

Material Safety Data Sheet

Product Trade Name: ALTRAZINC 900 A MAKE-UP

ID: Q087

*** Section 1 - Chemical Product and Company Identification ***

Product Trade Name: ALTRAZINC 900 A MAKE-UP

Manufacturer Information

Chemtech Finishing Systems
14057 Stephens Road
Warren, MI 48089

Contact Phone: (800) 791-2928

Chemtec Emergency Phone: (800) 424-9300

*** Section 2 - Composition / Information on Ingredients ***

CAS #	Component	Percent
001310-73-2	Sodium Hydroxide	5 - 15
013007-85-7	Sodium Glucoheptonate	<5
007733-02-0	Zinc Sulfate	<5
000143-33-9	Sodium Cyanide	<1
007758-98-7	Cupric Sulfate	<1
007786-81-4	Nickel Sulfate	<1

Additional Information:

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

*** Section 3 - Hazards Identification ***

Emergency Overview:

DANGER—CORROSIVE and TOXIC Liquid - Contact with this material can cause severe irritation or burns to the skin, eyes and mucous membranes. Ingestion may be fatal.

Signs and Symptoms of overexposure include: Irritation, discomfort, rash, tearing, blurring of vision, reddening of eyes, palpitation, difficulty breathing, salivation, numbness, nausea, headache, weakness of arms and legs, giddiness, collapse, convulsions, and coma.

Eye Contact:

This product is severely irritating to the eyes and may cause burns and irreversible damage.

Skin Contact:

This product is corrosive to the skin. Contact with the skin or mucous membranes may cause severe irritation, burns and possible ulceration. This product may cause allergic skin reactions in sensitive individuals.

Skin Absorption:

A component of this product may be absorbed through the skin.

Ingestion:

This product will cause irritation or burns to the throat, esophagus, and gastrointestinal tract if it is swallowed. Ingestion of large amounts of this product may be fatal. This product contains cyanide and, if ingested, will target the central vision systems (CVS), central nervous systems (CNS), skin, eyes, thyroid, and blood.

Inhalation:

Inhalation of dusts or mists of this product will cause irritation or burns to the nasal passages and respiratory tract and may cause ulceration of nasal membranes.

Medical Conditions Aggravated by Exposure:

Pre-existing eye, skin, gastrointestinal and respiratory disorders and CNS diseases may be aggravated by exposure. This product may cause an allergic reaction in sensitive persons due to Nickel content.

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*** Section 4 - First Aid Measures ***

Eye Contact:

If this chemical contacts the eyes, immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention immediately. Do not wear contact lenses when working with this chemical.

Skin Contact:

If this chemical contacts the skin, immediately flush the contaminated skin with water. If this chemical penetrates the clothing, immediately remove the clothing and flush the skin with water. Get medical attention promptly.
If irritation develops or persists, get medical attention. If skin contact is prolonged, hydrogen cyanide (HCN) poisoning may occur if source of cyanide intake is not removed and treatment provided. Even after washing skin, observe the victim for at least 2 hours because absorbed cyanide could continue to work into the bloodstream.

Ingestion:

If this chemical has been swallowed, **get medical attention immediately.**
If ingested, administer amyl nitrite antidote kit and oxygen. If the patient is conscious, immediately give the patient activated charcoal slurry, 1 pint of 1% sodium thiosulfate solution prepared with plain water or several glasses of water to drink. Vomiting may occur spontaneously; do not induce vomiting. Do not give anything by mouth to an unconscious person.

Inhalation:

If a person breathes large amounts of this chemical, move the exposed person to fresh air at once. If breathing has stopped, administer amyl nitrite antidote kit and oxygen. Perform artificial respiration using a barrier to avoid contact with the chemical. Keep the affected person warm and at rest. When breathing is difficult, properly trained personnel may assist the affected person by administering 100% oxygen. **Get medical attention immediately.**

First Aid: Notes to Physician

Amyl nitrite by inhalation and intravenous injections of sodium nitrite (10 mL of 3% solution), at a rate of 2.5 mL/min, followed by sodium thiosulfate (50 mL of 25 % solution), at a rate of 2.5 mL/min should be useful. If signs of excessive methemoglobinemia develop, intravenous injections of 1% methylene blue treatment should help victim.

*** Section 5 - Fire Fighting Measures ***

Flash Point: > 212°F

Method Used: Calculated

Upper Flammable

Lower Flammable

Flammability

Limit (UFL): Not applicable

Limit (LFL): Not applicable

Classification: Non-flammable

Fire & Explosion Hazards:

Carbon dioxide reacts with sodium cyanide to produce hydrogen cyanide if moisture is present.

Decomposition Products:

Upon decomposition, this product emits poisonous hydrogen cyanide gases, toxic sulfur oxide (SO_x) fumes ammonia gases, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Extinguishing Media:

Dry chemical, foam, and/or water fog. Do **NOT** use carbon dioxide (CO₂). In some cases, it may be advisable to let fire burn itself out.

Fire-Fighting Instructions:

Firefighters: Wear full protective clothing including self-contained breathing apparatus. Properly decontaminate all equipment after use.

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*** Section 6 - Accidental Release Measures ***

Containment and Clean up procedures must be conducted in accordance with all local, state, and federal regulations.

Containment Procedures:

Stop the flow of material, if this can be done without risk. Wear appropriate protective equipment and clothing during clean up.

Clean-Up Procedures:

Absorb spill with inert material and transfer material into appropriate container(s) for disposal. Flush spill area with a dilute solution of sodium hypochlorite (or calcium hypochlorite) to neutralize. Do not flush cyanide into sewers that may contain an acid. Dispose of collected material according to local, state, and federal regulations.

*** Section 7 - Handling and Storage ***

Handling Procedures:

Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists of this product. Do not store or handle food, beverages or tobacco products in cyanide areas. This product is for industrial use only. Use with adequate ventilation. Do not take internally.

Always have available and use appropriate disposable toxic dust and mist respirator and, in case of emergency, SCBA.

Storage Procedures:

Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. (For incompatible materials, see Section 10.) Thaw and mix thoroughly if frozen. Do not store at temperatures at elevated temperatures.

*** Section 8 - Exposure Controls / Personal Protection ***

Exposure Guidelines:

A: General Product Information

Follow all applicable exposure limits. Keep formation of airborne mists to a minimum.

B: Component Exposure Limits

Sodium Cyanide (000143-33-9) as CN (000057-12-5)

ACGIH: 5mg/m³ ceiling limit; potential for skin absorption

OSHA PEL: 5mg/m³ TWA; prevent or reduce skin absorption

NIOSH REL: 5mg/m³ (4.7 ppm) ceiling limit [10-minute]; 25 mg/m³ IDLH

Sodium Hydroxide (001310-73-2)

ACGIH: Irritation – TLV; 2 mg/m³ ceiling limit

OSHA: 2 mg/m³ TWA; 2 mg/m³ ceiling limit

NIOSH: 2 mg/m³ ceiling limit; 10 mg/m³ IDLH

Nickel as Nickel metal and other compounds (Ni: 007440-02-0)

ACGIH TLV: 1.5 mg/m³ TWA (as Ni)

OSHA PEL: 1 mg/m³ TWA (as Ni)

NIOSH REL: 0.015 mg/m³ TWA (as Inorganic Nickel)

Zinc Sulfate (007733-02-0)

USA - ORG: 2 mg/m³ (8-hr TWA) [ORG = Occupational Reproductive Guidelines]; UF = 1000; CR = NA; Endpoint = D

Copper Sulfate (007758-98-7) (as Cu – 007440-50-8)

ACGIH TLV: 1 mg/m³ TWA (dusts & mists)

OSHA PEL: 1mg/m³ TWA (dusts & mists)

NIOSH: 1mg/m³ TWA (dusts & mists); 100 mg/m³ IDLH (dusts & mists)

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Engineering Controls:

Ventilation should effectively remove and prevent buildup of any vapor or mist generated from the handling of this product.

PERSONAL PROTECTIVE EQUIPMENT

Eyes/Face Protective Equipment:

Wear appropriate eye protection to prevent eye contact.

Skin Protection:

Wear appropriate personal protective clothing to prevent skin contact. The worker should immediately wash the skin when it becomes contaminated. Remove wet or significantly contaminated work clothing and replace. Use of impervious apron and boots are also recommended.

Workers whose clothing may have become contaminated should change into uncontaminated clothing before leaving the work premises.

Respiratory Protection:

If ventilation is not sufficient to effectively prevent buildup of mists or vapors, provide appropriate NIOSH/MSHA respiratory protection.

Personal Protective Equipment:

Provide eyewash fountains in areas where there is any possibility that workers could be exposed to the substance; this is irrespective of the recommendation involving the wearing of eye protection.

Provide facilities for quickly drenching the body within the immediate work area for emergency use where there is a possibility of exposure. Depending on the specific circumstances, a deluge shower, a sink or hose could be considered adequate.

Additional equipment for Cyanide:

Have available Hydrogen Cyanide detector, oxygen resuscitator, and Amyl Nitrite ampoules (cyanide antidote kit) in areas where cyanide-containing materials are used.

*** Section 9 - Physical & Chemical Properties ***

Physical State:	Liquid	Appearance:	Clear, pale yellow-green
Odor:	Slight ammonia-like	Vapor Pressure:	N/A
Vapor Density:	N/A	Boiling Point:	N/A
Specific Gravity:	1.13-1.14	pH:	>12
Viscosity:	N/A	VOC:	N/A
Solubility in Water:	Complete as prepared	Evaporation Rate:	N/A
Percent Volatile:	N/A	Percent Solids:	N/A

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability:

Stable under normal conditions.

Conditions to Avoid:

Keep away from heat and incompatible materials.

Incompatibility:

Do not expose this product to acids, peroxides or strong oxidizers (such as chlorates and nitrates). Do not expose this product to excessive heat conditions.

Decomposition Products:

Upon decomposition, this product emits poisonous hydrogen cyanide gases, toxic sulfur oxide (SO_x) fumes ammonia gases, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Hazardous Polymerization:

Will not occur.

*** Section 11 - Toxicological Information ***

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Acute Toxicity:

A: General Product Information

No information available for the product.

B: Component Analysis - LD50/LC50

Sodium Cyanide (000143-33-9)

Oral LD₅₀ Rat: 6.44 mg/kg

Dermal LD₅₀ Rabbit: 10.4 mg/kg

Sodium Hydroxide (0001310-73-2)

Oral LD₅₀ Rat: 300-500 mg/kg

Dermal LD₅₀ Rabbit: 1350 mg/kg (on a dry basis)

Zinc Sulfate (007733-02-0)

Oral LD₅₀ Rat: 1710 mg/kg

Oral LD₅₀ Mouse: 245 mg/kg

Copper Sulfate (007758-98-7)

Oral LD₅₀ Rat: 300 mg/kg

Oral LD₅₀ Mouse: 369 mg/kg

Carcinogenicity:

A: General Product Information

No information available for the product.

B: Component Carcinogenicity

Nickel as Nickel metal and other compounds (007440-02-0)

IARC: "Nickel and nickel compounds" - Group 2B (possibly carcinogenic to humans)

NTP: "Nickel and nickel compounds" - suspect carcinogen

OSHA: "Nickel and nickel compounds" - suspect carcinogen

ACGIH: A5 - not suspected as a human carcinogen (see exposure limits)

NIOSH: "Nickel, inorganic" - potential human carcinogen

Chronic Toxicity

No information available for the product.

Other Toxicological Information:

None available.

*** Section 12 - Ecological Information ***

Ecotoxicity:

A: General Product Information

No data available for this product. Because of the high pH and components of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms, aquatic systems, terrestrial organisms and terrestrial systems.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Sodium Cyanide (143-33-9)

Test & Species		Conditions
LC50 (24 hr) Goldfish (<i>Carassius auratus</i>)	0.403 mg/L	Fresh water

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Sodium Hydroxide (1310-73-2)

Test & Species	Amount	Conditions
LC50 (24 hr) Mosquito fish (<i>Gambusia affinis</i>)	80.0 mg/L	
LC50 (48 hr) Bluegill (<i>Lepomis macrochirus</i>)	99 mg/L	

Zinc Sulfate (007733-02-0)

Test & Species	Amount	Conditions
LC50 (48 hr) Rainbow Trout (<i>Oncorhynchus mykiss</i>)	4.76 mg/L	Flow-through, hard water
LC50 (96 hr) Fathead minnow (<i>Pimephales promelas</i>)	25.8 mg/L	

Copper Sulfate (007758-98-7)

Test & Species	Amount	Conditions
LC50 (48 hr) Bluegill (<i>Lepomis macrochirus</i>)	0.6 mg/L	15 mg/L CaCO ₃
LC50 (48 hr) Bluegill (<i>Lepomis macrochirus</i>)	8.0 mg/L	68 mg/L CaCO ₃
LC50 (48 hr) Bluegill (<i>Lepomis macrochirus</i>)	10.0 mg/L	100 mg/L CaCO ₃
LC50 (48 hr) Bluegill (<i>Lepomis macrochirus</i>)	45.0 mg/L	132 mg/L CaCO ₃
LC50 (96 hr) Goldfish (<i>Carassius auratus</i>)	0.1-2.5 mg/L	
LC50 (96 hr) Rainbow Trout (<i>Oncorhynchus mykiss</i>)	0.1-2.5 mg/L	
EC50 (48 hr) Water Flea (<i>Daphnia magna</i>)	0.024 mg/L	

Environmental Fate:

No data available for this product.

*** Section 13 - Disposal Considerations ***

Wastes must be tested using methods described in 40 CFR Part 261. It is the generator's responsibility to determine if the waste meets applicable definitions of hazardous wastes. State and local regulations may differ from Federal disposal regulations. Dispose of waste material according to Local, State, Federal and Provincial Environmental Regulations.

*** Section 14 - Transportation Information ***

US DOT Information

Proper Shipping Name	Corrosive Liquid, Basic, Inorganic, N.O.S. (contains Sodium hydroxide)
Hazard Class	8
UN / NA Number	UN3266
Packing Group	III
Product RQ (lb)	--

*** Section 15 - Regulatory Information ***

US Federal Regulations

A: General Product Information

No additional information is available.

B: Component Analysis

This material contains one or more of the following chemicals, requiring identification under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Sodium Cyanide (000143-33-9)

SARA: RQ=10 pounds (4.54 kg)

CERCLA: final RQ = 10 pounds (4.54 kg)

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Sodium Hydroxide (001310-73-2)

CERCLA: final RQ = 1000 pounds (454 kg)

Zinc Sulfate (007733-02-0)

CERCLA: final RQ = 1000 pounds (454 kg)

Copper Sulfate (007758-98-7)

SARA 313: form R reporting required for 1.0% De Minimis concentration (related to Copper)

CERCLA: final RQ = 10 pounds (4.54 kg)

Nickel Sulfate (007786-81-4)

SARA 313: form R reporting required for 0.1% De Minimis concentration (related to Nickel)

CERCLA: final RQ = 100 pounds (45.4 kg)

SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No Reactive: No

State Regulations

A: General Product Information

No information available.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA	RI
Sodium Cyanide	000143-33-9	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sodium Hydroxide	001310-73-2	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sodium Glucoheptonate	013007-85-7	No	No	No	No	No	No	No
Zinc Sulfate	007733-02-0	Yes	No	Yes	No	Yes	Yes	No
Copper Sulfate	007758-98-7	Yes	No	Yes	No	Yes	Yes	No
Nickel Sulfate	007786-81-4	Yes	No	Yes	No	Yes	Yes	No

Other Regulations

A: General Product Information

All components are on the U.S. EPA TSCA Inventory List.

B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Sodium Cyanide	000143-33-9	Yes	Yes	Yes
Sodium Hydroxide	001310-73-2	Yes	Yes	Yes
Sodium Glucoheptonate	013007-85-7	Yes	Yes	Yes
Zinc Sulfate	007733-02-0	Yes	Yes	Yes
Copper Sulfate	007758-98-7	Yes	Yes	Yes
Nickel Sulfate	007786-81-4	Yes	Yes	Yes

C: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Sodium Hydroxide	001310-73-2	1% item 1442 (998)
Sodium Cyanide	000143-33-9	(D1A; D2B; E)
Copper Sulfate	007758-98-7	1% item 438 (1519)
Nickel Sulfate	007786-81-4	0.1% item 1139 (1525)
Zinc Sulfate	007733-02-0	1% item 1726 (1534)

***** Section 16 – Other Information *****

NFPA Ratings: Health: 3 Fire: 0 Reactivity: 1 Other:
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

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HMIS Ratings: Health: 3 Fire: 0 Reactivity: 1 Personal Protection:
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

Key/Legend:

ACGIH = American Conference of Governmental Industrial Hygienists	NFPA = National Fire Protection Association
CERCLA = Comprehensive Environmental Response, Compensation and Liability Act	NIOSH = National Institute for Occupational Safety and Health
EPA = Environmental Protection Agency	NTP = National Toxicology Program
HMIS = Hazardous Material Identification System	OSHA = Occupational Safety and Health Administration
IARC = International Agency for Research on Cancer	SARA = Superfund Amendments and Reauthorization Act
MSHA = Mine Safety and Health Administration	TSCA = Toxic Substance Control Act

The information presented herein is believed to be factual as it has been derived from the works and opinions of persons believed to be qualified experts; however, nothing contained in this information is to be taken as a warranty or representation for which Chemtech Finishing Systems bears legal responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate.

Contact: Jeff Szotek
Contact Phone: (800) 791-2928 (X227)

This is the end of MSDS for ALTRAZINC 900 A MAKE-UP.