

Safety Data Sheet
Stainless Steel Blackener

SECTION 1: Identification

1.1 Product identifier

Product name	Stainless Steel Blackener
Product number	SSB370
Brand	CASWELL

1.3 Recommended use of the chemical and restrictions on use
Blackening of Stainless Steel

1.4 Supplier's details

Name	Caswell Inc
Address	7696 Route 31 Lyons, NY 14489 USA
Telephone	315 946 1213
Fax	315 946 4456
email	sales@caswellplating.com

1.5 Emergency phone number(s)

Office Hours (9-4ET): 315 946 1213
24 Hour: CHEMTEL US# 1-800-255-3924 Intl# +01-813-248-0585

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

- Skin corrosion/irritation (chapter 3.2), Cat. 1B
- Germ cell mutagenicity (chapter 3.5), Cat. 2
- Hazardous to the aquatic environment - long-term hazard (chapter 4.1), Cat. 3
- Acute toxicity, oral (chapter 3.1), Cat. 3

2.2 GHS label elements, including precautionary statements

Pictogram



Signal word

Warning

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Hazard statement(s)

H314	Causes severe skin burns and eye damage
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H341	Suspected of causing genetic defects
H412	Harmful to aquatic life with long lasting effects
H301	Toxic if swallowed

Precautionary statement(s)

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash ... thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face 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.
P363	Wash contaminated clothing before reuse.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a POISON CENTER/doctor/...
P321	Specific treatment (see ... on this label).
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	Dispose of contents/container to ...
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P312	Call a POISON CENTER/doctor/... if you feel unwell.
P403+P233	Store in a well ventilated place. Keep container tightly closed.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P273	Avoid release to the environment.
P270	Do not eat, drink or smoke when using this product.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P330	Rinse mouth.

2.3 Other hazards which do not result in classification

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. WATER OR OTHER NON-REPORTABLE INGREDIENTS

Concentration	75 - 85 %
CAS no.	7732-18-5

2. HYDROCHLORIC ACID (<37%)

Concentration	15 - 20 %
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Other names / synonyms	ANHYDROUS HYDROCHLORIC ACID; CHLOROHYDRIC ACID; HYDROCHLORIC ACID; hydrochloric acid ... %; HYDROCHLORIC ACID
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GAS; HYDROCHLORICACID; HYDROCHLORIDE; hydrogen chloride;
HYDROGENCHLORIDE; MURIATIC ACID; NA 1789; SPIRITS OF SALT;
UN 1050; UN 1789; UN 2186

EC no. 231-595-7
CAS no. 7647-01-0
Index no. 017-002-01-X

- Skin corrosion/irritation (chapter 3.2), Cat. 1B
- Specific target organ toxicity, single exposure (chapter 3.8), Cat. 3

H314 Causes severe skin burns and eye damage
H335 May cause respiratory irritation

3. SELENIOS ACID

Concentration 1 - 4 %

Other names / synonyms MONOHYDRATED SELENIUM DIOXIDE; SELENIOSACID; SELENIOS ACID

CAS no. 7783-00-8

4. COPPER SULFATE PENTAHYDRATE

Concentration 3 %

Other names / synonyms BLUE COPPER AS; BLUE VITRIOL; BLUESTONE; COPPER (2+) SULFATE PENTAHYDRATE; COPPER (II) SULFATE PENTAHYDRATE; COPPER (II) SULFATE PENTAHYDRATE (1:1:5); COPPER SULFATE; COPPER SULPHATE; COPPERFINE-ZINC; COPPER SULFATE PENTAHYDRATE; CSP; CUPRIC SULFATE PENTAHYDRATE; NATURAL CHALCANTHITE; ROMAN VITRIOL; SALZBURG VITRIOL; SULFURIC ACID, COPPER (2+) SALT (1:1), PENTAHYDRATE; SULFURIC ACID, COPPER (2+) SALT, PENTAHYDRATE; TRIANGLE

CAS no. 7758-99-8

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Avoid all contact. Corrosive to skin, eyes and mucous membranes.
If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash off with soap and plenty of water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

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- 4.2 Most important symptoms/effects, acute and delayed**
Ingestion will result in metallic taste, garlic breath and nausea.

SECTION 5: Fire-fighting measures

- 5.1 Suitable extinguishing media**
Dry chemical, foam, carbon dioxide, water fog.
- 5.3 Special protective actions for fire-fighters**
Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation. Use personal protective equipment. For personal protection see section 8.
- 6.3 Methods and materials for containment and cleaning up**
SMALL SPILLS: Contain and absorb with absorbent material and place into containers for later disposal. Wash site of spillage thoroughly with water. LARGE SPILLS: Dike far ahead of spill to prevent further movement. Recover by pumping or by using a suitable absorbent material and place into containers for later disposal. Dispose in suitable waste container.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling**
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

- 1. Hydrogen chloride (CAS: 7647-01-0)**
PEL (Inhalation): (C) 5 ppm (OSHA)
OSHA Annotated Table Z-1, www.osha.gov
- 2. Hydrogen chloride (CAS: 7647-01-0)**
PEL (Inhalation): (C) 7 mg/m³ (OSHA)
OSHA Annotated Table Z-1, www.osha.gov
- 3. Hydrogen chloride (CAS: 7647-01-0)**
PEL (Inhalation): (C) 5 ppm (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov
- 4. Hydrogen chloride (CAS: 7647-01-0)**
REL (Inhalation): (C) 5 ppm (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov
- 5. SELENIOS ACID (CAS: 7783-00-8)**
TWA (Oral): 0.2 mg/m³ (ACGIH)
- 6. SELENIOS ACID (CAS: 7783-00-8)**
TWA (Oral): 0.2 mg/m³ (OSHA)
- 7. SELENIOS ACID (CAS: 7783-00-8)**
TWA (Oral): 0.2 mg/m³ (NIOSH)

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8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Wear chemical resistant gloves and clothing.

Body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form	Light Blue Solution
Odor	Odorless
Odor threshold	
pH	-1 to 1
Melting point/freezing point	None/32 deg F
Initial boiling point and boiling range	228 deg F
Flash point	None
Evaporation rate	Approx equal to water
Flammability (solid, gas)	None
Upper/lower flammability limits	
Upper/lower explosive limits	
Vapor pressure	
Vapor density	Approx equal to water
Relative density	1.05-1.07
Solubility(ies)	
Partition coefficient: n-octanol/water	
Auto-ignition temperature	
Decomposition temperature	
Viscosity	
Explosive properties	
Oxidizing properties	

SECTION 10: Stability and reactivity

10.2 Chemical stability

This is a stable material

10.4 Conditions to avoid

Avoid extreme heat

10.5 Incompatible materials

May react with strong acids. May react with strong reducing agents. Organic compounds and cyanides

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10.6 Hazardous decomposition products

May produce volatile organoselenides or hydrogen selenide

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Water (7732-18-5) Oral LD50 Rat >90 mL/kg

Hydrogen chloride (7647-01-0) Inhalation LC50 Rat 3124 ppm 1 h; Oral LD50 Rat 700 mg/kg; Dermal LD50 Rabbit >5010 mg/kg

Copper (7758-99-8) Oral LD50 Rat 300 mg/kg; Dermal LD50 Rat >2 g/kg

Carcinogenicity

Hydrogen chloride (7647-01-0)

ACGIH:

A4 - Not Classifiable as a Human Carcinogen

IARC:

Monograph 54 [1992] (Group 3 (not classifiable))

Selenous acid (7783-00-8)

IARC:

Supplement 7 [1987]; Monograph 9 [1975] (related to Selenium compounds) (Group 3 (not classifiable))

Summary of evaluation of the CMR properties

Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. It causes conjunctivitis leading eventually to an allergic type of reaction of the eyes. Acute selenium poisoning produces central nervous system effects, which include nervousness, convulsions, and drowsiness. Other signs of gastrointestinal distress, teeth that are discolored or decayed, odorous (garlic-like) breath, and partial loss of hair and nails. Chronic exposure by inhalation can produce symptoms that include pallor, coating of the tongue, anemia, irritation of the mucosa, lumbar pain, liver and spleen damage, as well as any of the other previously mentioned symptoms.

SECTION 12: Ecological information

Toxicity

Hydrogen chloride (7647-01-0)

Test & Species

Conditions

96 Hr LC50 *Gambusia affinis*

282 mg/L [static]

Copper (7758-99-8)

Test & Species

Conditions

96 Hr LC50 *Lepomis macrochirus*

0.66-1.15 mg/L [semi-static]

96 Hr LC50 *Lepomis macrochirus*

0.96-1.8 mg/L [static]

96 Hr LC50 *Oncorhynchus mykiss*

0.1478-0.165 mg/L [flow-through]

96 Hr LC50 *Oncorhynchus mykiss*

0.09-0.19 mg/L [static]

96 Hr LC50 *Pimephales promelas*

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0.6752 mg/L [static]
48 Hr EC50 Daphnia magna
0.147 - 0.227 mg/L [Static]

SECTION 13: Disposal considerations

Disposal of the product

Waste must be handled in accordance with all federal, state, provincial, and local regulations. Transport waste material to an authorized waste location, or incinerate under controlled conditions.

Selenous acid (7783-00-8)
RCRA: waste number U204

Disposal of contaminated packaging

Consult appropriate federal and local regulations for disposal. Empty containers are subject to the same regulations.

SECTION 14: Transport information

DOT (US)

UN Number: UN1760
Class: 8
Packing Group: II
Proper Shipping Name: Corrosive Liquid NOS (Hydrochloric Acid, Selenious Acid)
Reportable quantity (RQ):
Marine pollutant:
Poison inhalation hazard:
Quantities under 1L may be shipped as LTD QTY within the USA by Ground.

IMDG

UN Number: UN1760
Class: 8
Packing Group: II
EMS Number:
Proper Shipping Name:

IATA

UN Number: UN1760
Class: 8
Packing Group: II
Proper Shipping Name:

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Massachusetts Right To Know Components

Chemical name: Hydrochloric acid
CAS number: 7647-01-0

New Jersey Right To Know Components

Common name: HYDROGEN CHLORIDE
CAS number: 7647-01-0

Pennsylvania Right To Know Components

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Chemical name: Hydrochloric acid
CAS number: 7647-01-0

Massachusetts Right To Know Components

Chemical name: Selenious acid
CAS number: 7783-00-8

New Jersey Right To Know Components

Common name: SELENOUS ACID
CAS number: 7783-00-8

Pennsylvania Right To Know Components

Chemical name: Selenous acid
CAS number: 7783-00-8

HMIS Rating

Stainless Steel Blackener	
HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	C

NFPA Rating



SECTION 16: Other information

16.1 Further information/disclaimer

DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. In no event shall Caswell Inc be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if Caswell Inc has been advised of the possibility of such damages.