



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

1.1. Product identifier

Product form : Mixture
Product name : Star San HB™

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

1.2.1. Relevant identified uses

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 Inc
4915 E 52nd Ave
Commerce City, CO 80022
T (303)287-0186

Distributor

Brouwland
Korspelsesteenweg 86,
3581 Beverlo, Belgium
T: +32 11 40 14 08

1.4. Emergency telephone number

For product information or in case of
Emergency Call 0032-(0) 14 58 45 45 (Telephone advice: English, French, German, Dutch)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Met. Corr. 1 H290
Skin Corr. 1B H314
Eye Dam. 1 H318

Full text of hazard classes and H-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, Dodecyl benzene sulfonic acid
Hazard statements (CLP) : H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.
Precautionary statements (CLP) : P101 - If medical advice is needed, have product container or label at hand.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310 - Immediately call a POISON CENTER or doctor/physician.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 - Store locked up.
P501 - Rinse empty container and dispose of container in accordance with local regulations.

2.3. Other hazards

No additional information available

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 (Note B)	(CAS-No.) 7664-38-2 (EC-No.) 231-633-2 (EC Index-No.) 015-011-00-6 (REACH Reg. No.) 01-2119485924-24-XXXX	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 (REACH Reg. No.) 01-2119490234-40-XXXX	10 – 20	Acute Tox. 4 (Oral), H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Chronic 3, H412
1,2-Propanediol	(CAS-No.) 57-55-6 (EC-No.) 200-338-0 (REACH Reg. No.) 01-2119456809-23-XXXX	5-15	Not classified.

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-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. Immediately call a POISON CENTER or 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 or 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 or 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.
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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).
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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.

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. Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Do not flush into surface water or sewer system. 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 : Wash contaminated clothing before reuse. Wash hands, forearms and face 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. Store locked up. Store in original container. Store in a dry, cool and well-ventilated area.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

1,2-Propanediol (57-55-6)		
United Kingdom	WEL TWA (mg/m³)	474 mg/m³ (total particulates and vapour) 10 mg/m³ (particulates)
United Kingdom	WEL TWA (ppm)	150 ppm (total particulates and vapour)
United Kingdom	WEL STEL (mg/m³)	1422 mg/m³ (calculated-total particulate and vapour) 30 mg/m³ (calculated-particulate)
United Kingdom	WEL STEL (ppm)	450 ppm (calculated-total particulate and vapour)
Phosphoric acid (7664-38-2)		
EU	IOELV TWA (mg/m³)	1 mg/m³
EU	IOELV STEL (mg/m³)	2 mg/m³
United Kingdom	WEL TWA (mg/m³)	1 mg/m³
United Kingdom	WEL STEL (mg/m³)	2 mg/m³

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

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

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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	: Amber / yellow liquid
Colour	: Amber / yellow
Odour	: Characteristic
Odour threshold	: No data available
pH	: 1.65
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 200 °F (93.33 °C)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not flammable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.359
Solubility	: Soluble in water
Partition coefficient n-octanol/water	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising 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

No dangerous reactions known under normal conditions of use.

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. Do not mix STAR SAN HB™ with chlorinated cleaners as chlorine gas will result.

10.5. Incompatible materials

Strong bases. Strong oxidizing agents.

10.6. Hazardous decomposition products

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.
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Acute toxicity (dermal) : Not classified.

Acute toxicity (inhalation) : Not classified.

Star San HB™	
LD50 oral rat	4400 mg/kg

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivatives (85536-14-7)	
LD50 oral rat	775 mg/kg
LD50 dermal rabbit	2000 mg/kg

1,2-Propanediol (57-55-6)	
LD50 oral rat	20 g/kg
LD50 dermal rabbit	20800 mg/kg

Phosphoric acid (7664-38-2)	
LD50 oral rat	1530 mg/kg
LD50 dermal rabbit	2740 mg/kg

Unknown acute toxicity (CLP) - SDS : 74.13% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Vapours))

Skin corrosion/irritation : Causes severe skin burns.
pH: 1.65

Serious eye damage/irritation : Causes serious eye damage.
pH: 1.6545

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.

Aspiration hazard : Not classified.

Additional information : Based on available data, the classification criteria are not met.

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Unknown hazards to the aquatic environment (CLP) : Contains 0.45 % of components with unknown hazards to the aquatic environment

Hazardous to the aquatic environment, short-term (acute) : Not classified.

Hazardous to the aquatic environment, long-term (chronic) : Not classified.

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivatives (85536-14-7)	
LC50 fish 1	3 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	2.9 mg/l (Exposure time: 48 h - Species: Daphnia magna)

1,2-Propanediol (57-55-6)	
LC50 fish 1	51600 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
LC50 fish 2	41 – 47 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	> 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 96h algae (1)	19000 mg/l (Species: Pseudokirchneriella subcapitata)

Phosphoric acid (7664-38-2)	
LC50 fish 1	75.1 mg/l

12.2. Persistence and degradability

Star San HB™	
Persistence and degradability	Not established.

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12.3. Bioaccumulative potential

Star San HB™	
Bioaccumulative potential	Not established.
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivatives (85536-14-7)	
Partition coefficient n-octanol/water	2 (at 23 °C)
1,2-Propanediol (57-55-6)	
BCF fish 1	< 1

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

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.

SECTION 14: Transport information

In accordance with ADR, IATA, IMDG, AND RID

14.1. UN number

UN-No. : 1760

14.2. UN proper shipping name

Proper Shipping Name : Corrosive Liquid, N.O.S. (Phosphoric Acid, Dodecylbenzene sulfonic acid)

14.3. Transport hazard class(es)

Transport hazard class(es) : 8

Danger labels :



14.4. Packing group

Packing group : III

14.5. Environmental hazards

Dangerous for the environment : 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.

- Overland transport

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

Not applicable

SECTION 15: Regulatory information

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

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

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

15.1.2. National regulations

No additional information available

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.
cP – centipoise (unit of dynamic viscosity)
cSt – centistokes (unit of kinematic viscosity)
DNEL – Derived No-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
IDLH – Immediately Dangerous to Life or Health
IMDG – International Maritime Dangerous Goods
IOELV – Indicative Occupational Exposure Limit Value
kPa – kilopascal
Kow – Octanol-Water Partition Coefficient
LC50 – Median Lethal Concentration
LD50 – Median Lethal Dose
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
N.O.S. – Not Otherwise Specified
OEL – Occupational Exposure Limit
PBT - Persistent, Bioaccumulative and Toxic
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
TLV – Threshold Limit Value
TWA – Time Weighted Average
UN – United Nations
vPvB - Very Persistent and Very Bioaccumulative

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 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2

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H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.

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

Skin Corr. 1B	H314	Calculation method
Eye Dam. 1	H318	Calculation method

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