SAFETY DATA SHEET

According to 29 CFR 1910.1200 Hazard Communication Standard 2012 (HazCom 2012)

SECTION 1: Identification

Product identifier

Product name: Zinc Powder

Product number: R-0922

Recommended use and restrictions: To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.

Manufacturer:
Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152
Phone: (410) 472-4340
Emergency phone: (800) 837-8548

SECTION 2: Hazard(s) identification

Physical hazards	Flammable solids	Category 1
Health hazards	Acute toxicity, oral	Category 4
	Eye damage/irritation	Category 2A

Environmental hazards: No data available

Label elements

Hazard pictograms

Signal word: Danger

Hazard statements: Flammable solid. Harmful if swallowed. Causes serious eye irritation.

Precautionary statements

Prevention: Keep away from heat/sparks/open flames. -No smoking. Ground or bond container and receiving equipment. Use explosion-proof electrical/ventilating equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection if contact is likely to occur. Wash skin thoroughly after handling. Do not eat, drink, or smoke when using this product.

Response: IF SWALLOWED: Rinse mouth. Call a physician or poison control center if you feel unwell. 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. IN CASE OF FIRE: Use approved class D extinguishers, clay, and dry sand to extinguish.

Storage: Keep tightly capped. Store out of direct sunlight between 36°F–85°F.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards not otherwise classified: No data available

SECTION 3: Composition/information on ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Ammonium chloride	Ammonium muriate	12125-02-9	55–65
Zinc	Not available	7440-66-6	25–35
Silicon dioxide	Not available	12945-52-5	5–10

SECTION 4: First-aid measures

If inhaled

Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact

Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical attention if irritation develops.

In case of eye contact

Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice.

If swallowed

Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice.

Most important symptoms and effects, both acute and delayed

Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically.

General information

Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media	Approved class D extinguishers, clay, and dry sand
Unsuitable extinguishing media	Carbon dioxide, dry chemical powder, foam

Specific hazards arising from the substance or mixture

Fire hazard	Flammable. Fine dust dispersed in air may ignite. Pyrophoric: Spontaneously flammable in air. Water reactive. Contact with water liberates extremely flammable gases. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat, sparks, flames, and other sources of ignition (e.g., static electricity, pilot lights, or mechanical/electrical equipment).
Explosion hazard	No data available
Reactivity	Hazardous reactions will not occur under normal conditions.
Hazardous combustion products	Ammonia, hydrogen chloride, metal oxides, nitrogen oxides, zinc chloride, and zinc oxide

Advice for firefighters

Precautionary measures	Exercise caution when fighting any chemical fire; hazardous fumes will be present.
Firefighting equipment/instructions	No data available
Protection during firefighting	Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions

Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Sweep up spillage and collect in a suitable container for later disposal. Never return spills to original containers for reuse. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections

For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and storage

Precautions for safe handling

Keep away from sources of ignition. NO SMOKING. Do not handle, store, or open near an open flame, sources of heat or sources of ignition. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe dust. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities

Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

Occupational exposure limits

ACGIH Threshold Limit Values

Components	Type	Value	Form
Ammonium chloride (CAS 12125-02-9)	STEL	20 mg/m^3	Fume
	TWA	10 mg/m^3	Fume
Silica (CAS 12945-52-5)	TLV	2 mg/m^3	Not applicable

NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Ammonium chloride (CAS 12125-02-9)	STEL	20 mg/m^3	Fume
	TWA	10 mg/m^3	Fume
Silica (CAS 12945-52-5)	TWA	6 mg/m^3	Not applicable

OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Silica (CAS 129-45-52-5)	PEL	5 mg/m^3	Respirable dust
		15 mg/m^3	Total dust

Biological limit values No biological exposure limits noted for the ingredient(s)

Exposure controls

Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Personal protective equipment

- Eye/face protection: Wear appropriate chemical safety goggles if contact is likely to occur.
- Skin protection: Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
- Body protection: Wear appropriate protective clothing.
- Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Solid
Form	Powder
Color	Gray
Odor	Odorless
Odor threshold	No data available
pH	No data available
Evaporation rate	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	No data available

Flash point	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	No data available
Vapor pressure	No data available
Relative vapor density	No data available
Solubility	60%
Partition coefficient (n-octanol/water)	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

SECTION 10: Stability and reactivity

Reactivity Hazardous reactions will not occur under normal conditions.

Chemical stability Stable under recommended handling and storage conditions (refer to section 7 of the SDS)

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use

Conditions to avoid Heat, sparks, open flames, and other ignition sources. Contact with incompatible materials. Do not use in areas without adequate ventilation.

Incompatible materials Halogens, nitrates, silver salts, strong acids, strong bases, strong oxidizers, and transition metal halides

SECTION 11: Toxicological information

Information on toxicological effects

Inhalation	May cause respiratory irritation
Skin contact	May cause slight or mild transient irritation
Eye contact	Causes serious eye irritation
Ingestion	May cause irritation, nausea, vomiting, and diarrhea

Most important symptoms/effects, acute and delayed

Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness and itching.

Direct eye contact may cause serious irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Inhalation of dust can cause respiratory irritation. Symptoms may include coughing and breathing difficulties.

Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Acute toxicity Harmful if swallowed. See below for product acute toxicity estimate (ATE) and individual ingredient acute toxicity data.

Product	Species	Test Results
Zinc (CAS Mixture)		
Acute		
Oral		
LD_{50}	Rat	1053–1369 mg/kg

Components	Species	Test Results
Ammonium chloride (CAS 12125-02-9)		
Acute		
Oral		
LD_{50}	Rat	1650 mg/kg
Zinc (CAS 7440-66-6)		
Acute		
Inhalation		
TC_{50}	Human	124 mg/m^3, 50 minutes

Oral			
LD_{50}		Rat	630 mg/kg

Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity (single exposure)	No data available
Specific target organ toxicity (repeated exposure)	No data available
Aspiration hazard	No data available

SECTION 12: Ecological information

This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

DOT

UN number	UN3178
UN proper shipping name	Flammable solid, inorganic, N.O.S. (Zinc powder)
Transport hazard class(es)	
Class	4.1
Subsidiary risk	Not listed
Label(s)	4.1
Packing group	II
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Special provisions	A1, IB8, IP2, IP4, T3, TP33
Packaging exceptions	151
Packaging, non-bulk	212
Packaging, bulk	240

IATA

UN number	UN3178
UN proper shipping name	Flammable solid, inorganic, N.O.S. (Zinc powder)
Transport hazard class(es)	
Class	4.1
Subsidiary risk	Not listed
Packing group	II
Environmental hazards	Not listed
ERG code	3L
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed
Cargo aircraft only	Allowed

IMDG

UN number	UN3178
UN proper shipping name	Flammable solid, inorganic, N.O.S. (Zinc powder)
Transport hazard class(es)	
Class	4.1
Subsidiary risk	Not listed
Packing group	II
Environmental hazards	
Marine pollutant	Not listed
EmS	F-A, S-G
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

This substance/mixture is not intended to be transported in bulk.

DOT

IATA; IMDG

SECTION 15: Regulatory information

U.S. federal regulations

This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA Hazardous Substance (40 CFR 302.4)

Ammonium chloride (CAS 12125-02-9)
Zinc (CAS 7440-66-6)

SARA 313 (TRI reporting)

Ammonium chloride (CAS 12125-02-9)
Zinc (CAS 7440-66-6)

U.S. state regulations

Massachusetts Right-to-Know Act

Ammonium chloride (CAS 12125-02-9)
Silica (CAS 12945-52-5)
Zinc (CAS 7440-66-6)

New Jersey Worker and Community Right-to-Know Act

Ammonium chloride (CAS 12125-02-9)
Silica (CAS 12945-52-5)
Zinc (CAS 7440-66-6)

Pennsylvania Worker and Community Right-to-Know Act

Ammonium chloride (CAS 12125-02-9)
Silica (CAS 12945-52-5)
Zinc (CAS 7440-66-6)

Rhode Island Right-to-Know Act

Ammonium chloride (CAS 12125-02-9)
Zinc (CAS 7440-66-6)

SECTION 16: Other information

NFPA Rating

Health hazard	1
Fire hazard	3
Reactivity	1
Specific	N/A

Disclaimer

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