

SAFETY DATA SHEET



CROWN ALLOYS COMPANY

Section 1 – PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Cold-Galvanizing Zinc Primer in One Gallon Bulk Containers.

PRODUCT IDENTIFICATION: CROWN-GALV (liquid)

SPECIFICATION: N/A

RECOMMENDED USE: Sacrificial zinc-based protection that prevents rust and corrosion.

SUPPLIER: Crown Alloys Company
 30105 Stephenson Hwy.
 Madison Heights, MI. 48071

TELEPHONE NUMBER: (248) 588-3790

EMERGENCY NUMBER: Call CHEMTREC Day or Night 1-800-424-9300 / +1 703-527-3887

WEBSITE: www.crownalloys.com

Section 2 – HAZARDS IDENTIFICATION

2.1 Classification of the mixture

This product is placed on the market in liquid form

2.1.1 Classification in accordance with GHS-US

Flam. Liq. 2	H225	Eye Irrit. 2A	H319	Repr. 1	H360
Asp. Tox. 1	H304	Acute Tox. 4	H332	Aquatic Acute 1	H400
Acute Tox., dermal 5	H313	STOT SE 3	H335	Aquatic Chronic 1	H410
Skin Irrit. 2	H315	STOT SE 3	H336		

2.2 Label elements

GHS-US labelling

Hazard Pictograms (GHS-US):



GHS02



GHS08



GHS07



GHS09

Signal word (GHS-US):

Danger

Hazard statements (GHS-US):

H225 – Highly flammable liquid and vapor
 H304 – May be fatal if swallowed and enters airways
 H313 – May be harmful in contact with skin
 H315 – Causes skin irritation
 H319 – Causes serious eye irritation
 H332 – Harmful if inhaled

H335 – May cause respiratory irritation
 H336 – May cause drowsiness or dizziness
 H360 – May damage fertility or the unborn child
 H400 – Very toxic to aquatic life
 H410 – Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US):

P101 – If medical advice is needed, have product container or label at hand

P102 – Keep out of reach of children

P103 – Read label before use

P202 – Do not handle until all safety precautions have been read and understood
 P210 – Keep away from heat/sparks/open flames/hot surfaces – no smoking
 P260 – Do not breathe dust/fume/gas/mist/vapors/spray
 P261 – Avoid breathing dust/fume/gas/mist/vapors/spray
 P262 – Do not get in eyes, on skin, or on clothing
 P264 – Wash thoroughly after handling
 P270 – Do not eat, drink or smoke when using this product
 P271 – Use only outdoors or in a well-ventilated area
 P280 – Wear protective gloves/protective clothing/eye protection/face protection
 P281 – Use personal protective equipment as required
 P285 – In case of inadequate ventilation wear respiratory protection

P302 + P352 – IF ON SKIN: Wash with plenty of soap and water

P303+P361+P353 – If on skin or hair, remove/takeoff immediately all contaminated clothing. Rinse skin with water/shower
 P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P308 + P313 – IF exposed or concerned: Get medical advice/attention
 P312 – Call a POISON CENTER or physician if you feel unwell
 P314 – Get medical advice and attention if you feel unwell
 P332 + P313 – If skin irritation occurs: Get medical advice/attention
 P337 + P313 – If eye irritation persists: Get medical advice/attention
 P362 – Take off contaminated clothing and wash before reuse
 P372 – Fight fire with normal precautions from a reasonable distance
 P402 – Store in a dry place
 P403+P233 – Store in a well-ventilated place. Keep container tightly closed
 P405 – Store locked up
 P410+P412 – Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F
 P501- Dispose of contents/container in accordance with local / regional / national / international regulations

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2.3 Other hazards

Do not expose to heat or store at temperatures above 50°C/122°F

2.4 Unknown acute toxicity (GHS-US)

No data available

Other hazards which do not result in GHS classification:
 (When product is used in conjunction with welding)

Electrical shock can kill.
 Arc rays can injure eyes and burn skin.
 Welding arc and sparks can ignite combustibles and flammable materials.
 Overexposure to welding fumes and gases can be hazardous.
 Read and understand the manufacturer's instructions, Safety Data Sheets and the precautionary labels before using these alloys. Refer to Section 8.

Substance(s) formed under the conditions of use:

Welding fumes may contain the following constituent(s) and/or their complex metallic oxides as well as solid particles or other constituents from the consumables, base metal, or base metal coating not listed below:

Chemical Identity	CAS-No.	Chemical Identity	CAS-No.	Chemical Identity	CAS-No.
Carbon Dioxide	124-38-9	Ozone	10028-15-6	Nitrogen Dioxide	10102-44-0
Carbon Monoxide	630-08-0				

Section 3 – COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

Full text of H-phrases: See section 16

3.2 Mixture

Reportable Hazardous Ingredients:

Chemical Identity	CAS-No.	Weight Percent (%)	GHS-US Classification
1,2,4-Trimethylbenzene	95-63-6	5.0 max.	Not classified
Aluminum Flake	7429-90-5	7.5 – 12.5	Not classified
Aromatic Hydrocarbon Solvent	64742-95-6	15.0 max.	Not classified
MICA	12001-26-2	5.0 max.	Not classified
Mineral Spirits	8052-41-2	5.0 max.	Acute Tox. 4, H332
n-Butyl Acetate	123-86-4	5.0 max.	Flam. Liq. 2, H225 STOT SE 3, H336
Sodium Silicoaluminate	1344-00-9	5.0 max.	Not classified
Toluene	108-88-3	5.0 max.	Not classified
Zinc	7440-66-6	35.0 – 45.0	Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Section 4 – FIRST AID MEASURES

4.1 Description of first aid measures

Ingestion: Aspiration hazard. Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. **GHS: Category 4**

Inhalation: If inhaled, remove to fresh air. If you experience difficulty breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Get medical attention if irritation develops or persists. **GHS: Category 3**

Eye Contact: Check for and remove contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do not allow rubbing of eyes or keeping eyes closed. **GHS: Category 2A**
 Arc rays can injure eyes. If exposed, move victim to a dark room, remove contact lenses and cover eyes with a padded dressing and rest. Obtain medical assistance if symptoms persist.

4.2 Most important symptoms/effects, acute and delayed

Medical Conditions Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions (asthma).

Symptoms/injuries after inhalation: High vapor/mist concentration exposure can cause respiratory tract irritation, nausea, headaches, dizziness and other central nervous system effects.

Symptoms/injuries after skin contact: May cause skin irritation. Skin inflammation is characterized by itching, scaling, reddening or occasionally blistering.

Symptoms/injuries after eye contact: May cause stinging, redness, blurred vision and/or tears.

Symptoms/injuries after ingestion: Ingestion may cause irritation of the gastrointestinal tract. If swallowed, aspiration into lungs may result in chemical pneumonitis and severe pulmonary injury.

4.3 Indication of immediate medical attention and special treatment needed

No additional information available

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Section 5 – FIRE-FIGHTING MEASURES

General Fire Hazards: (When product is used in conjunction with welding) Welding arc and sparks can ignite combustibles and flammable products. Read and understand American National Standard Z49.1, "Safety In Welding, Cutting and Allied Processes" and National Fire Protection Association NFPA 51B, "Standard for Fire Prevention During Welding, Cutting and Other Hot Work" before using this product.

5.1 Extinguishing media

Suitable extinguishing media: Use film forming foam, dry chemical powder, water fog or carbon dioxide (CO₂).
Unsuitable extinguishing media: None known

5.2 Special hazards arising from the substance

Fire hazard: Flash Point: 73°F (Seta flash method), FLAMMABLE LIQUID
Flammability Limits in Air by Volume: LOWER: 0.09% UPPER: 7.00%
Products of Combustion: Carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.
Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalis. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention. Keep containers tightly closed. Isolate from heat, sparks and open flame.
Unusual Fire and Explosion hazard: Closed containers may rupture when exposed to extreme heat. Application to hot surfaces requires special precautions. Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and rupture.

5.3 Special protective equipment and precautions for firefighters

Special firefighting procedures: Use water spray to cool containers exposed to heat or fire to prevent pressure build-up. In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.
Special protective equipment for firefighters: Firefighters should wear full protective gear.

Section 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear the appropriate protective equipment as conditions warrant. Do not touch or walk through spilled material.

6.2 Environmental precautions

Contain spill to prevent material from entering sewage or ground water systems.

6.3 Methods and material for containment and cleaning up

Remove all sources of ignition. Ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

Section 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Flammable liquid, use in a well ventilated area. Do not use near sources of ignition. Do not eat, drink or smoke while working with the Crown Galv (liquid). Wash hands thoroughly after handling. Wash hands before eating. Avoid breathing vapor or mist. Avoid contact of raw material with eyes, skin and clothing. Follow all SDS/label precautions even after container is emptied because it may retain product residues. Read and understand the manufacturer's instruction and the precautionary label on the product. See American National Standard Z49.1, "Safety In Welding, Cutting and Allied Processes" published by the American Welding Society, <http://pubs.aws.org> and OSHA Publication 2206 (29CFR1910), U.S. Government Printing Office, www.gpo.gov.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry, well ventilated place. Keep containers tightly closed. Store out of direct sunlight. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120°F. Store large quantities in buildings designed and protected for storage that comply with OSHA 1910.106. Store away from incompatible materials. Store in accordance with local/regional/national regulations.

7.3 Specific end use(s)

For protection against rust and corrosion on all metal surfaces.

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Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Chemical Identity (CAS-No.)	ACGIH TLV (TWA)	OSHA PEL (TWA)	ACGIH TLV (STEL)	VAPOR PRESSURE mmHg @ temp.	SARA SEC. 313*
1,2,4-Trimethylbenzene (95-63-6)	25 ppm	25 ppm	N/A	N/A	YES
Aluminum Flake (7429-90-5)	10.0 mg/m ³	15.0 mg/m ³	N/A	N/A	YES
Aromatic Hydrocarbon Solvent (64742-95-6)	100 ppm	100 ppm	N/A	2.0 @ 68°F	
MICA (12001-26-2)	3.0 mg/m ³	3.0 mg/m ³	N/A	N/A	
Mineral Spirits (8052-41-2)	100 ppm	100 ppm	N/A	2.0 @ 68°F	YES
n-Butyl Acetate (123-86-4)	150 ppm	150 ppm	200 ppm	8.4 @ 68°F	YES
Sodium Silicoaluminate (1344-00-9)	Not Established	Not Established	N/A	N/A	
Toluene (108-88-3)	50 ppm	N/A	N/A	22.0 @ 68°F	YES
Zinc/zinc dust (7440-66-6)	10.0 mg/m ³ (dust)	15.0 mg/m ³ (dust)	N/A	N/A	YES

*Ingredients marked "YES" are subject to the reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 313, 40 CFR 372.

8.2 Exposure controls

Appropriate Engineering Controls: (When used in conjunction with welding)

Use enough ventilation, local exhaust at the arc, or both to keep the fumes and gases from the worker's breathing zone & the general area. Remove decomposition products formed during welding or flame cutting on surface coated with this product. If baking, vent fumes. Maintain exposures below acceptable exposure levels (see Section 8.1). Use industrial hygiene air monitoring to ensure that your use of this product does not create exposures that exceed the recommended exposure limits. Always use exhaust ventilation in user operations such as high temperature cutting, grinding, welding and brazing. Train the welder to keep his head out of the fume plume. Confined spaces require adequate ventilation and/or air supplied respirators. Read and understand the manufacturer's instructions and the precautionary label on the product. See American National Standard Z49.1, Safety in Welding, Cutting, and Allied Processes, published by the American Welding Society, 8669 Doral Blvd. Suite 130, Doral, FL 33166 and OSHA Publication 2206 (29CFR1910), US Government Printing Office, Washington, D.C. 20402 for more details on many of the following.

Eye/face protection: At a minimum, always wear safety glasses with side shields. Additional protection such as goggles, face shields or respirators may be required. Wear helmet or use face shield with filter lens shade number 12 or darker when engaging in any open arc processes. No specific lens shade recommendation for submerged arc processes. Shield others by providing screens & flash goggles.

Skin/Hand Protection: Wear protective gloves. Chemically resistant gloves (neoprene, butyl or nitrile rubber) are recommended.

Respiratory Protection: CROWN-GALV LIQUID is usually used in conjunction with many different open arc processes which requires much more vigilant attention to the resulting fumes.

General Respiratory Welding Controls:

Keep your head out of fumes. Use enough ventilation and local exhaust to keep fumes and gases from your breathing zone and the general area. An approved respirator should be used unless exposure assessments are below applicable exposure limits. Use respirable fume respirator or air supplied respirator when welding in confined space or where local exhaust or ventilation does not keep exposure below TLV's (see Section 8.1). Use only NIOSH approved respirators in accordance with 29 CFR 1910.134 – Respiratory Protection. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998) and ANSI Z88.2.

Hygiene measures: Do not eat, drink or smoke when using the product. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Cosmetics should not be applied in areas where exposures exist! Routinely wash work clothing and protective equipment to remove contaminants.

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Metallic gray liquid
Physical state	Liquid
Color	Metallic gray
Odor	Typical paint solvent odor
Specific gravity (H₂O=1)	1.5
Water reactive	Not established
Flash point (Seta flash method)	73°F
Evaporation rate	Slower than ether
pH	Not applicable (solvent based)

Flammability	Flammable liquid
Boiling point	228°F
Vapor pressure	Not established
Vapor density (Air=1)	Heavier than air
Solubility in water	Negligible
Partition coefficient (n-octanol/water)	Not established
Auto-ignition temperature	Not established
Decomposition temperature	Not established
VOC emitted (lb/gal)	4.17

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Section 10 – STABILITY AND REACTIVITY

10.1 Reactivity

This product is non-reactive under normal conditions of use, storage and transport.

10.2 Chemical stability

This product is stable under normal conditions.

10.3 Possibility of hazardous reactions (hazardous polymerization)

Will not occur under normal conditions.

10.4 Conditions to avoid

Avoid ignition sources, open flames, temperatures above 120°F, strong acids and strong bases.

10.5 Incompatible materials

Incompatible with strong oxidizing agents, strong acids and strong alkalis.

10.6 Hazardous decomposition products

Use of CROWN-GALV LIQUID as per label instructions does not by itself result in any hazardous decomposition products, however, CROWN-GALV LIQUID is usually used in conjunction with many different open arc processes. Note the below likely hazardous decomposition products from general welding operations:

When heated to decomposition (as in welding), CROWN-GALV LIQUID emits acrid smoke & irritating fumes. CROWN-GALV LIQUID contains solvents which may form carbon monoxide, carbon dioxide & formaldehyde. Welding fumes & gases can't be classified simply. The composition & quantity of both are dependent upon the metal being welded & the rods used. Coatings on the metal being welded (such as paint, plating, or CROWN-GALV LIQUID), the number of welders, the volume of the work area, the quality & the amount of ventilation, the position of the welder's head with respect to the gas plume, the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning & degreasing activities), the process & procedures, as well as the welding consumables. Ozone & nitrogen oxides may be formed by the radiation from an arc, in addition to the shielding gases like argon & helium, whenever they are employed.

Section 11 – TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

- Ingestion:** Not an anticipated route of exposure during normal product handling. However, ingestion may be irritating to the nose, throat and respiratory tract. Harmful if swallowed.
- Inhalation:** High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.
- Skin Contact:** Prolonged contact will de-fat and dry skin to a point, persons with sensitive skin may experience mild to moderate redness or irritation.
- Eye contact:** May cause stinging, redness, blurred vision and/or tears.
- Effects of Overexposure – Chronic Hazards:** Reports have associated repeated and prolonged overexposure to **solvents** with permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart and blood.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure): Harmful if swallowed

Specified substance: AROMATIC HYDROCARBON SOLVENT LD50 (acute oral toxicity, mouse) = 1,596 mg/kg LD50 (acute dermal toxicity, rat) = 13,131 mg/kg	Specified substance: MINERAL SPIRITS LD50 (oral, rat) > 5,000 mg/kg LC50 (inhalation, rat, 4 h) > 1,400 ppm
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Specified substance: TOLUENE LD50 (oral, rat) = 636 mg/kg LC50 (inhalation, rat, 1 h) = 26,700 ppm Petroleum distillates may contain chemical carcinogens in limited quantities (<0.01%). These quantities are determined by the supplier/fraction/purity of the distillate during the manufacturing process. Chemicals that may be present within distillates are listed on California's Prop 65 list such as Ethylbenzene, Benzene and Toluene .

- Skin corrosion/irritation (product):** Not classified
- Serious eye damage/irritation (product):** Not classified
- Respiratory or skin sensitization (product):** May cause an allergic skin reaction
- Germ cell mutagenicity (product):** Not classified
- Carcinogenicity (product):**
 - NTP:** N/A
 - IARC:** N/A
 - OSHA:** N/A

- Reproductive toxicity (product):** Not classified
- Genetic Toxicity (product):** Negative results from animal studies
- Specific target organ toxicity - single exposure (product):** Not classified
- Specific target organ toxicity - repeated exposure (product):** Not classified
- Aspiration hazard (product):** Not classified
- Other Effects:** Not classified
- Symptoms related to the physical, chemical and toxicological characteristics under the condition of use:** Not classified

Additional toxicological information under the conditions of use:

Acute toxicity: Not classified

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Section 12 – ECOLOGICAL INFORMATION

Product is a mixture of listed components (see Section 3)

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Specified substance: AROMATIC HYDROCARBON SOLVENTS Aromatic hydrocarbon solvents are moderately toxic to freshwater fish.	Specified substance: ZINC and/or zinc alloys (as Zn) LC50 (Pimephales promelas) [flow-through], 96 h): 2.16 – 3.05 mg/l LC50 (Pimephales promelas) [semi-static], 96 h): 0.211 – 0.269 mg/l
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Aquatic Invertebrates

Specified substance: AROMATIC HYDROCARBON SOLVENTS Aromatic hydrocarbon solvents are moderately toxic to aquatic invertebrates & algae.	Specified substance: ZINC and/or zinc alloys (as Zn) EC50 (Pseudokirchneriella subcapitata) [static], 96 h): 0.11 – 0.271 mg/l EC50 (Pseudokirchneriella subcapitata) [static], 72 h): 0.09 – 0.125 mg/l EC50 (Daphnia Magna) [Static], 48 h): 0.139 – 0.908 mg/l
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Chronic hazards to the aquatic environment:

Fish (product):	Not classified
Aquatic Invertebrates (product):	Not classified

Persistence and Degradability

Biodegradation (product):	No Data Available
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Bioaccumulative Potential:	No Data Available
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Mobility in Soil:	No Data Available
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Octanol/Water partition coefficient:	No Data Available
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Organic carbon/Water partition coefficient:	No Data Available
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Atmospheric half-life:	No Data Available
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Other Adverse Effects:	No Data Available
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Section 13 – DISPOSAL CONSIDERATIONS

Product Disposal Method: Collect and reclaim or dispose in sealed containers at a licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Under RCRA, it is the responsibility of the user of the final product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This product should be disposed of in accordance with all applicable federal, state and local regulations.

Do not discard into any sewers, on the ground or into any bodies of water.

Contaminated Container or Packaging: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Dispose of spent gallon pails and packaging in accordance with all federal, state, regional and/or local regulations.

Section 14 – TRANSPORT INFORMATION

In accordance with DOT

14.1 UN number

UN1993

14.2 UN proper shipping name

Flammable liquid N.O.S. (Paint)

14.3 Additional information

DOT Shipping Information:

DOT Shipping Name:	Paint
Hazard Class or Division:	3
UN Number:	1993
Packing Group:	III

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Section 15 – REGULATORY INFORMATION

15.1 US Federal regulations

Toxic Substances Control Act

The product on this SDS, or all of its components, is listed under TSCA.

Workplace classification

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

SARA Section 313

Zinc (7440-66-6)	Toluene (108-88-3)
Listed on SARA Section 313 of Title III (Specific toxic chemical listings) CERCLA Hazardous Substance List (40 CFR part 372)	Listed on SARA Section 313 of Title III (Specific toxic chemical listings) CERCLA Hazardous Substance List (40 CFR part 372)

CERCLA – SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard – YES	Fire Hazard – YES
Chronic Health Hazard – YES	Reactivity Hazard – NO

SARA requires reporting any spill of any hazardous substance

15.2 US State regulations

California Proposition 65

WARNING: This product may contain chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

Zinc (7440-66-6)	
U.S. - Massachusetts - Right To Know List	U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Rhode Island - Right To Know List	U.S. - Pennsylvania - RTK (Right to Know) List

Section 16 – OTHER INFORMATION

SUPERSEDES LAST REVISION: 03/15/2018 (SDS)

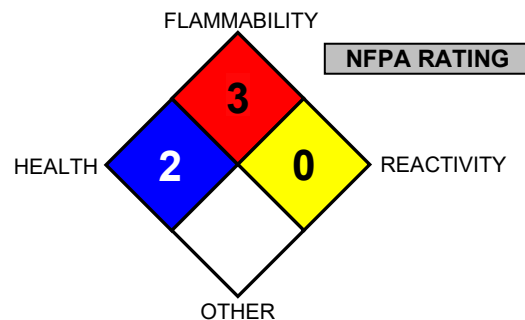
HMIS RATING (Hazardous Materials Information System)			
Health (blue) - 2	Flammability (red) - 3	Reactivity (yellow) - 0	Protective Equipment - X (See Sections 4, 8 & 10)

Health Hazard: 2 (moderate acute or significant chronic exposure hazard) [100°F] Reactivity Hazard: 0 (normally stable)
 Flammability Hazard: 3 (Class IB and IC flammable liquids with flash points below 38°C)

NATIONAL FIRE PROTECTION ASSOCIATION:

Health Hazard: 0 (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); 1 (materials that on exposure under fire conditions could cause irritation or minor residual injury); 2 (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); 3 (materials that can on short exposure cause serious temporary or residual injury); 4 (materials that under very short exposure causes death or major residual injury).

Flammability Hazard: 3 (Class IB and IC flammable liquids with flash points below 38°C [100°F]) Reactivity Hazard: 0 (normally stable)



DEFINITIONS OF TERMS

- ACGIH - American Conference of Governmental Industrial Hygienists
- CAS No. - Chemical Abstracts Service Number
- EPA - Environmental Protection Agency
- GHS - Globally Harmonized System
- IARC - International Agency for Research on Cancer
- LC50 - Lethal Concentration (50 percent kill)
- LD50 - Lethal dose (50 percent kill)

- OSHA - U.S. Occupational Safety and Health Administration
- PEL - Permissible Exposure Limit
- SARA - Superfund Amendments and Reauthorization Act
- STEL - Short Term Exposure Limit
- TLV - Threshold Limit Value
- TSCA - Toxic Substances Control Act
- TWA - Time Weighted Average

Full text of H-phrases (from Section 2 & 3)

Fam. Liq. 2	Flammable liquid, Category 2	H225	Highly flammable liquid and vapor
Asp. Tox. 1	Aspiration hazard, Category 1	H304	May be fatal if swallowed and enters airways
Acute Tox., dermal 5	Acute toxicity (dermal), Category 5	H313	May be harmful in contact with skin
Skin Irrit. 2	Skin corrosion/irritation, Category 2	H315	Causes skin irritation
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2	H319	Causes serious eye irritation
Acute Tox. 4	Acute toxicity (inhalation), Category 4	H332	Harmful if inhaled
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3	H335	May cause respiratory irritation
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3	H336	May cause drowsiness or dizziness
Repr. 1	Reproductive toxicity, Category 1	H360	May damage fertility or the unborn child
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1	H400	Very toxic to aquatic life
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1	H410	Very toxic to aquatic life with long lasting effects

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES: Crown Alloys Company urges each end user and recipient of this SDS to study it carefully. If necessary, consult an industrial hygienist or other expert to understand this information and safeguard the environment and protect workers from the potential hazards associated with the handling or use of this product. The information in this document is believed to be correct as of the date issued. However, this information is provided without any representation or warranty, expressed or implied, regarding accuracy or correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons we do not assume responsibility and expressly disclaim liability of loss, damage, or expense arising from it or any way connected with the handling, storage, use, or disposal of this product. Data may be changed from time to time. Be sure to consult the latest edition of the SDS. Compliance with all applicable Federal, State, Provincial and local laws and regulations remain the responsibility of the user.