

Safety Data Sheet
Plug N Plate Gold Solution

SECTION 1: Identification

1.1 Product identifier

Product name	Plug N Plate Gold Solution
Product number	PNPG
Brand	Caswell

1.2 Other means of identification

Blue liquid

1.3 Recommended use of the chemical and restrictions on use

Gold Brush Plating Solution

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. 2
- Eye damage/irritation (chapter 3.3), Cat. 2B
- Acute toxicity, dermal (chapter 3.1), Cat. 4

2.2 GHS label elements, including precautionary statements

Pictogram



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Signal word

Warning

Hazard statement(s)

H315
H320
H312

Causes skin irritation
Causes eye irritation
Harmful in contact with skin

Precautionary statement(s)

P264
P280
P302+P352
P321
P332+P313
P362+P364
P305+P351+P338

P337+P313
P312
P501

Wash ... thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with plenty of water/...
Specific treatment (see ... on this label).
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
Call a POISON CENTER/doctor/... if you feel unwell.
Dispose of contents/container to ...

2.3 Other hazards which do not result in classification

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. Component 1 (trade secret)

Concentration 1 - 5 % (Weight)

- Xi: Irritating
R36: Irritating to eyes.

2. Component 2 (trade secret)

Concentration 1 - 5 % (Weight)

3. Component 3 (trade secret)

Concentration 1 - 5 % (Weight)

4. Component 4 (trade secret)

Concentration 1 - 5 %

- T+: Toxic
R 60: May impair fertility.
R61: May cause harm to the unborn child.
(Rated only when above 8.5% in concentration)

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5. Aqueous solution, with components that are not hazardous or are below 1.0% in concentration (or below 0.1% in concentration for carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens). All ingredients are listed per the requirements of regulations pertinent to Safety Data Sheet requirements under various regulations..

Concentration	Not specified
CAS no.	11111-11-1

Trade secret statement (OSHA 1910.1200(i))

The specific names and CAS #'s of components have been withheld as a trade secret.

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	May be mildly irritating to eyes, throat and skin if directly exposed. No significant hazards to human health.
If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration.
In case of skin contact	Wash off with soap and plenty of water.
In case of eye contact	Flush eyes with water as a precaution.
If swallowed	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Any

5.2 Specific hazards arising from the chemical

None

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personnel who have received basic chemical safety training can generally handle small-scale releases (e.g., under 1 kg). For small releases, the minimum Personal Protective Equipment should be rubber gloves and rubber apron, splash goggles or safety glasses. Use caution during clean-up; avoid stepping into spilled solid or clean-up procedures that generate substantial amounts of dust.

6.2 Environmental precautions

Avoid response actions that can cause a release of a significant amount of the substance (1 liter or more) into the environment.

6.3 Methods and materials for containment and cleaning up

Any available

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

HYGIENE PRACTICES: Keep out of reach of children. Follow good chemical hygiene practices. Do not smoke, drink, eat, or apply cosmetics in the chemical use area. Avoid inhalation of dusts. Use in wellventilated area. Avoid contact with skin or eyes. Remove contaminated clothing promptly. Clean up spilled product immediately.

7.2 Conditions for safe storage, including any incompatibilities

Ensure all containers are correctly labeled. Store containers away from direct sunlight, sources of intense heat, or where freezing is possible. Store this product away from incompatible chemicals (See Section 10, Stability and Reactivity). Empty containers may contain residual material; therefore, empty containers should be handled with care. Material should be stored in secondary containers, or in a diked area, as appropriate. Storage and use areas should be covered with impervious materials. Inspect all

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Component 4 (trade secret)

TLV® (Oral): 2MG/M3 (ACGIH)

8.2 Appropriate engineering controls

Use this product in well-ventilated environment. Safety showers, eye wash stations, and hand-washing equipment should be available.

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

Eye/face protection

Splash goggles or safety glasses. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, or the European Standard EN166.

Skin protection

Neoprene gloves or nitrile gloves should be used. Use triple gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this SDS. If necessary, refer to U.S. OSHA 29 CFR 1910.138, appropriate Standards of Canada, or appropriate Standards of the European Economic Community.

Body protection

Use a body protection appropriate to task (e.g., lab coat, coveralls, or apron). Care should be taken to select protection for potentially exposed areas when prolonged exposure could occur in occupational settings.

Respiratory protection

None needed under normal conditions of use. Use NIOSH approved respirators if ventilation is inadequate to control sprays or mists. For situations in which significant amounts of sprays or mists could be generated, wear an air-purifying respirator with a high-efficiency particulate filter.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

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Appearance/form	Blue Liquid
Odor	None
Odor threshold	
pH	5-8
Melting point/freezing point	32 deg F
Initial boiling point and boiling range	212 deg F
Flash point	NA
Evaporation rate	1
Flammability (solid, gas)	Not Flammable
Upper/lower flammability limits	NA
Upper/lower explosive limits	NA
Vapor pressure	NA
Vapor density	1
Relative density	1.23
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 under typical conditions of use or handling; contact with water can generate some amount of heat.

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

This product is not self-reactive or air-reactive.

This product can release heat upon contact with water.

This product will not undergo hazardous polymerization.

10.5 Incompatible materials

This product is not compatible with strong oxidizers, strong acids and water-reactive substances.

10.6 Hazardous decomposition products

Products of thermal decomposition of this product can include carbon monoxide, carbon dioxide and compounds of sodium, nitrogen, sulfur.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

The following data are available for hazardous components in this product greater than 1% in concentration

BORON COMPOUND

Specific Locus Test-Drosophila melanogaster-Oral 714

ppm

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Cytogenetic Analysis-Drosophila melanogaster-Oral
714 ppm

Oral-Rat TDLo: 37 g/kg (multi):Reproductive effects

Oral-Infant LDLo :1000 mg/kg

Oral-Man LDLo: 709 mg/kg

Oral-Rat LD50: 2660 mg/kg

Oral-Mouse LD50: 2000 mg/kg

Intraperitoneal-Mouse LD50: 2711 mg/kg

Intravenous-Mouse LD50: 1320 mg/kg

Subcutaneous-Rabbit, adult LDLo:150 mg/kg

Oral-Guinea Pig, adult LD50:5330 mg/kg

GOLD SALT

No data available.

SULFITE COMPOUND

DNA Inhibition-Human: lymphocyte 10 mmol/L

Cytogenetic Analysis-Mouse: other cell types 25 mg/L

Intravenous-Rat LD50: 115 mg/kg

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SULFITE COMPOUND (continued)

Intraperitoneal-Mouse LD50: 950 mg/kg

Intravenous-Mouse LD50: 130 mg/kg

Subcutaneous-Dog, adult LDLo: 1300 mg/kg "

Subcutaneous-Cat, adult LDLo: 1300 mg/kg

Intravenous-Cat, adult LDLo: 200 mg/kg

Oral-Rabbit, adult LDLo: 2825 mg/kg

Subcutaneous-Rabbit, adult LDLo: 300 mg/kg

Intravenous-Rabbit, adult LD50: 65 mg/kg

CHELATING AGENT

Cytogenetic Analysis-Mouse-Intraperitoneal 50 mmol/L

DNA Inhibition-Rabbit, adult: kidney 250 nmol/L

Oral-Rat TDLo:7632 mg/kg (female 7-14D post): Teratogenic effects

Oral-Rat TDLo: 7632 mg/kg (female 7-14D post): Reproductive effects

Intraperitoneal-Rat LD50: 397 mg/kg

Intraperitoneal-Mouse LD50: 250 mg/kg

Skin corrosion/irritation

Mild irritation may occur

Serious eye damage/irritation

Mild irritation may occur

Respiratory or skin sensitization

Mild irritation may occur

Carcinogenicity

Not a carcinogen

Reproductive toxicity

BORON COMPOUND: Animal feeding studies in rat, mouse and dog, at high doses, have demonstrated effects on fertility and testes. Studies with the chemically related boric acid in the rat, mouse and rabbit, at high doses, demonstrate developmental effects on the fetus, including fetal weight loss and minor skeletal variations. The doses administered were many times in excess of those to which humans would normally be exposed. Human

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epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to boric acid dust and sodium borate dust. A recent epidemiological study under the conditions of normal occupational exposure to borate dusts indicated no effect on fertility.

SECTION 12: Ecological information

Toxicity

Based on available data, this product may be harmful to contaminated terrestrial plants or animals.

- Based on available data, this product may be harmful or fatal to contaminated aquatic plants or animals.
- There are the following aquatic toxicity data available for components of this product that are over 1 percent in concentration.

BORON COMPOUND

LC50 Fish (Carassium auratus, goldfish); 72 hours/178 mg/L

LC50 Fish (Carassium auratus, goldfish); 72 hours/630mg/L

LC50 Fish (Onchoryncus mykiss, rainbow trout); 24 days/ 150 mg/L

EC50 (Daphnia magna); 48 hours, 1085-1402mg/L

IC50 (Algae); 96 hours, 158 mg/L

CHELATING AGENT

EC50 Fish (catfish); 96 hours, 129ppm

static test LC50 - Lepomis macrochirus (Bluegill sunfish) -

41 mg/l - 96 hours

static test EC50 - Daphnia magna (Water flea) - 625 mg/l

- 48 hours

Persistence and degradability

When released into the soil, the components of this product are expected to biodegrade, dissipate in soils via oxidation, or otherwise chemically degrade or photo-decompose via solar radiation.

Bioaccumulative potential

The components of this product are not anticipated to bioaccumulate in any significant quantities. The following bioaccumulation data are available for components of this product.

CHELATING AGENT: Lepomis macrochirus - 28 d - 80 µg/l; Bioconcentration factor (BCF): 1.8

SECTION 13: Disposal considerations

Disposal of the product

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

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

SARA 311/312 Hazards

ACUTE: YES, CHRONIC: YES, FIRE: NO, REACTIVE: NO

Toxic Substances Control Act (TSCA) Inventory

All components of this product are listed on the TCSA Inventory

California Prop. 65 Components

Nickel Chloride (less than 0.1%) is present in this solution and found on the Prop 65 List. WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

HMIS Rating

Plug N Plate Gold Solution	
HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B

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.