

The information contained in this Material Safety Data Sheet is very important. If need be, please have this document translated so that anyone using this material may fully understand these instructions and directions.

Product/Trade Name: Alloys containing Zinc.  
NAFTA H.S. DESCRIPTION 8001.20

**SECTION I. IDENTIFICATION**

Info furnished by: Hallmark Metals Corporation  
Address: 930 Wellington Avenue  
Cranston, RI 02910 USA  
Date Prepared: 01 January 2002  
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**SECTION II. CONSTITUENTS**

Element	CAS	%WT	Carcinogen	TLV/TWA	OSHA PEL ACGIH/OSHA
*Zinc	7440-66-6	1	No	0.5 mg/cu m	5.0 mg/cu m

\*Product contains one or more of these metallic elements in varying percentages by weight.

**SECTION III. PHYSICAL DATA**

Melting Point 480° F  
Boiling Point N/A  
Vapor Pressure Not Volatile  
Vapor Density (air is 1) Not Volatile  
Solubility in Water NIL  
Appearance & Color Silver to gray metal  
Density g/cc Tin 7.30 g/cc  
Zinc 7.14 g/cc  
Odor None  
% Volatile Nil  
pH N/A  
Evaporation N/A

#### **SECTION IV. FIRE AND EXPLOSION DATA**

FLASH POINT: INFORMATION NOT AVAILABLE

FLAMMABILITY LIMITS: INFORMATION NOT AVAILABLE

AUTOIGNITION TEMPERATURE: INFORMATION NOT AVAILABLE

SOLID, MASSIVE FORM OF MATERIAL IS NOT COMBUSTIBLE UNDER ORDINARY FIRE CONDITIONS. FIRE AND EXPLOSION HAZARDS ARE MODERATE WHEN MATERIAL IS IN THE FORM OF DUST AND EXPOSED TO HEAT OR FLAMES, CHEMICAL REACTION, OR CONTACT WITH POWERFUL OXIDIZERS.

FIRE EXTINGUISHING METHODS: USE SPECIAL MIXTURES OF DRY CHEMICALS. DO NOT USE WATER OR MOIST SAND. FIRE FIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING.

#### **SECTION V. REACTIVITY DATA**

MASSIVE MATERIAL IS STABLE AT ORDINARY TEMPERATURES, BUT DUST PRESENTS MODERATE FIRE AND EXPLOSION HAZARDS. MATERIAL MAY BE INCOMPATIBLE WITH ACIDS, BASES, AND OXIDIZERS. MOLTEN METAL MAY REACT VIOLENTLY WITH WATER. FOR ADDITIONAL INFORMATION, USERS SHOULD CONSULT DATA SHEETS ON INDIVIDUAL COMPONENT ELEMENTS.

#### **SECTION VI. HEALTH HAZARDS DATA**

TLV: SEE SECTION II.

PRIMARY ROUTES OF ENTRY: INGESTION OF DUST, INHALATION OF DUST OR FUME.

ZINC IS RELATIVELY LOW IN TOXICITY BUT INHALATION OF FUMES MAY CAUSE "METAL FUME FEVER". ONSET OF SYMPTOMS MAY BE DELAYED 4-12 HOURS AND INCLUDE IRRITATION OF THE NOSE, MOUTH, AND THROAT, COUGH, STOMACH PAIN, HEADACHE, NAUSEA, VOMITING, METALIC TASTE, CHILLS, FEVER, PAINS IN THE MUSCLES AND JOINTS, THIRST, BRONCHITIS OR PNEUMONIA AND A BLUISH TINT TO THE SKIN. THESE SYMPTOMS GO AWAY IN 24 TO 48 HOURS AND LEAVE NO EFFECT

#### **SECTION VII. SPILL PROCEDURES**

NO SPECIAL PRECAUTIONS ARE NECESSARY FOR SPILLS OF BULK MATERIAL. IF LARGE QUANTITIES OF DUST ARE SPILLED, REMOVE BY VACUUMING WITH A "HEPA" FILTER OR WET SWEEPING TO PREVENT HEAVY CONCENTRATIONS OF AIRBORNE DUST. CLEAN-UP PERSONAL SHOULD WEAR RESPIRATORS AND PROTECTIVE CLOTHING.

METAL CAN BE RECLAIMED FOR REFUSE. FOLLOW FEDERAL, STATE, AND LOCAL REGULATIONS REGARDING DISPOSAL.

### **SECTION VIII. SPECIAL PROTECTION INFORMATION**

USE GENERAL AND LOCAL EXHAUST VENTILATION TO KEEP AIRBORNE CONCENTRATIONS OF DUST OR FUME BELOW THE TLV. EMPLOYEES SHOULD WEAR OSHA OR NIOSH APPROVED RESPIRATORS FOR PROTECTION AGAINST AIRBORNE DUST OR FUMES. FULL PROTECTIVE CLOTHING SHOULD BE WORN BY WORKERS EXPOSED TO HEAVY CONCENTRATIONS OF DUST, AND SHOWERING SHOULD BE REQUIRED BEFORE CHANGING INTO STREET CLOTHES. GLOVES AND BARRIER CREAMS MAY BE NECESSARY TO PREVENT SKIN SENSITIZATION AND DERMATITIS.

APPROVED SAFETY GLASSES OR GOGGLES SHOULD BE WORN WHEN WORKING WITH DUSTY MATERIAL AND MOLTEN METAL. SAFETY STATIONS SHOULD BE PROVIDED IN CLOSE PROXIMITY TO WORK AREAS.

PRE-EMPLOYMENT AND PERIODIC MEDICAL EVALUATIONS SHOULD BE PROVIDED. ATTENTION SHOULD BE DIRECTED TOWARD SKIN, EYES, RESPIRATORY TRACT, BLOOD, KIDNEYS, PULMONARY FUNCTION, AND NEUROLOGIC HEALTH. CHEST X-RAYS SHOULD BE INCLUDED IF SYMPTOMS ARE PRESENT.

FOOD SHOULD NOT BE CONSUMED IN THE WORK AREA. NO SMOKING IN WORK AREA. HANDS AND FACE MUST BE WASHED BEFORE EATING OR SMOKING. COSMETICS SHOULD NOT BE APPLIED IN AREAS WHERE THIS PRODUCT IS USED.

### **SECTION IX. SPECIAL PRECAUTIONS**

USE GOOD HOUSEKEEPING PRACTICES TO PREVENT ACCUMULATIONS OF DUST AND TO KEEP AIRBORNE DUST CONCENTRATIONS AT A MINIMUM. AVOID BREATHING DUST OR FUMES.

STORE MATERIAL AWAY FROM INCOMPATIBLE MATERIALS, AND KEEP DUST AWAY FROM SOURCES OF IGNITION.

### **SECTION X. HAZARD RATING**

BASES ON NFPA AND NPCA SYSTEMS  
HEALTH – 2  
FLAMMABILITY – 0  
REACTIVITY – 0

SPECIAL HAZARD –

**SECTION XI. OTHER INFORMATION**

THIS FACT SHEET WAS PREPARED BY HALLMARK METALS CORPORATION. THE INFORMATION RECOMMENDATIONS AND SUGGESTIONS WERE COMPILED FROM REFERENCE MATERIALS AND OTHER SOURCES BELIEVED TO BE RELIABLE. HOWEVER, THE FACT SHEETS' ACCURACY OR COMPLETENESS IS NOT GUARANTEED BY HALLMARK METALS CORPORATION, NOR IS ANY RESPONSIBILITY ASSUMED OR IMPLIED FOR ANY LOSS OR DAMAGE RESULTING FROM INACCURACIES OR OMISSIONS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS. NO WARRANTY IS IMPLIED OR EXPRESSED REGARDING THE ACCURACY OF THIS DATA. LIABILITY IS EXPRESSLY DISCLAIMED FOR LOSS OR INJURY ARISING OUT OF USE OF THIS INFORMATION OR THE USE OF ANY MATERIALS DESIGNATED.

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