CASWELL INC

Safety Data Sheet
Yellow Chromate

SECTION 1: Identification

1.1 Product identifier

Product name	Yellow Chromate
Product number	YCHR5G
Brand	Caswell

1.3 Recommended use of the chemical and restrictions on use

Chromating Solution For Zinc & Pot Metal

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

- Oxidizing liquids (chapter 2.13), Cat. 1
- Carcinogenicity (chapter 3.6), Cat. 1A
- Germ cell mutagenicity (chapter 3.5), Cat. 1B
- Acute toxicity, oral (chapter 3.1), Cat. 2
- Toxic to reproduction (chapter 3.7), Cat. 2
- Acute toxicity, inhalation (chapter 3.1), Cat. 3
- Skin corrosion/irritation (chapter 3.2), Cat. 1A
- Sensitization, respiratory (chapter 3.4), Cat. 1
- Sensitization, skin (chapter 3.4), Cat. 1
- Hazardous to the aquatic environment - acute hazard (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment - long-term hazard (chapter 4.1), Cat. 1

2.2 GHS label elements, including precautionary statements

Pictogram

Signal word **Warning**

Hazard statement(s)

H271	May cause fire or explosion; strong oxidizer
H350	May cause cancer
H340	May cause genetic defects
H300	Fatal if swallowed
H361	Suspected of damaging fertility or the unborn child
H331	Toxic if inhaled
H314	Causes severe skin burns and eye damage
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317	May cause an allergic skin reaction
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
P220	Keep/Store away from clothing/…/combustible materials.
P221	Take any precaution to avoid mixing with combustibles/...
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P283	Wear fire/flame resistant/retardant clothing.
P306+P360	IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P371+P380+P375	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
P370+P378	In case of fire: Use … to extinguish.
P501	Dispose of contents/container to …
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.
P405	Store locked up.
P264	Wash … thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P321	Specific treatment (see … on this label).
P330	Rinse mouth.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P311	Call a POISON CENTER/doctor/...
P403+P233	Store in a well ventilated place. Keep container tightly closed.
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.
P310	Immediately call a POISON CENTER/doctor/...
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P284	[In case of inadequate ventilation] wear respiratory protection.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
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.
P273	Avoid release to the environment.
P391	Collect spillage.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. CHROMIUM TRIOXIDE

Concentration	< 17 % (Volume)
EC no.	215-607-8
CAS no.	1333-82-0
Index no.	024-001-00-0

- Oxidizing solids (chapter 2.14), Cat. 1
- Carcinogenicity (chapter 3.6), Cat. 1A
- Germ cell mutagenicity (chapter 3.5), Cat. 1B
- Toxic to reproduction (chapter 3.7), Cat. 2
- Acute toxicity (chapter 3.1), Cat. 2
- Acute toxicity (chapter 3.1), Cat. 3
- Specific target organ toxicity, repeated exposure (chapter 3.9), Cat. 1
- Skin corrosion/irritation (chapter 3.2), Cat. 1A
- Sensitization, respiratory (chapter 3.4), Cat. 1
- Sensitization, skin (chapter 3.4), Cat. 1
- Hazardous to the aquatic environment - acute hazard (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment - long-term hazard (chapter 4.1), Cat. 1

H271	May cause fire or explosion; strong oxidizer
H301	Toxic if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H330	Fatal if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H340	May cause genetic defects
H350	May cause cancer
H361f	Suspected of damaging fertility
H372	Causes damage to organs through prolonged or repeated exposure

H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

2. SODIUM DICHROMATE, DIHYDRATE

Concentration	< 17 % (Volume)
EC no.	234-190-3
CAS no.	7789-12-0
Index no.	024-004-01-4

- Oxidizing solids (chapter 2.14), Cat. 2
- Carcinogenicity (chapter 3.6), Cat. 1B
- Germ cell mutagenicity (chapter 3.5), Cat. 1B
- Toxic to reproduction (chapter 3.7), Cat. 1B
- Acute toxicity (chapter 3.1), Cat. 2
- Acute toxicity (chapter 3.1), Cat. 3
- Specific target organ toxicity, repeated exposure (chapter 3.9), Cat. 1
- Acute toxicity (chapter 3.1), Cat. 4
- Skin corrosion/irritation (chapter 3.2), Cat. 1B
- Sensitization, respiratory (chapter 3.4), Cat. 1
- Sensitization, skin (chapter 3.4), Cat. 1
- Hazardous to the aquatic environment - acute hazard (chapter 4.1), Cat. 1
- Hazardous to the aquatic environment - long-term hazard (chapter 4.1), Cat. 1

H272	May intensify fire; oxidizer
H301	Toxic if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H330	Fatal if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H340	May cause genetic defects
H350	May cause cancer
H360FD	May damage fertility. May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

3. Nitric acid (<40%)

Concentration	< 14 % (Volume)
EC no.	231-714-2
CAS no.	7697-37-2
Index no.	007-004-00-1

- Oxidizing liquids (chapter 2.13), Cat. 3
- Skin corrosion/irritation (chapter 3.2), Cat. 1A

H272	May intensify fire; oxidizer
H314	Causes severe skin burns and eye damage

4. Sulfuric acid (<10%)

Concentration	< 3 % (Volume)
EC no.	231-639-5
CAS no.	7664-93-9
Index no.	016-020-00-8

- Skin corrosion/irritation (chapter 3.2), Cat. 1A

H314	Causes severe skin burns and eye damage

5. WATER OR OTHER NON-REPORTABLE INGREDIENTS

Concentration	< 49 % (Volume)
CAS no.	7732-18-5

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	If exposed, seek immediate medical attention. 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	Take off contaminated clothing and shoes immediately. 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.Continue rinsing eyes during transport to hospital.
If swallowed	If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. Seek immediate medical treatment.

Personal protective equipment for first-aid responders
See section 8

4.2 Most important symptoms/effects, acute and delayed
Can cause severe tissue destruction. Kidney failure may follow and result in death. May cause liver damage.

4.3 Indication of immediate medical attention and special treatment needed, if necessary
Any exposure should be treated immediately by medical personnel.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Water or dry chemical as appropraite for combustibles in area.

5.2 Specific hazards arising from the chemical

Oxidizer. Avoid contact with organic materials.

5.3 Special protective actions for fire-fighters
Wear self-contained breathing apparatus for firefighting if necessary.

Further information
Do not allow runoff to enter water sources such as sewers, streams, rivers or lakes.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
See section 8 for PPE.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Absorb with soil or absorbent material. Treat spill area with a reducing agent to convert hexavalent chrome to trivalent chrome,. Neutralize with a weak base. Comply with regulations for spill reporting.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid all exposure. 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
Avoid organic materials, strong bases, cyanides and zinc.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. CHROMIUM TRIOXIDE (CAS: 1333-82-0 EC: 215-607-8)
PEL-TWA: 1mg/m3 (OSHA)

2. CHROMIUM TRIOXIDE (CAS: 1333-82-0 EC: 215-607-8)
STEL: C0.1 mg/m3 (OSHA)

3. CHROMIUM TRIOXIDE (CAS: 1333-82-0 EC: 215-607-8)
TLV®: 0.05ppm (ACGIH)

4. SODIUM DICHROMATE, DIHYDRATE (CAS: 7789-12-0 EC: 234-190-3)
PEL-TWA: 1mg/m3 (OSHA)

5. Nitric acid (<40%) (CAS: 7697-37-2 EC: 231-714-2)
TWA: 2ppm (OSHA)

6. Nitric acid (<40%) (CAS: 7697-37-2 EC: 231-714-2)
STEL: 10 mg/m3 (OSHA)

7. Sulfuric acid (<10%) (CAS: 7664-93-9 EC: 231-639-5)
TWA: 1 mg/m3 (OSHA)

8.2 Appropriate engineering controls

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

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

Eye/face protection

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

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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 cartidge or canister may be permissable 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	Dark Yellow Liquid
Odor	Vinegar Like
Odor threshold	
pH	< 1
Melting point/freezing point	
Initial boiling point and boiling range	220 deg F
Flash point	
Evaporation rate	
Flammability (solid, gas)	
Upper/lower flammability limits	
Vapor pressure	
Vapor density	Approx 1
Relative density	1.3
Solubility(ies)	Complete In Water
Partition coefficient: n-octanol/water	
Auto-ignition temperature	
Decomposition temperature	
Viscosity	
Explosive properties	
Oxidizing properties	

SECTION 10: Stability and reactivity

10.1 Reactivity
Not reactive

10.2 Chemical stability
Stable

10.5 Incompatible materials
Strong bases, Strong Acids

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Chromic Acid:
Dermal LD50: 57 mg/kg (rabbit)
Oral LD50: 52 mg/kg (rat)
Inhalation LC50: 217 mg/m3 (rat/4hour)

Skin corrosion/irritation
Causes severe skin burns.

Serious eye damage/irritation
Causes severe burns

Respiratory or skin sensitization
Can cause severe tissue destruction. Kidney failure may follow and result in death. May cause liver damage.

Germ cell mutagenicity
Mutagenic for mammalian somatic cells, bacteria and yeast.

Carcinogenicity
NTP: Known Carcinogen
IARC: Know Carcinogen

Reproductive toxicity
May alter genetic material.

STOT-single exposure
Kidneys, liver, GI Tract, upper respiratory tract, skin, eyes

SECTION 12: Ecological information

Toxicity
Chromic Acid:
LC50: Tilapia 21-141 mg/L 96h
LC50: Leuciscus 100 mg/L 48h
EC50: Dpahnia Magna 0.8 mg/L 48h

Other adverse effects
Very toxic to aquatic life

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)
UN Number: UN1760
Class: 8
Packing Group: II
Proper Shipping Name: Corrosive liquid, NOS (Chromic Acid, Nitric Acid)
Reportable quantity (RQ): 10#
Marine pollutant:
Poison inhalation hazard:
LTD QTY in quantities under 1L

IMDG
UN Number: UN1760
Class: 8
Packing Group: II
EMS Number:
Proper Shipping Name: Corrosive liquid, NOS (Chromic Acid, Nitric Acid)

IATA
UN Number: UN1760
Class: 8
Packing Group: ii
Proper Shipping Name: Corrosive liquid, NOS (Chromic Acid, Nitric Acid)

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: CHROMIC TRIOXIDE
CAS number: 1333-82-0

Pennsylvania Right To Know Components
Chemical name: Chromium oxide
CAS number: 1333-82-0

California Prop. 65 components
Chemical name: CHROMIUM TRIOXIDE

CAS number: 1333-82-0
02/27/1987 - Cancer
12/19/2008 - Developmental, female, male

California Prop. 65 components
Chemical name: SODIUM DICHROMATE, DIHYDRATE
CAS number: 7789-12-0
02/27/1987 - Cancer
12/19/2008 - Developmental, female, male

Massachusetts Right To Know Components
Chemical name: Nitric acid
CAS number: 7697-37-2

New Jersey Right To Know Components
Common name: NITRIC ACID
CAS number: 7697-37-2

Pennsylvania Right To Know Components
Chemical name: Nitric acid
CAS number: 7697-37-2

Massachusetts Right To Know Components
Chemical name: Sulfuric acid
CAS number: 7664-93-9

New Jersey Right To Know Components
Common name: SULFURIC ACID
CAS number: 7664-93-9

Pennsylvania Right To Know Components
Chemical name: Sulfuric acid
CAS number: 7664-93-9

California Prop. 65 components
Chemical name: Sulfuric acid (<10%)
CAS number: 7664-93-9
03/14/2003 - Cancer

HMIS Rating

Yellow Chromate	
HEALTH	* 3
FLAMMABILITY	0
PHYSICAL HAZARD	1
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.