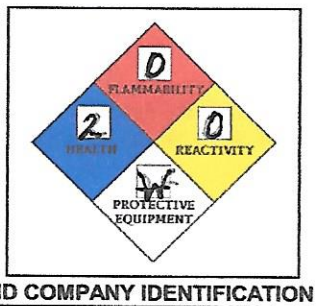
SAFETY DATA SHEET

NFPA:



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	Zinc Aluminum Alloy
SYNONYMS:	#3 Alloy
MANUFACTURER:	Imperial Zinc Corporation
ADDRESS:	1031 East 103rd Street Chicago, IL 60628
EMERGENCY PHONE:	773-264-5900
CHEMTREC PHONE:	1-800-424-9300
FAX PHONE:	773-264-5910
CHEMICAL NAME:	Zinc
PRODUCT USE:	Pressure Die Castings
PREPARED BY:	Melissa S. Livingston
PREPARATION DATE:	FEBRUARY 18, 2015

SECTION 2: HAZARDS IDENTIFICATION

CLASSIFICATIONS: **Not classified as dangerous**

Other Hazards

The metling down of moist metal leads to explosion risks
Heated product causes burns
Caution! This substance is subject to exposure limits when in dust form.

INGREDIENT: Zinc, solid — Water reactive

CAS NO.	% WT	
7440-66-6	95-96	
	ppm	mg/m3
OSHA PEL-TWA:	15.0	5.0

Aluminum — Water reactive

CAS NO.	% WT	
7429-90-5	3.9 to 4.3	
	ppm	mg/m3
OSHA PEL-TWA:	15.0	none

Copper

CAS NO.	% WT	
7440-50-8	0.10	
	ppm	mg/m3
OSHA PEL-TWA:		0.10

Magnesium

CAS NO.	% WT	
7439-95-4	< Trace	
	ppm	mg/m3

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OSHA PEL-TWA:

PICTOGRAMS: N/A

SIGNAL WORDS: DANGER

HAZARD STATEMENTS: EXTREMELY EXPLOSIVE AND REACTIVE WITH WATER.
MAY CAUSE SEVERE BURNS

PRECAUTIONARY STATEMENTS:

PREVENTION: KEEP AWAY FROM FLUIDS
WEAR EYE, FACE, HAND AND FOOT PROTECTION
DO NOT EAT OR DRINK AROUND ZINC DUST PRODUCTS

RESPONSE: IN CASE OF FIRE, USE OF DRY FIRE FIGHTING PROPERTY

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

	OSHA PEL					
Hazardous Components	**TWA**	**Ceiling**	**ACGIH**	**TWA**	**STEL**	**%**
Aluminum Oxide						<1
total dust	10	none	10		none	
respirable dust	5	none	none		none	
Aluminum						3.9 to 4.3
total dust	15	none	10		none	
fume, powder, resp, dust	5	none	5		none	
Iron						0.075
oxide fume	10	none	5		none	
oxide total dust	10	none	none		none	
Lithium	none	none	none		none	< trace
Nitrides	none	none	none		none	< trace
Copper						0.10
fume	0.1	none	0.2		none	
total dust	1	none	1		none	
Magnesium						< trace
Magnesium oxide						< trace
fume	10	none	10		none	
respirable dust	5	none	none		none	
Lead						<.004
Zinc						95-96
oxide fume	5	none	5		none	
oxide total dust	15	none	10		none	
oxide respirable dust	5	none	none		none	
Manganese	5	5	0.2		none	< trace
Carbides	none	none	none		none	< trace
Ammonia	50 ppm	none	25 ppm		35 ppm	< trace
Tin						<.002
oxide and inorganic	2	none	2		none	
Cadmium						<.003
Chromium	1	none	0.5		none	< trace

Nickel	1	none	1	none	< trace
Cobalt	0.1	none	0.05	none	< trace
Silicon					< trace
total dust	15	none	10	none	
respirable dust	5	none	none	none	

SECTION 4: FIRST AID MEASURES

EYES: RINSE IMMEDIATELY WITH WATER FOR 15 MINUTES AND TAKE VICTIM TO OPTHALMOLOGIST

SKIN: IN CASE OF BURNS, WASH WITH WATER FOR 15 MINUTES, REMOVE CLOTHING WHILE WASHING IF NOT STUCK TO SKIN. DO NOT TEAR OFF SOLIDIFIED PRODUCT FROM SKIN, COVER WITH STERILE BANDAGES

INGESTION: N/A

INHALATION: AFTER INHALATION OF FUMES, MOVE VICTIM TO FRESH AIR. RESPIRATORY PROBLEMS, CONSULT PHYSICIAN/MEDICAL ADVICE

SECTION 4 NOTES: IF BURNED SURFACE IS > 10%: TAKE VICTIM TO HOSPITAL

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: N/A
(% BY VOLUME) LOWER: N/A

FLASH POINT:
F: N/A
C: N/A

NFPA HAZARD CLASSIFICATION
HEALTH: FLAMMABILITY: NO REACTIVITY: YES, WATER/MOISTURE
OTHER:

HMIS HAZARD CLASSIFICATION
HEALTH: FLAMMABILITY: NO REACTIVITY: YES, WATER/MOISTURE
PROTECTION: WEAR APPROPRIATE EYE/FACE/FOOT AND HAND PROTECTION WHEN WORKING AROUND MOLTEN METAL

EXTINGUISHING MEDIA: DRY CHEMICAL, SAND, OR SPECIAL POWDER IS ACCEPTABLE

SPECIAL FIRE FIGHTING PROCEDURES: DO NOT USE WATER!!!!

SECTION 5 NOTES: FIRE FIGHTERS SHOULD BE EQUIPPED WITH NIOSH APPROVED SCBA APARATUS.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: IF ZINC IS IN A MOLTEN STATE, AVOID CONTACT WITH WATER OR MOISTURE. IF IT IS IN A SOLID STATE, BE CAREFUL OF SHARP EDGES. STORE IN A DRY AREA. DO NOT ALLOW TO GET WET.

SECTION 7: HANDLING AND STORAGE

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

OTHER PRECAUTIONS: STORE METAL IN A DRY AREA AWAY FROM INCOMPATIBLE MATERIALS. AVOID STORAGE NEAR HYDROGEN PEROXIDE. kEEP DUST AWAY FROM INGITION SOURCES.

SECTION 7 NOTES: PRE-HEAT METAL WHEN REQUIRED TO EVAPORATE SURFACE MOISTURE PRIOR TO MELTING. ICE, SNOW GREASE, OIL OR MOISTURE CAN CAUSE EXPLOSIONS. REMOVE THESE CONTAMINATES BEFORE CHARGING INGOT/SOWS INTO MELTING FURNACE.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

VENTILATION : PROVIDE VENTILATION NECESSARY TO MAINTAIN CONCENTRATIONS OF AIR CONTAMINENTS BELOW RECOMMENDED LEVELS.

RESPIRATORY PROTECTION: A MASK/FULL-FACE RESPIRATOR SHOULD BE WORN IF AIR CONTAMINENT CONCENTRATIONS EXCEED EXPOSURE LIMITS OR IF EXCESSIVE DUST CONCENTRATIONS OCCUR.

EYE PROTECTION: GOGGLES SHOULD BE WORN IF EXCESSIVE DUST CONCENTRATIONS OCCUR AND WHEN WORKING WITH MOLTEN METAL.

SKIN PROTECTION: GLOVES AND BARRIER CREAMS MAY BE NECESSARY TO PREVENT SKIN SENSITIZATION AND DERMATITIS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: FULL PROTECTIVE CLOTHING SHOULD BE WORN BY WORKERS EXPOSED TO HEAVY CONCENTRATIONS OF DUST OR HIGH HEAT AND DURING ALLOYING OPERATIONS TO PREVENT INJURY FROM MOLTEN METAL SPLASHING, SPILLING, ETC.

WORK HYGIENIC PRACTICES: AS NECESSARY TO MAINTAIN EXPOSURES BELOW TLVs AND PELS AND FOLLOW GOOD NORMAL HYGIENIC PRACTICES.

SECTION 8 NOTES: WEAR APPROPRIATE PPE WHEN WORKING WITH OR AROUND MOLTEN METALS.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: METALLIC GRAYISH WHITE

ODOR: ODORLESS

PHYSICAL STATE: SOLID

pH AS SUPPLIED: 1% SOLN/WATER
BOILING POINT:
F: APPROXIMATELY 1660 DEGREES
C: APPROXIMATELY 904.444 DEGREES

MELTING POINT:
F: 730 DEGREES
C: 387.777 DEGREES
FREEZING POINT:
F: 788 DEGREES
C: 420 DEGREES
VAPOR PRESSURE (mmHg):
@
F: N/A
C: N/A

VAPOR DENSITY (AIR = 1):

@
F: N/A
C: N/A

SPECIFIC GRAVITY (H2O = 1):
@
F: 7.1
EVAPORATION RATE: N/A

SOLUBILITY IN WATER: INSOLUBLE

PERCENT VOLATILE:
BY WT/ BY VOL @
F: N/A
C: N/A
VOLATILE ORGANIC COMPOUNDS (VOC):

WITH WATER: LBS/GAL
WITHOUT WATER: LBS/GAL

SECTION 10: STABILITY AND REACTIVITY

	STABLE	UNSTABLE
STABILITY:	YES IN INGOT/SOW FORM	

CONDITIONS TO AVOID (STABILITY): CONTACT WITH ACIDS AND ALKALINE HYDROXIDES WILL GENERATE HYDROGEN GASES.

INCOMPATIBILITY (MATERIAL TO AVOID): SULFUR, HALOGENS AND STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: AT TEMPERATURES ABOVE THE MELTING POINT, ZINC FUMES MAY BE EVOLVED. REACTION WITH STRONG OXIDIZERS LIBERATES HYDROGEN GAS WHICH MAY BE EXPLOSIVE.

HAZARDOUS POLYMERIZATION: HEATING OF THIS PRODUCT MAY GENERATE ZINC OXIDE FUMES GENERALLY OVER 1652 DEGREES F.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:
CHRONIC TOXICITY: CAUTION! THIS SUBSTANCE IN DUST OR MOLTEN FORM IS SUBJECT TO EXPOSURE LIMITS.

SECTION 11 NOTES:
ACCUTE EFFECTS/SYMPTOMS:
INHALATION:
AFTER INHALATION OF DUST, IRRITATION OF THE NASAL MUCOUS MEMBRANES, DRY/SORE THROAT AND COUGHING MAY OCCUR.
AFTER INHALATION OF FUMES, FEELING OF WEAKNESS, METAL FUME FEVER, VOMITING OR NAUSEA MAY OCCUR.
SKIN CONTACT:
IF IN MOLTEN STATE, BURNS MAY OCCUR.
EYE CONTACT:
IF IN MOLTEN STATE, BURNS MAY OCCUR.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:
MOBILITY:

VOLATILE ORGANIC COMPOUNDS (VOC)	NOT APPLICABLE
SOLUBILITY IN/REACTION WITH WATER	INSOLUBLE IN WATER, SUBSTANCE SINKS IN WATER.
PERSISTENCE AND DEGRADABILITY:	NOT BIODEGRADABLE
BIOACCUMULATIVE POTENTIAL:	NO BIOACCUMULATIVE DATA AVAILABLE

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SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: RECYCLE/REUSE. REMOVE WASTE IN ACCORDANCE WITH LOCAL AND OR NATIONAL REGULATIONS

RCRA HAZARD CLASS: CLASSIFIED AS A NON HAZARDOUS, NO PLACARDS NEEDED

SECTION 13 NOTES:

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: ZINC ALUMINUM ALLOY (#3 ALLOY)
HAZARD CLASS: NO SPECIAL DOT REGULATIONS PERTAINING TO THIS MATERIAL
ID NUMBER: 1435
PACKING GROUP: N/A
LABEL STATEMENT: DANGER, POSSIBLE SHARP EDGES, HARMFUL IF INHALED AS A DUST FORM

SECTION 14 NOTES: THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): NOT REGULATED AS A HAZARDOUS MATERIAL IN SOLID FORM FOR TRANSPORTATION PURPOSES

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): N/A

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): N/A

311/312 HAZARD CATEGORIES: 0.1 TO > 1.0%

313 REPORTABLE INGREDIENTS: 0.1 TO > 1.0%

STATE REGULATIONS: NOT REGULATED AS A HAZARDOUS MATERIAL IN SOLID FORM FOR TRANSPORTATION PURPOSES

INTERNATIONAL REGULATIONS: NOT REGULATED AS A HAZARDOUS MATERIAL IN SOLID FORM FOR TRANSPORTATION PURPOSES

SECTION 15 NOTES:

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

PREPARATION INFORMATION: THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH THE SDS REQUIREMENTS OF THE OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200.
THIS PRODUCT IS CONSIDERED AN ARTICLE IN ITS FINAL FORM AND NOT SUBJECT TO THE REQUIREMENTS FOR CLASSIFICATION OR LABELING UNDER 29 CFR 1910.1200.

DISCLAIMER: