

CROWN ALLOYS

COMPANY

MATERIAL SAFETY DATA SHEET

Section 1 - COMPANY AND MATERIAL IDENTIFICATION

PRODUCT TYPE: Cold-galvanizing zinc primer in aerosol containers.
TRADE NAME: CROWN-GALV (aerosol)
SPECIFICATION: N/A
CLASSIFICATION: N/A
VENDOR: Crown Alloys Company
ADDRESS: 30105 Stephenson Hwy.
 Madison Heights, MI. 48071
TELEPHONE: (248) 588-3790 Emergency 24 hour telephone #
 CHEMTEL (800) 255-3924
WEBSITE: www.crownalloys.com
DATE: November 29, 2010

Section 2 - HAZARDOUS INGREDIENTS

IMPORTANT! This section covers the material from which these products are manufactured. The fumes and gases produced when welding with normal use of these products are covered in Section 5 & 6.

Ingredient	CAS No.	OSHA – TWA PEL	(ACGIH – TWA) ¹ TLV	Carcinogen Ref. Source*	Wt. %
Dichloromethane	75-09-2	25 ppm	5 ppm	IARC and NTP	50.00
Propane	74-98-6	1000 ppm	1000 ppm	d	24.00
Xylol	1330-20-7	100 ppm	100 ppm	d	6.00
Zinc Dust and Resin Binder	7440-66-6	200 ppm	200 ppm	d	20.00
VOC: 53.3%					

Single values shown are maximum.

NIOSH classifies welding fumes as carcinogens.

¹The ACGIH has an established exposure limit for Welding Fumes, Not Otherwise Classified. That Threshold Limit Value is 5 mg/m³.

*Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

HMIS RATING (Hazardous Materials Information System)

Health (blue) - 2	Flammability (red) - 2	Reactivity (yellow) - 0	Protective Equipment - B (See Section 7)
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Health Hazard: 0 (minimal acute or chronic exposure hazard); 1 (slight acute or chronic exposure hazard); 2 (moderate acute or significant chronic exposure hazard); 3 (severe acute exposure hazard; one time overexposure can result in permanent injury and may be fatal); 4 (extreme acute exposure hazard; onetime overexposure can be fatal).

Flammability Hazard: 0 (minimal hazard); 1 (materials that require substantial pre-heating before burning); 2 (combustible liquid or solids; liquids with a flash point of 38-93°C [100-200°F]); 3 (Class IB and IC flammable liquids with flash points below 38°C [100°F]); 4 (Class IA flammable liquids with flash points below 23°C [73°F] and boiling points below 38°C [100°F]).

Reactivity Hazard: 0 (normally stable); 1 (material that can become unstable at elevated temperatures or which can react slightly with water); 2 (materials that are unstable but do not detonate or which can react violently with water); 3 (materials that can detonate when initiated or which can react explosively with water); 4 (materials that can detonate at normal temperatures or pressures).

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDS's under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used only in conjunction with a fully implemented HMIS® program by workers who have received appropriate HMIS® training. HMIS® is a registered trade and service mark of the NPCA.

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Section 3 - PHYSICAL and CHEMICAL CHARACTERISTICS

APPEARANCE AND COLOR:

- Silver zinc coating; chlorinated solvent odor.

SPECIFIC GRAVITY @ 20°C (water = 1): 1.428

SOLUBILITY IN WATER: Insoluble

VAPOR DENSITY (AIR = 1): N/E

WATER REACTIVE: No

VAPOR PRESSURE: (PSIG @ 70°F (Aerosols): Max. 60

EVAPORATION RATE (Butyl Acetate = 1): >1

BOILING POINT @ 760 mm Hg: N/A

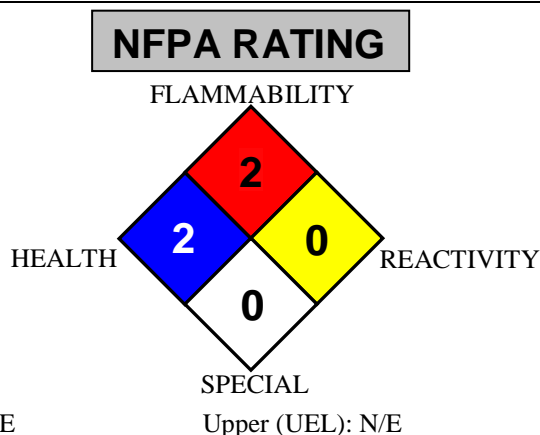
Section 4 - FIRE and EXPLOSION HAZARD DATA

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: Refer to definitions for "HMIS RATING (Hazardous Materials Information System)"

Reactivity Hazard: Refer to definitions for "HMIS RATING (Hazardous Materials Information System)"



FLAMMABLE LIMITS (in air by volume, %): Lower (LEL): N/E

AUTO IGNITION TEMPERATURE: Unknown

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols): Flammable

EXTINGUISHER MEDIA: Use media compatible with surrounding fire. Water, foam, dry chemical, carbon dioxide can be used.

Brazing flame, welding arc and sparks can ignite combustibles and flammables. Refer to American National Standard Z49.1 "Safety in Welding and Cutting" and "Safe Practices" Code: SP, published by the American Welding Society for fire prevention during the use of welding, brazing and allied procedures.

UNUSUAL FIRE AND EXPLOSION HAZARDS: At high temperatures above 120°F, overpressurization of containers can result. Cans may burst.

SPECIAL FIRE-FIGHTING PROCEDURES: Wear self-contained respiratory apparatus for protection. Storage containers exposed to fire and/or heat should be kept cool with water to prevent rupture.

Section 5 - STABILITY AND REACTIVITY DATA

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Open flames, sparks and/or high temperatures, welding arcs.

HAZARDOUS DECOMPOSITION PRODUCTS: HCl, CO, CO₂, small amounts of phosgene and chlorine.

MATERIALS WITH WHICH THIS PRODUCT IS INCOMPATIBLE: Alkalis, oxidizing materials, amines, potassium, magnesium, sodium and other active metals.

Hazardous Decomposition Products

Welding/brazing/soldering fumes and gases can not be classified simply. The composition and quantity of both are dependent upon the type of flux, the metal being soldered/brazed/welded and the rods used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include; Coatings on the metal being soldered/brazed/welded (such as paint, plating, or galvanizing), the number of welders, the volume of the work area, the quality and 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 and degreasing activities), the process and procedures, as well as the soldering/brazing/welding consumables.

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Section 5 - STABILITY AND REACTIVITY DATA (continued)

When this cold-galvanizing zinc primer is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 2. Decomposition products of normal operation include those originating from the volatilization, reaction, or oxidation of the materials shown in Section 2, plus those from the base metal, coatings, etc., as noted above. Gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by the radiation from an arc, in addition to the shielding gases like argon and helium, whenever they are employed.

One recommended way to determine the composition and quantity of fumes and gases to which workers are exposed is to take an air sample inside the welder's helmet if worn or in the worker's breathing zone. See ANSI/AWS F1.1 "Method for Sampling Airborne Particles Generated by Welding and Allied Processes" and "Characterization of Arc Welding Fume" available from the American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.

Section 6 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] Inhalation [] Ingestion [] Skin Absorption [] Eye [] Not Hazardous

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

ACUTE & CHRONIC HEALTH EFFECTS:

- **EYES:** Contact with this cold-galvanizing zinc primer will cause severe irritation, tearing and blurred vision.
- **SKIN:** Contact with this cold-galvanizing zinc primer may cause moderate irritation due to defatting of the skin.
- **INGESTION:** Ingesting this cold-galvanizing zinc primer may cause possible chemical pneumonitis if aspirated into the lungs. It can also cause nausea.
- **INHALATION:** Excessive inhalation of vapors can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness. **CHRONIC EFFECTS:** Long term overexposure may cause neural dysfunction, elevated carboxyhemoglobin levels and salivary gland tumors and liver abnormalities.
- **CARCINOGENICITY:** Dichloromethane has been shown to increase the rate on spontaneously occurring malignant tumors in laboratory mice and benign tumors in laboratory rats. It is not believed to pose a measurable carcinogenic risk to men and women when handled as recommended.

Section 7 - PRECAUTIONS FOR SAFE HANDLING & USE/APPLICABLE **CONTROL MEASURES**

VENTILATION AND ENGINEERING CONTROLS: Maintain exposures below the acceptable exposure levels (see Section 2). 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, brazing and soldering. Train the welder to keep his head out of the fume plume. Maintain air flow away from the user to remove all fumes and dusts, so that the PEL is never exceeded. Adhere to Environmental regulations for exhausts. 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, 550 N.W. LeJeune Road, Miami, FL 33126 and OSHA Publication 2206 (29CFR1910), US Government Printing Office, Washington, D.C. 20402 for more details on many of the following.

RESPIRATORY PROTECTION: Use respirable fume respirator or air supplied respirator when welding in confined space or where local exhaust or ventilation does not keep exposure below PEL's (see Section 2). 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). If vapor exceeds TLV, use respirator approved by US Bureau of Mines for organic vapor.

FOR MAXIMUM SAFETY:

BE CERTIFIED FOR AND WEAR A RESPIRATOR AT ALL TIMES WHEN WELDING OR BRAZING!

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Section 7 - PRECAUTIONS FOR SAFE HANDLING & USE/APPLICABLE **CONTROL MEASURES (continued)**

EYE PROTECTION: Ensure eyewash/safety shower stations are available near areas where this product is used. Wear safety glasses, goggles or face-shield with filter lens of appropriate shade number (per ANSI Z49.1-1988, "Safety in Welding and Cutting"). Goggles must be chemically tight safety goggles. Do NOT wear contact lenses.

PROTECTIVE CLOTHING: Protective rubber gloves are recommended that are chemical and acid impervious. Since welding/brazing/soldering involves high temperatures, be sure the gloves are designed for high temperature applications to prevent burns.

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash with soap and water before handling food. Do not eat or drink while handling this product. Do not smoke or apply cosmetics in areas where exposures exist. Remove contaminated clothing.

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. Do NOT flush to sewer.

WASTE DISPOSAL METHOD: Prevent waste from contaminating surrounding environment. Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with federal, state and local regulations. When vented to atmospheric pressure through normal use, aerosol cans pose no disposal problem.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store this product at ambient conditions. Do not store at temperatures above 130°F. Do not puncture or incinerate containers. Keep under extremely dry and controlled conditions. Wash thoroughly after handling to remove all residue. KEEP OUT OF REACH OF CHILDREN! Professionally wash contaminated clothing before re-use.

Section 8 - FIRST AID MEASURES

- **EYE EXPOSURE:** Flush eyes with plenty of water or saline for at least 15 minutes to remove all residue. Consult a physician.
- **SKIN EXPOSURE:** Wash thoroughly with soap and water. If irritation should occur, contact a physician.
- **INHALATION EXPOSURE:** Remove to fresh air. Resuscitate if necessary. Call a physician; advise of chemical composition (Section 2) and potential health hazards (Section 6).
- **INGESTION EXPOSURE:** DO NOT INDUCE VOMITING! Call a physician. Advise of chemical composition (Section 2) and potential health effects (Section 6).
- **RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms and eliminate overexposure.

Section 9 – REGULATORY INFORMATION

SARA Title III Program (Section 313 Supplier Notification):

This product contains the following toxic chemicals
Subject to the reporting requirements of EPCRA of
1986 and 40 CFR 372

<u>Chemical Name</u>	<u>Concentration</u>
Xylol	6.00%
Dichloromethane	50.00%

Section 10 – OPTIONAL INFORMATION

DOT Hazard Classification: Consumer Commodity ORMD 48580 Sub 3

Section 11 – DEFINITIONS OF TERMS

CAS No. - Chemical Abstracts Service Number **PEL** - Permissible Exposure Level **TLV** - Threshold Limit Value
TWA - Time Weighted Average **STEL** - Short Term Exposure Limit **IARC** – International Agency for Research on Cancer
NIOSH – National Institute of Occupational Safety and Health **OSHA** – U.S. Occupational Safety and Health Administration
TDLo – the lowest dose to cause a symptom **TCLo** – the lowest concentration to cause a symptom
TD₀, **LDLo**, and **LD₀**, or **TC**, **TC₀**, **LCLo**, and **LC₀** – the lowest dose (or concentration) to cause lethal or toxic effects.
SARA – Superfund Amendments and Reauthorization Act **ACGIH** – American Conference of Governmental Industrial Hygienists
LD₅₀ & **LC₅₀** – These values are the amount of a substance given to the stated species that causes 50% of that species to die.
NTP – National Toxicology Program

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