3.5 - 10 mg/l (96 h; Brachydanio rerio)
EC50 Daphnia 2	5.88 mg/l (48 h; Daphnia magna)
TLM fish 1	4.2 - 5.6, 96 h; Lepomis macrochirus; Soft water
TLM fish 2	4.2 - 5.6, 96 h; Pimephales promelas; Soft water
Threshold limit algae 1	29 mg/l (96 h; Selenastrum capricornutum)
Threshold limit algae 2	127.9 mg/l (72 h; Scenedesmus subspicatus; GLP)

12.2. Persistence and degradability

Star San	
Persistence and degradability	Not established.

phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
Persistence and degradability	Biodegradability: not applicable. No (test) data on mobility of the components available. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

dodecylbenzenesulphonic acid (27176-87-0)	
Persistence and degradability	Readily biodegradable in water. Low potential for adsorption in soil.
Chemical oxygen demand (COD)	2.41 g O ₂ /g substance

12.3. Bioaccumulative potential

Star San	
Bioaccumulative potential	Not established.

phosphoric acid, conc=75%, aqueous solution (7664-38-2)	
Log Pow	-0.77 (Estimated value)
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.

dodecylbenzenesulphonic acid (27176-87-0)	
BCF fish 1	108 - 551 (Pisces)
BCF fish 2	130 (72 h; Leuciscus idus)
BCF other aquatic organisms 1	140 (120 h; Bacteria)
BCF other aquatic organisms 2	60 (24 h; Chlorophyta)

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dodecylbenzenesulphonic acid (27176-87-0)	
Log Pow	1.96
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

dodecylbenzenesulphonic acid (27176-87-0)	
Surface tension	35 N/m (25 °C; 800 mg/l)

12.5. Other adverse effects

Effect on ozone layer	:
Effect on the global warming	: No known ecological damage caused by this product.
Other information	: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

Transport document description	: UN1760 Corrosive liquids, n.o.s. (Contains Phosphoric Acid and Dodecylbenzenesulfonci acid), 8, III
UN-No.(DOT)	: UN1760
Proper Shipping Name (DOT)	: Corrosive liquids, n.o.s. (Contains Phosphoric Acid and Dodecylbenzenesulfonci acid)
Hazard Classes (DOT)	: 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT)	: 8 - Corrosive



DOT Symbols	: G - Identifies PSN requiring a technical name
Packing group (DOT)	: III - Minor Danger
DOT Special Provisions (49 CFR 172.102)	: IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 154
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"

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Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

UN-No. (IMDG) : 1760
Proper Shipping Name (IMDG) : CORROSIVE LIQUID, N.O.S.
Class (IMDG) : 8 - Corrosive substances
Packing group (IMDG) : III - substances presenting low danger

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Star San

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

dodecylbenzenesulphonic acid	CAS No 27176-87-0	15.00%
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This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

phosphoric acid, conc=75%, aqueous solution (7664-38-2)

Not listed on the United States SARA Section 313

RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
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15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

15.2.2. National regulations

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

phosphoric acid, conc=75%, aqueous solution (7664-38-2)

U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

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15.4. FIFRA Information

Hazard Data:	FIFRA Classification/Typical Hazard Labeling, as outlined in EPA Label Review Manual:	OSHA HCS Requirement for Section 2 of SDS:
Signal Word	Danger	Danger
Acute Toxicity, oral LD50	(Category III) Harmful if swallowed	Not Classified
Acute Toxicity, Dermal LD50	(Category III) Harmful if absorbed through skin	Not Classified
Acute Toxicity, inhalation LC50	(Category III) Harmful if inhaled	Not Classified
Skin Irritation	(Category I) Corrosive. Causes skin burns.	(Category 1) Causes severe skin burns and eye damage.
Eye Irritation	Causes serious eye damage.	(Category 1) Causes serious eye damage.
Sensitization	This product is skin sensitizer	This product is skin sensitizer
Germ Cell Mutagenicity	Not Classified	Not Classified
Carcinogenicity	Not Classified	Not Classified
Reproductive/developmental Toxicity	Not Classified	Not Classified
Specific target organ toxicity, single exposure	Not Classified	Not Classified
Specific target organ exposure repeated exposure	Not Classified	Not Classified
Aspiration	Not Classified	Not Classified
Environmental (Aquatic Toxicity)	Not Classified	Harmful to aquatic life

FIFRA Classification: This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also included other important information, including direction for use. Following is the hazard information as required on the pesticide label:

DANGER

Corrosive

Causes eye damage or skin burns.

Do not get in eyes, on skin, or on clothes.

Avoid breathing spray mist.

Wear protective clothing and rubber gloves.

Wash thoroughly with soap and water after handling.

Remove contaminated clothing and wash before reuse.

SECTION 16: Other information

Other information : None.

Full text of H-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H401	Toxic to aquatic life
H402	Harmful to aquatic life

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product