



### 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

##### 1.2.1. Relevant identified uses

Main use category : Industrial use  
Use of the substance/mixture : Cleaner

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

##### Manufacturer

Five Star Chemicals & Supply, LLC.  
6870 W. 52nd Ave. Suite 205  
Arvada, CO 80002  
T (303) 287-0186

##### Distributor

Five Star Chemicals & Supply, LLC  
Olympisch Stadion 24-28  
1076 DE Amsterdam - The Netherlands  
T +31.20.854.6030

#### 1.4. Emergency telephone number

Emergency number : 800-535-5053 (Infotrac)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Skin Corr. 1B H314  
Eye Dam. 1 H318

Full text of hazard classes, H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Danger  
Hazardous ingredients : Phosphoric acid, Benzenesulfonic acid, 4-C10-13-sec-alkyl derivatives  
Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage.  
Precautionary statements (CLP) : P260 - Do not breathe dust/fume/gas/mist/vapours/spray.  
P280 - Wear protective gloves, eye protection.  
P301+P330+P331+P310 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
Immediately call a POISON CENTER or doctor.  
P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor.  
P305+P351+P338+P310 - IF IN EYES: 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.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### 2.3. Other hazards

No additional information available

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## Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Phosphoric acid substance with a Community workplace exposure limit (Note B)	(CAS-No.) 7664-38-2 (EC-No.) 231-633-2 (EC Index-No.) 015-011-00-6	45 – 55	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivatives	(CAS-No.) 85536-14-7 (EC-No.) 287-494-3	10 – 20	Acute Tox. 4 (Oral), H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Chronic 3, H412

#### Specific concentration limits:

Name	Product identifier	Specific concentration limits
Phosphoric acid	(CAS-No.) 7664-38-2 (EC-No.) 231-633-2 (EC Index-No.) 015-011-00-6	( 10 ≤C < 25) Skin Irrit. 2, H315 ( 10 ≤C < 25) Eye Irrit. 2, H319 ( 25 ≤C < 100) Skin Corr. 1B, H314

Note B : Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ... %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

Full text of H- and EUH-statements: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures after inhalation : If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
- First-aid measures after skin contact : If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
- First-aid measures after ingestion : If swallowed: rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER/doctor.

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

- Symptoms/effects after inhalation : Causes burns to the respiratory system.
- Symptoms/effects after skin contact : Causes severe skin burns. Symptoms may include redness, pain, blisters.
- Symptoms/effects after eye contact : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
- Symptoms/effects after ingestion : May be harmful if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not use water jet.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon. Oxides of phosphorus. May release toxic or corrosive products.

#### 5.3. Advice for firefighters

- Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

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According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758.

### 6.1.1. For non-emergency personnel

No additional information available

### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and material for containment and cleaning up

- |                         |   |
|-------------------------|---|
| For containment         | : Stop leak if safe to do so. Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE). Wear recommended personal protective equipment. |
| Methods for cleaning up | : Sweep or shovel spills into appropriate container for disposal. Provide ventilation.  |

### 6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- |                               |   |
|-------------------------------|---|
| Precautions for safe handling | : Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapours/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Provide adequate ventilation. |
| Hygiene measures              | : Take off immediately all contaminated clothing and wash it before reuse. Wash hands thoroughly after handling.  |

### 7.2. Conditions for safe storage, including any incompatibilities

- |                    |  |
|--------------------|--|
| Storage conditions | : Keep out of the reach of children. Keep container tightly closed in a cool, well-ventilated place. Store in original container. Store locked up. |
|--------------------|--|

### 7.3. Specific end use(s)

Cleaner.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station. Provide readily accessible eye wash stations and safety showers.

#### Hand protection:

Chemical resistant gloves (according to European standard NF EN 374 or equivalent)

#### Eye protection:

Safety eyewear complying with an approved standard such as the European Standard EN166 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

#### Environmental exposure controls:

Avoid release to the environment.

#### Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

- |                |                  |
|----------------|------------------|
| Physical state | : Liquid         |
| Appearance     | : Viscous liquid |
| Colour         | : Amber          |
| Odour          | : None           |

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## Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758.

Odour threshold	: Not available
pH	: 1.36
Relative evaporation rate (butylacetate=1)	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: > 100 °C
Flash point	: Not available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not applicable
Flammability (solid, gas)	: Not flammable
Vapour pressure	: Not applicable
Relative vapour density at 20 °C	: Not available
Relative density	: 1.359
Solubility	: Soluble in water
Partition coefficient n-octanol/water	: Not applicable
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosive properties	: None
Oxidising properties	: None
Explosive limits	: None

### 9.2. Other information

Alkali reserve	: 22.48
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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reactions known under normal conditions of use. Thermal decomposition generates : Corrosive vapours.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Heat. Incompatible materials.

### 10.5. Incompatible materials

Strong bases. Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Products of combustion may include, and are not limited to: oxides of carbon. Oxides of phosphorus. May release toxic or corrosive products.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified.
Acute toxicity (dermal)	: Not classified.
Acute toxicity (inhalation)	: Not classified.

<b>Star San</b>	
LD50 oral rat	2221.999 mg/kg
<b>Phosphoric acid (7664-38-2)</b>	
LD50 oral rat	1530 mg/kg
LD50 dermal rabbit	2740 mg/kg
<b>Benzenesulfonic acid, 4-C10-13-sec-alkyl derivatives (85536-14-7)</b>	
LD50 oral rat	1219 mg/kg
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation	: Causes severe skin burns. pH: 1.65
Serious eye damage/irritation	: Causes serious eye damage. pH: 1.65

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## Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758.

Respiratory or skin sensitisation	: Not classified.
Additional information	: Based on available data, the classification criteria are not met.
Germ cell mutagenicity	: Not classified.
Additional information	: Based on available data, the classification criteria are not met.
Carcinogenicity	: Not classified.
Additional information	: Based on available data, the classification criteria are not met.
Reproductive toxicity	: Not classified.
Additional information	: Based on available data, the classification criteria are not met.
STOT-single exposure	: Not classified.
Additional information	: Based on available data, the classification criteria are not met.
STOT-repeated exposure	: Not classified.
Additional information	: Based on available data, the classification criteria are not met.

Phosphoric acid (7664-38-2)	
NOAEL (oral, rat, 90 days)	250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard	: Not classified.
Additional information	: Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: May cause long-term adverse effects in the aquatic environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified.
Hazardous to the aquatic environment, long-term (chronic)	: Not classified.

Phosphoric acid (7664-38-2)	
LC50 - Fish [1]	75.1 mg/l
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivatives (85536-14-7)	
LC50 - Fish [1]	5.6 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [flow-through])
EC50 - Crustacea [1]	5.2 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	36 mg/l (Species: Desmodesmus subspicatus)
NOEC (chronic)	1.18 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

### 12.2. Persistence and degradability

Star San	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

Star San	
Bioaccumulative potential	Not established.

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivatives (85536-14-7)	
Partition coefficient n-octanol/water	2 (at 23 °C)

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Additional information	: No other effects known
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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
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# Star San

## Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758.

### SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

#### 14.1. UN number

UN-No. (ADR) : 1760  
UN-No. (IMDG) : 1760  
UN-No. (IATA) : 1760

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : CORROSIVE LIQUID, N.O.S. (Phosphoric acid and Benzenesulfonic acid, 4-C10-13-sec-alkyl derivatives)  
Proper Shipping Name (IMDG) : CORROSIVE LIQUID, N.O.S. (Phosphoric acid and Benzenesulfonic acid, 4-C10-13-sec-alkyl derivatives)  
Proper Shipping Name (IATA) : Corrosive liquid, n.o.s. (Phosphoric acid and Benzenesulfonic acid, 4-C10-13-sec-alkyl derivatives)

#### 14.3. Transport hazard class(es)

##### ADR

Transport hazard class(es) (ADR) : 8  
Danger labels (ADR) :



##### IMDG

Transport hazard class(es) (IMDG) : 8  
Danger labels (IMDG) :



##### IATA

Transport hazard class(es) (IATA) : 8  
Danger labels (IATA) :



#### 14.4. Packing group

Packing group (ADR) : III  
Packing group (IMDG) : III  
Packing group (IATA) : III

#### 14.5. Environmental hazards

Dangerous for the environment : No  
Marine pollutant : No  
Other information : No supplementary information available.

#### 14.6. Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

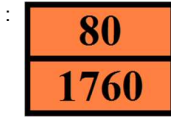
# Star San

## Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758.

### - Overland transport

Orange plates



### - Transport by sea

No data available

### - Air transport

No data available

## 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No additional information available

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Relevant EU provisions transposed through retained EU law

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no REACH candidate substance.

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

#### 15.1.2. National regulations

Not determined

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Indication of changes:

None.

Abbreviations and acronyms:

°C – Degrees Celsius
°F – Degrees Fahrenheit
ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road.
ACGIH – American Conference of Governmental Industrial Hygienists
ATE – Acute Toxicity Estimate
BCF – Bioconcentration Factor
BEI – Biological Exposure Index
CAS – Chemical Abstracts Service
CLP – Regulation (EC) No 1272/2008 on the Classification, Labeling and Packaging of substances and mixtures.
CMR – Carcinogen, Mutagen, Reproductive toxin
cP – centipoise (unit of dynamic viscosity)
cSt – centistokes (unit of kinematic viscosity)
DNEL – Derived No-effect Level
DMEL – Derived Minimal Effect Level
EC50 – Half maximal effective concentration
ECHA – European Chemicals Agency
EC-No. – European Community number
EU – European Union
GHS – Globally Harmonized System of Classification and Labelling of Chemicals
h – Hours
IATA – International Air Transport Association
IC50 – Inhibition concentration
IDLH – Immediately Dangerous to Life or Health
IMDG – International Maritime Dangerous Goods
IOELV – Indicative Occupational Exposure Limit Value
KIFS – Swedish Chemicals Agency's (KemI's) Code of Statutes
kPa – kilopascal
Koc – Adsorption Coefficient
Kow – Octanol-Water Partition Coefficient

# Star San

## Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758.

	<p>LC50 – Median Lethal Concentration          LD50 – Median Lethal Dose          LOAEL – Lowest Observed Adverse Effect level          mg/l – Milligram per liter          mg/kg – Milligram per kilogram          mg/m3 – Milligram per cubic meter          Min – Minutes          NIOSH – National Institute for Occupational Safety and Health          NOEC – No Observed Effect Concentration          NO(A)EL – No Observed (Adverse) Effect Level          N.O.S. – Not Otherwise Specified          OEL – Occupational Exposure Limit          PBT - Persistent, Bioaccumulative and Toxic          PCN – Poison Centre Notification          PNEC – Predicted No Effect Concentration          ppm – Parts per million          PVC – Polyvinyl chloride          REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006          RID – European Agreement concerning the International Carriage of Dangerous Goods by Rail          SDS – Safety Data Sheet          STEL – Short Term Exposure Limit          STOT – Specific Target Organ Toxicity          SVHC – Substance of Very High Concern (CMR, vPvB, PBT)          TDI – Tolerable Daily Intake          TLV – Threshold Limit Value          TWA – Time Weighted Average          UFI – Unique Formulation Identifier          UN – United Nations          vPvB - Very Persistent and Very Bioaccumulative          WEL – Workplace Exposure Limit          WGK – Wassergefährdungskategorie – German water quality classification</p>
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Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long lasting effects.
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Skin Corr. 1B	H314	Expert judgment
Eye Dam. 1	H318	On basis of test data

*Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.*