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1. Identification

1.1. Product identifier

Product Identity Galvanic Copper Backing Concentrate – C1214

Alternate Names Galvanic Copper Backing Concentrate – C1214

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use Commercial mirroring.

1.3. Details of the supplier of the safety data sheet

Company Name Angel Gilding

1945 Gardner Road

Broadview IL 60155 USA

Emergency

24 hour Emergency Telephone No. 708-383-3340 **Customer Service: Angel Gilding** 708-383-3340

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Acute Tox. 5;H303 May be harmful if swallowed. (Not adopted by US OSHA)

Skin Irrit. 2;H315 Causes skin irritation.

Eye Dam. 1;H318 Causes serious eye damage. Aquatic Acute 1;H400 Very toxic to aquatic life.

Aguatic Chronic 2;H411 Toxic to aquatic life with long lasting effects.

2.2. Label elements



Danger

H303 May be harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

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[Prevention]:

P264 Wash thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P312 Call a POISON CENTER or doctor / physician if you feel unwell.

P321 Specific treatment (see information on this label).

P332+313 If skin irritation occurs: Get medical advice / attention.

P362 Take off contaminated clothing and wash before reuse.

P391 Collect spillage.

[Storage]:

No GHS storage statements

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Copper (II) sulfate pentahydrate (1:1:5) CAS Number: 0007758-99-8	10 - 25	Acute Tox. 4;H302 Skin Irrit. 2;H315 Eye Irrit. 2;H319 Aquatic Acute 1;H400 Aquatic Chronic 1;H410	[1]
D-Mannitol CAS Number: 0000069-65-8	1 - 5	Not Classified	[1]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

4. First aid measures

4.1. Description of first aid measures

^[1] Substance classified with a health or environmental hazard.

^[2] Substance with a workplace exposure limit.

^[3] PBT-substance or vPvB-substance.

^{*}The full texts of the phrases are shown in Section 16.

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General In all cases of doubt, or when symptoms persist, seek medical attention.

Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give

artificial respiration. If unconscious, place in the recovery position and obtain immediate

medical attention. Give nothing by mouth.

Eyes Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and

seek medical attention.

Skin Remove contaminated clothing. Wash skin thoroughly with soap and water or use a

recognized skin cleanser.

Ingestion If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Overview No specific symptom data available.

See section 2 for further details.

Eyes Causes serious eye damage.

Skin Causes skin irritation.

Ingestion May be harmful if swallowed.

5. Fire-fighting measures

5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water spray. Do not use: water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: No hazardous decomposition data available.

5.3. Advice for fire-fighters

None

ERG Guide No. ---

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Ventilate the area and avoid breathing vapors. Take the personal protective measures listed in section 8.

Contain and absorb spillage with non-combustible materials e.g. sand, earth, and vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations.

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7. Handling and storage

7.1. Precautions for safe handling

Handle containers carefully to prevent damage and spillage.

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Keep in a tightly closed container. Store in a cool, dry, ventilated area away from sources of heat or ignition. Protect against physical damage. Store separately from reactive or combustible materials, and out of direct sunlight.

Incompatible materials: No data available.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0000069-65-8	D-Mannitol	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0007758-99-8 Copper (II) sulfate pentahydrate (1:1:5)		OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	1 mg/m3 (as Cu, except for Copper fume) (listed under copper compounds, (n.o.s)
		Supplier	No Established Limit

8.2. Exposure controls

Respiratory If workers are exposed to concentrations above the exposure limit they must use the

appropriate, certified respirators.

Eyes Use chemical safety goggles and/or full face shield where dusting or splashing of solutions

is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Skin Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls,

as appropriate, to prevent skin contact. Wear PVC or rubber gloves to keep skin contact to a minimum. Refer to the manufacturer's recommendations regarding the suitability of any

gloves used.

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Engineering Controls Provide adequate ventilation. Where reasonably practicable this should be achieved by the

use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits

suitable respiratory protection must be worn.

using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details.

9. Physical and chemical properties

AppearanceBlue LiquidOdorOdorless

Odor threshold Not determined PH Not Measured

Melting point / freezing point $0 \, ^{\circ}\text{C}$ Initial boiling point and boiling range $100 \, ^{\circ}\text{C}$

Flash Point

Evaporation rate (Ether = 1)

Flammability (solid, gas)

Not Measured

Not Applicable

Upper/lower flammability or explosive limits Lower Explosive Limit: Not Measured

Upper Explosive Limit: Not Measured

Vapor pressure (Pa) Not Measured **Vapor Density** Not Measured **Specific Gravity** Not Measured Solubility in Water Complete Partition coefficient n-octanol/water (Log Kow) Not Measured **Auto-ignition temperature** Not Measured **Decomposition temperature** Not Measured Viscosity (cSt) Not Measured

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

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No data available.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

No hazardous decomposition data available.

11. Toxicological information

Acute toxicity

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Copper (II) sulfate pentahydrate (1:1:5) - (7758-99-8)	482.00, Rat - Category: 4	>2,000.00, Rat - Category: 5	No data available	No data available	No data available
D-Mannitol - (69-65-8)	No data available	No data available	No data available	No data available	No data available

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000069-65-8 D-Mannitol		OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
	IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;	
0007758-99-8 Copper (II) sulfate pentahydrate (1:1:5)	OSHA	Regulated Carcinogen: No	
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

Classification	Category	Hazard Description
Acute toxicity (oral)	5	May be harmful if swallowed. (Not adopted by US OSHA)
Acute toxicity (dermal)		Not Applicable
Acute toxicity (inhalation)		Not Applicable
Skin corrosion/irritation	2	Causes skin irritation.
Serious eye damage/irritation	1	Causes serious eye damage.
Respiratory sensitization		Not Applicable
Skin sensitization		Not Applicable
Germ cell mutagenicity		Not Applicable
Carcinogenicity		Not Applicable
Reproductive toxicity		Not Applicable
STOT-single exposure		Not Applicable
STOT-repeated exposure		Not Applicable

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Aspiration hazard	 Not Applicable

12. Ecological information

12.1. Toxicity

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Copper (II) sulfate pentahydrate (1:1:5) - (7758-99-8)	1.10, Lepomis macrochirus	0.014, cladocera	0.032 (72 hr), Chlamydomonas reinhardtii
D-Mannitol - (69-65-8)	Not Available	Not Available	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

DOT (Domestic Surface Transportation)

IMO / IMDG (Ocean Transportation)

ICAO/IATA

14.1. UN number

Not Applicable

Not Regulated

Not Regulated

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14.2. UN proper shipping Not Regulated Not Regulated Not Regulated

name

14.3. Transport hazard DOT Hazard Class: Not IMDG: Not Applicable Air Class: Not Applicable

class(es) Applicable Sub Class: Not Applicable

14.4. Packing group Not Applicable Not Applicable Not Applicable

14.5. Environmental hazards

IMDG Marine Pollutant: No; (Copper (II) sulfate pentahydrate (1:1:5))

14.6. Special precautions for user

No further information

15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected

regulations are represented.

Toxic Substance
Control Act (TSCA)

All components of this material are either listed or exempt from listing on the TSCA

Control Act (TSCA) Inventory. WHMIS 1988 D2B E

Classification

US EPA Tier II Hazards Fire: No

Sudden Release of Pressure: No

Reactive: No Immediate (Acute): Yes Delayed (Chronic): No

EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:

Copper (II) sulfate pentahydrate (1:1:5)

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

16. Other information

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The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our

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products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

IMPORTANT NOTE: This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or any process. Final determination of suitability of any material is the sole responsibility of the user.

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