

**Safety Data Sheet**  
**Flash Copper Solution Part A**

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**SECTION 1: Identification**

**1.1 Product identifier**

Product name	Flash Copper Solution Part A
Product number	FLSA
Brand	Caswell

**1.3 Recommended use of the chemical and restrictions on use**  
Metal Finishing

**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

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**SECTION 2: Hazard identification**

**2.1 Classification of the substance or mixture**

- Hazardous to the aquatic environment - long-term hazard (chapter 4.1), Cat. 2

**2.2 GHS label elements, including precautionary statements**

**Pictogram**



**Hazard statement(s)**

H411

Toxic to aquatic life with long lasting effects

# Safety Data Sheet

## Flash Copper Solution Part A

### Precautionary statement(s)

P273	Avoid release to the environment.
P391	Collect spillage.
P501	Dispose of contents/container to ...

### 2.3 Other hazards which do not result in classification

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

#### Hazardous components

##### 1. Copper

Concentration	< 4 % (Volume)
CAS no.	65357-62-2

##### 2. WATER OR OTHER NON-REPORTABLE INGREDIENTS

Concentration	96 - 98 % (Volume)
CAS no.	7732-18-5

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## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration.
In case of skin contact	Skin Protection: None required with normal household use. Industrial Setting: Protective gloves (for hands) and protective clothing are required where repeated or prolonged skin contact may occur.
In case of eye contact	Flush eyes with water as a precaution.
If swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water.
Personal protective equipment for first-aid responders	See section 8

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## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

Use extinguishing media appropriate for surrounding fire.

### 5.2 Specific hazards arising from the chemical

# Safety Data Sheet

## Flash Copper Solution Part A

Avoid release into environment

### 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### Further information

Not a flammable material

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## SECTION 6: Accidental release measures

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

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### 6.2 Environmental precautions

Do not let product enter drains.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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

Keep away from strong oxidizers and acids

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## SECTION 8: Exposure controls/personal protection

### 8.2 Appropriate engineering controls

General industrial hygiene practice.

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

#### Eye/face protection

Eye/Face Protection: None required with normal household use. Industrial Setting: For splash protection, use chemical goggles. Eye wash fountain is recommended.

#### Skin protection

Skin Protection: None required with normal household use. Industrial Setting: Protective gloves (for hands) and protective clothing are required where repeated or prolonged skin contact may occur.

#### 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

Distribution, Workplace and Household Settings: No special protective equipment required. Product Manufacturing Plant (needed at Product-Producing Plant ONLY): In case of insufficient ventilation wear suitable respiratory equipment

# Safety Data Sheet

## Flash Copper Solution Part A

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### SECTION 9: Physical and chemical properties

#### Information on basic physical and chemical properties

Appearance/form	Blue Liquid
Odor	Mild, Musty
Odor threshold	
pH	9
Melting point/freezing point	
Initial boiling point and boiling range	218 deg F
Flash point	
Evaporation rate	As water
Flammability (solid, gas)	
Upper/lower flammability limits	
Upper/lower explosive limits	
Vapor pressure	
Vapor density	
Relative density	1.35
Solubility(ies)	Complete In Water
Partition coefficient: n-octanol/water	
Auto-ignition temperature	
Decomposition temperature	
Viscosity	
Explosive properties	
Oxidizing properties	

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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Not reactive

#### 10.2 Chemical stability

Stable

#### 10.5 Incompatible materials

Strong oxidizers and acids

#### 10.6 Hazardous decomposition products

CO, CO<sub>2</sub>,

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### SECTION 11: Toxicological information

#### Information on toxicological effects

##### Acute toxicity

Not Toxic

##### Skin corrosion/irritation

May irritate skin

# Safety Data Sheet

## Flash Copper Solution Part A

### Serious eye damage/irritation

May irritate eyes

### Respiratory or skin sensitization

May irritate respiratory tract

### Carcinogenicity

Not a Carcinogen

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## SECTION 12: Ecological information

### Toxicity

Copper compounds are hazardous to the environment.

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## SECTION 13: Disposal considerations

### Disposal of the product

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

### Disposal of contaminated packaging

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

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## SECTION 14: Transport information

### DOT (US)

Not dangerous goods

### IMDG

Not dangerous goods

### IATA

Not dangerous goods

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## SECTION 15: Regulatory information

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

#### Massachusetts Right To Know Components

Chemical name: Copper

CAS number: 65357-62-2

#### HMIS Rating

Flash Copper Solution Part A	
HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0

# Safety Data Sheet

## Flash Copper Solution Part A

PERSONAL PROTECTION	C
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### NFPA Rating



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## SECTION 16: Other information

### 16.1 Further information/disclaimer

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**CASWELL INC**

**Safety Data Sheet  
Flash Copper Part B**

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**SECTION 1: Identification**

**1.1 Product identifier**

Product name	Flash Copper Part B
Product number	FLSB
Brand	Caswell

**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

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**SECTION 2: Hazard identification**

**2.1 Classification of the substance or mixture**

Not a hazardous substance or mixture.

**2.2 GHS label elements, including precautionary statements**

Not a hazardous substance or mixture.

**2.3 Other hazards which do not result in classification**

Not a hazardous substance or mixture.

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**SECTION 3: Composition/information on ingredients**

**3.1 Substances**

**Hazardous components**

# Safety Data Sheet

## Flash Copper Part B

### 1. WATER OR OTHER NON-REPORTABLE INGREDIENTS

Concentration 100 - 100 %  
CAS no. 7732-18-5

#### Trade secret statement (OSHA 1910.1200(i))

Specific chemical names and formulas have been omitted as a trade secret under OSHA 1910.1200.

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## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

General advice	Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention
If inhaled	Assure fresh air breathing. Allow the victim to rest.
In case of skin contact	Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
In case of eye contact	Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
If swallowed	Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.
Personal protective equipment for first-aid responders	None required

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## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

Foam. Dry powder. Carbon dioxide. Water spray. Sand.

### 5.3 Special protective actions for fire-fighters

Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment. Do not enter fire area without proper protective equipment, including respiratory protection.

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## SECTION 6: Accidental release measures

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

Use chemically protective clothing.

### 6.2 Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling



# Safety Data Sheet

## Flash Copper Part B

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 vapour. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

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

Keep only in the original container in a cool, well ventilated place away from : incompatible materials. Keep container closed when not in use. Incompatible products: Oxidizing agent. Strong acids.

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## SECTION 8: Exposure controls/personal protection

### 8.2 Appropriate engineering controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

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

#### Pictograms



#### Eye/face protection

Chemical goggles or safety glasses.

#### Skin protection

Wear protective gloves.

#### 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

Wear appropriate mask.

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## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

Appearance/form	Clear Liquid
Odor	Odorless
Odor threshold	
pH	9.8
Melting point/freezing point	
Initial boiling point and boiling range	222 deg F
Flash point	
Evaporation rate	
Flammability (solid, gas)	
Upper/lower flammability limits	
Upper/lower explosive limits	
Vapor pressure	
Vapor density	Equal to water
Relative density	1.379
Solubility(ies)	Water

# Safety Data Sheet

## Flash Copper Part B

Partition coefficient: n-octanol/water  
Auto-ignition temperature  
Decomposition temperature  
Viscosity  
Explosive properties  
Oxidizing properties

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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

None

#### 10.2 Chemical stability

Not Established

#### 10.3 Possibility of hazardous reactions

Not Established

#### 10.4 Conditions to avoid

Extremely high or low temperatures.

#### 10.5 Incompatible materials

Strong Acids. Strong Bases.

#### 10.6 Hazardous decomposition products

None

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### SECTION 11: Toxicological information

#### Information on toxicological effects

##### Acute toxicity

Not Established

##### Skin corrosion/irritation

Not Classified

##### Serious eye damage/irritation

Not Classified

##### Respiratory or skin sensitization

Not Classified

##### Germ cell mutagenicity

Not classified

##### Carcinogenicity

Not classified

##### Reproductive toxicity

Not classified

##### STOT-single exposure

Not classified

# Safety Data Sheet

## Flash Copper Part B

**STOT-repeated exposure**  
Not classified

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### SECTION 12: Ecological information

**Toxicity**  
Not Established

**Persistence and degradability**  
Not Established

**Bioaccumulative potential**  
Not Established

**Mobility in soil**  
Not Established

**Results of PBT and vPvB assessment**  
Not Established

**Other adverse effects**  
Avoid release to the environment.

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### SECTION 13: Disposal considerations

**Disposal of the product**  
Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.

**Disposal of contaminated packaging**  
Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.

**Waste treatment**  
Avoid release to the environment.

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### SECTION 14: Transport information

**DOT (US)**  
Not dangerous goods

**IMDG**  
Not dangerous goods

**IATA**  
Not dangerous goods

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### SECTION 15: Regulatory information

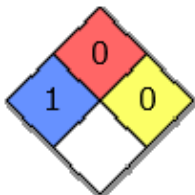
**HMIS Rating**

Flash Copper Part B
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## Safety Data Sheet Flash Copper Part B

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	C

### NFPA Rating



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## SECTION 16: Other information

### 16.1 Further information/disclaimer

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**Safety Data Sheet  
Flash Copper Part C**

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**SECTION 1: Identification**

**1.1 Product identifier**

Product name	Flash Copper Part C
Product number	FLSC
Brand	Caswell

**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

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**SECTION 2: Hazard identification**

**2.1 Classification of the substance or mixture**

- Skin corrosion/irritation (chapter 3.2), Cat. 1
- Eye damage/irritation (chapter 3.3), Cat. 1

**2.2 GHS label elements, including precautionary statements**

**Pictogram**



**Signal word**

**Danger**

**Hazard statement(s)**

H303	May be harmful if swallowed
H320	Causes eye irritation
H314	Causes severe skin burns and eye damage

# Safety Data Sheet

## Flash Copper Part C

H318 Causes serious eye damage

### Precautionary statement(s)

P312	Call a POISON CENTER/doctor/... if you feel unwell.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container to ...
P264	Wash ... thoroughly after handling.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
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).

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## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous components

##### 1. WATER OR OTHER NON-REPORTABLE INGREDIENTS

Concentration	80 - 90 %
CAS no.	7732-18-5

##### 2. Potassium carbonate

Concentration	15 - 25 %
CAS no.	584-08-7

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## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

General advice	Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention
If inhaled	Assure fresh air breathing. Allow the victim to rest.
In case of skin contact	Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
In case of eye contact	Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

# Safety Data Sheet

## Flash Copper Part C

If swallowed Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

Personal protective equipment for first-aid responders  
None required

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### SECTION 5: Fire-fighting measures

#### 5.1 Suitable extinguishing media

Foam. Dry powder. Carbon dioxide. Water spray. Sand.

#### 5.3 Special protective actions for fire-fighters

Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment. Do not enter fire area without proper protective equipment, including respiratory protection.

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### SECTION 6: Accidental release measures

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

Use chemically protective clothing.

#### 6.2 Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

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### SECTION 7: Handling and storage

#### 7.1 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 vapour. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

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

Keep only in the original container in a cool, well ventilated place away from : incompatible materials. Keep container closed when not in use. Incompatible products: Oxidizing agent. Strong acids.

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### SECTION 8: Exposure controls/personal protection

#### 8.2 Appropriate engineering controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

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

##### Pictograms



Eye/face protection

# Safety Data Sheet

## Flash Copper Part C

Chemical goggles or safety glasses.

### Skin protection

Wear protective gloves.

### 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

Wear appropriate mask.

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## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Clear Liquid
Odor	Odorless
Odor threshold	
pH	11.8-12.5
Melting point/freezing point	32 deg F
Initial boiling point and boiling range	218 deg F
Flash point	
Evaporation rate	
Flammability (solid, gas)	
Upper/lower flammability limits	
Vapor pressure	
Vapor density	Equal to water
Relative density	1.19-1.21
Solubility(ies)	Water
Partition coefficient: n-octanol/water	
Auto-ignition temperature	
Decomposition temperature	
Viscosity	
Explosive properties	
Oxidizing properties	

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

None

### 10.2 Chemical stability

Not Established

### 10.3 Possibility of hazardous reactions

Not Established

### 10.4 Conditions to avoid

Extremely high or low temperatures.

### 10.5 Incompatible materials

Strong Acids. Strong Bases.



# Safety Data Sheet

## Flash Copper Part C

10.6 Hazardous decomposition products  
None

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### SECTION 11: Toxicological information

#### Information on toxicological effects

##### Acute toxicity

Water: Oral LD50 Rat > 90/mL/kg

Carbonic Acid: Oral LD50 Rat 1870 mg/kg

##### Skin corrosion/irritation

Not Classified

##### Serious eye damage/irritation

Not Classified

##### Respiratory or skin sensitization

Not Classified

##### Germ cell mutagenicity

Not classified

##### Carcinogenicity

Not classified

##### Reproductive toxicity

Not classified

##### STOT-single exposure

Not classified

##### STOT-repeated exposure

Not classified

---

### SECTION 12: Ecological information

#### Toxicity

Not Established

#### Persistence and degradability

Not Established

#### Bioaccumulative potential

Not Established

#### Mobility in soil

Not Established

#### Results of PBT and vPvB assessment

Not Established

#### Other adverse effects

# Safety Data Sheet

## Flash Copper Part C

Avoid release to the environment.

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### SECTION 13: Disposal considerations

#### Disposal of the product

Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.

#### Disposal of contaminated packaging

Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.

#### Waste treatment

Avoid release to the environment.

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### SECTION 14: Transport information

#### DOT (US)

UN Number: UN1760

Class: 8

Packing Group: PG II

Proper Shipping Name: Corrosive liquid, NOS (Contains Potassium Carbonate)

Reportable quantity (RQ):

Marine pollutant:

Poison inhalation hazard:

Small Quantities May Be Shipped As LTD QTY

#### IMDG

UN Number: UN1760

Class: 8

Packing Group: II

EMS Number:

Proper Shipping Name: Corrosive liquid, NOS (Contains Potassium Carbonate)

#### IATA

UN Number: UN1760

Class: 8

Packing Group: II

Proper Shipping Name: Corrosive liquid, NOS (Contains Potassium Carbonate)

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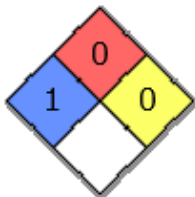
### SECTION 15: Regulatory information

#### HMIS Rating

Flash Copper Part C	
HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	C

#### NFPA Rating

**Safety Data Sheet**  
**Flash Copper Part C**



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**SECTION 16: Other information**

**16.1 Further information/disclaimer**

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