CASWELL INC

Safety Data Sheet
Casweld Flux PM

SECTION 1: Identification

1.1 Product identifier

Product name	Casweld Flux PM
Product number	CWFX1
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

SUPPLIED IN AUSTRALIA BY
CASWELL AUSTRALIA P/L

FACTORY 1, 51 ELM PARK DRIVE
HOPPERS CROSSING 3029
VICTORIA

PH 03 9741 7103

EMERGENCY **000**

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

General hazard statement
Not considered a hazard in its solid form. Hazards are from fumes during use and heat.

2.1 Classification of the substance or mixture

GHS classification in accordance with: (EC) No 1272/2008 (CLP)
- Skin corrosion/irritation (chapter 3.2), Cat. 1B
- Sensitization, skin (chapter 3.4), Cat. 1
- Eye damage/irritation (chapter 3.3), Cat. 1
- Specific target organ toxicity, single exposure (chapter 3.8), Cat. 3
- Toxic to reproduction (chapter 3.7), Cat. 1B
- 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)

H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H360	May damage fertility or the unborn child
H411	Toxic to aquatic life with long lasting effects

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.
P272	Contaminated work clothing should not be allowed out of the workplace.
P302+P352	IF ON SKIN: Wash with plenty of water/...
P333+P313	If skin irritation or a rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
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.
P391	Collect spillage.

SECTION 3: Composition/information on ingredients

3.1 Substances

Hazardous components

1. N-HYDROXYETHYLETHYLENEDIAMINE

Concentration	20 - 40 %
CAS no.	111-41-1

2. Ammonium fluoroborate

Concentration	15 - 20 %
CAS no.	13826-83-0

3. Zinc oxide

Concentration	5 - 15 %
EC no.	215-222-5
CAS no.	1314-13-2
Index no.	030-013-00-7

4. TRIETHANOLAMINE

Concentration	20 - 40 %
CAS no.	102-71-6

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. Consult a physician.
In case of skin contact	Wash off with soap and plenty of water. Get medical attention if symptoms occur.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Personal protective equipment for first-aid responders
See section 8

4.2 Most important symptoms/effects, acute and delayed
not established

4.3 Indication of immediate medical attention and special treatment needed, if necessary
not established

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Use water spray, alcohol resistant foam, dry chemical or carbon dioxide. Welding sparks can ignite combusible and flammable materials. Use media recommended for burning material.

5.2 Specific hazards arising from the chemical
NO_2 fumes

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
See section 8

6.2 Environmental precautions
See section 13

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Zinc oxide fume (CAS: 1314-13-2)
PEL (Inhalation): 5 mg/m3 (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

2. Zinc oxide fume (CAS: 1314-13-2)
PEL (Inhalation): 5 mg/m3, (ST) 10 mg/m3 (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

3. Zinc oxide fume (CAS: 1314-13-2)
REL (Inhalation): 5 mg/m3, (ST) 10 mg/m3 (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

4. Zinc oxide (CAS: 1314-13-2)
PEL (Inhalation): See PNOR (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

5. Zinc oxide, Total dust (CAS: 1314-13-2)
PEL (Inhalation): 15 mg/m3 (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

6. Zinc oxide, Total dust (CAS: 1314-13-2)
PEL (Inhalation): 10 mg/m3 (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

7. Zinc oxide, Total dust (CAS: 1314-13-2)
REL (Inhalation): 5 mg/m3, (C) 15 mg/m3 (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

8. Zinc oxide, Respirable fraction (CAS: 1314-13-2)
PEL (Inhalation): 5 mg/m3 (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

9. Zinc oxide, Respirable fraction (CAS: 1314-13-2)
PEL (Inhalation): 5 mg/m3 (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

8.2 Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

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

Pictograms

Eye/face protection

Welder's helmet or face shield with color absorbing lenses. Shield and filter to provide protection from UV radiation, infrared and molten metal approved to standard EN379. Filter shade to be a minimum of shade 9.

Skin protection

Heat resistant protective clothing. Safety boots, apron, arm and shoulder protection.

Body protection

Type A or B gloves. Type B recommended when high dexterity is required.

Respiratory protection

Use an air purifying dust respirator when welding or brazing in a confined space, or when local exhaust or ventialtion is not sufficient to keep exposure values within safe limits.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Amber Gel
Odor	Ammonia
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	Not Available
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Upper/lower flammability limits	Not Available
Vapor pressure	Not Available
Vapor density	Not Available
Relative density	Not Available
Solubility(ies)	Freely Soluble
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available
Viscosity	Not Available
Explosive properties	Not Available
Oxidizing properties	Not Available

SECTION 10: Stability and reactivity

10.1 Reactivity

Contact with chemical substances like acids or strong bases cause generation of gas.

10.2 Chemical stability
Stable

10.5 Incompatible materials
Reacts with acid

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Overexposure to welding fumes may result in symptoms such as eye and skin burns, damage to digestive and respiratory system, abdominal pain, vomiting and effect on the central nervous system. Amino Ethylethanolamine is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes and skin, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, cough, wheezing, laryngitis, shortness of breath, headache, and nausea. Zinc oxide dust or fume can irritate the respiratory tract. Exposure to high levels of dust or fume can cause metallic taste, marked thirst, coughing, fatigue, weakness, muscular pain and nausea followed by fever and chills. Severe overexposure may result in bronchitis or pneumonia with a bluish tint to skin.

LD/LC50 Values that are relevant for classification
Amino Ethylethanolamine 111-41-1

Oral	LD50	3000 mg/kg (rat)
Dermal	LD50	2250 mg/kg (rat)

LD/LC50 Values that are relevant for classification
Zinc Oxide 1314-13-2

Oral	LD50	7950 mg/kg (mouse)
Inhalation	LD50	2500 mg/m3 (mouse)
	LC50	1.1 mg/l (96h) (rainbow trout)

LD/LC50 Values that are relevant for classification
Triethanolamine 102-71-6

Oral	LD50	5530 mg/kg (rat)
Oral	LD50	2200 mg/kg (rabbit)
Oral	LD50	2200 mg/kg (guinea pig)
Dermal	LD50	22.5 g/kg (rabbit)
	LC50	1000 mg/l (96h) (bluegill)

Respiratory or skin sensitization
Amino Ethylethanolamine is extremely destructive to tissue of the mucous membrane and upper respiratory tract, eyes and skin. Other signs and symptoms are: spasms, inflammation and edema of the larynx, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, cough, wheezing, laryngitis, and shortness of breath, headache and nausea. Zinc Oxide dust or fume can irritate the respiratory tract. Prolonged skin contact can produce a severe dermatitis called oxide pox. Exposure to high levels of dust or fume can cause metallic taste, marked thirst, coughing, fatigue, weakness, muscular pain and nausea followed by fever and chills. Severe overexposure may result in bronchitis or pneumonia with a bluish tint to the skin.

Germ cell mutagenicity
Prolonged or repeated exposure of Zinc Oxide can cause reversible liver enzyme abnormalities. Triethanolamine: Kidney injury may occur.

Summary of evaluation of the CMR properties

It has also been reported that copper poisoning has led to haemolytic anemia and accelerates arteriosclerosis, damage to the lungs, vomiting, diarrhoea, abdominal pain and blood disorders. Excessive inhalation of zinc oxide fumes may produce symptoms known as “Zinc Shakes” which are flu-like and usually cease when the individual is removed from the source. Prolonged or repeated exposure can cause vomiting, diarrhoea, lung irritation.

STOT-repeated exposure
Overexposure to welding fumes may affect pulmonary function.

SECTION 12: Ecological information

Toxicity
No available data.
Welding materials could degrade into components originating from the materials used in the welding process.
Avoid exposure to conditions that could lead to accumulation in soils or groundwater.

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.

SECTION 14: Transport information

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

SECTION 15: Regulatory information

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

New Jersey Right To Know Components
Common name: AMINOETHYLETHANOLAMINE
CAS number: 111-41-1

Pennsylvania Right To Know Components
Chemical name: Ethanol, 2-[(2-aminoethyl)amino]-
CAS number: 111-41-1

Massachusetts Right To Know Components
Chemical name: Ammonium fluoborate
CAS number: 13826-83-0

New Jersey Right To Know Components
Common name: AMMONIUM FLUOROBORATE
CAS number: 13826-83-0

Pennsylvania Right To Know Components
Chemical name: Borate(1-), tetrafluoro-, ammonium

CAS number: 13826-83-0

Massachusetts Right To Know Components
Chemical name: Zinc oxide
CAS number: 1314-13-2

New Jersey Right To Know Components
Common name: ZINC OXIDE
CAS number: 1314-13-2

Pennsylvania Right To Know Components
Chemical name: Zinc oxide
CAS number: 1314-13-2

New Jersey Right To Know Components
Common name: TRIETHANOLAMINE
CAS number: 102-71-6

Pennsylvania Right To Know Components
Chemical name: Ethanol, 2,2'-nitrilotris-
CAS number: 102-71-6

HMIS Rating

Casweld Flux PM	
HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	D

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.