

MSDS NUMBER : 0139-NHC  
PROJECT NAME: ALUMINUM ALLOYS, 3XXX

IS-1424

MSDS ID CODE : NO  
PART NUMBER(S) : ALLOYS

Section I General Information

*Insul  
Shield*

\*\*\*\*\* ADDITIONAL INFORMATION \*\*\*\*\*

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. VENDOR ASSUMES NO RESPONSIBILITY FOR INJURY TO VENDEE OR THIRD PERSONS PROXIMATELY CAUSED BY THE MATERIAL IF REASONABLE SAFETY PROCEDURES ARE NOT ADHERED TO AS STIPULATED IN THE DATA SHEET. ADDITIONALLY, VENDOR ASSUMES NO RESPONSIBILITY FOR INJURY TO VENDEE OR THIRD PERSONS PROXIMATELY CAUSED BY ABNORMAL USE OF THE MATERIAL EVEN IF REASONABLE SAFETY PROCEDURES ARE FOLLOWED. FURTHER MORE, VENDEE ASSUMES THE RISK IN HIS USE, STORAGE, AND HANDLING OF THE MATERIAL.

Section II Hazardous Ingredients/Identity Information

INGREDIENT NAME CAS NUMBER	PERCENTAGE	EXPOSURE LIMITS
MAGNESIUM 7439-95-4	0.6	OSHA PEL : 10MG/M3 ACGIH TLV: 15MG/M3 OTHER :

MSDS NUMBER : 0139-NHC  
PRODUCT NAME: ALUMINUM ALLOYS, 3XXX

Section II Hazardous Ingredients/Identity Information - (CONT.)

SECTION 313 CHEMICALS

INGREDIENT NAME CAS NUMBER	PERCENTAGE	EXPOSURE LIMITS
ALUMINUM (AS DUST) 7429-90-5	99.7	OSHA PEL : 10MG/M3 ACGIH TLV: 10.0 MG/M3 OTHER : 5.0 MG/M3
MANGANESE 7439-96-5	.4-1.6	OSHA PEL : 10MG/M3 ACGIH TLV: 15MG/M3 OTHER :

SECTION 313 SUPPLIER NOTIFICATION

THE CHEMICALS LISTED ABOVE WITH PERCENTAGES ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372.

Section III Physical/Chemical Characteristics

BOILING POINT 4442F	MELTING POINT 1220F	FREEZING POINT ND
EVAPORATION RATE BASIS (NA )=1 RATE: ND	VAPOR DENSITY (AIR=1) NA	SPECIFIC GRAVITY (WATER=1) ND
PERCENT VOLATILE BY VOLUME ND	THEORETICAL VOC CONTENT PERCENT BY WEIGHT ND	WEIGHT PER GALLON ND
PH INFORMATION PH VALUE: NA CONCENTRATION: ND	PHYSICAL STATE STATE: ND	VAPOR PRESSURE VALUE: NA
SOLUBILITY IN WATER: NIL (% BY WEIGHT)		
REACTIVITY IN WATER: NO DATA		

MSDS NUMBER : 0139-NHC  
PRODUCT NAME: ALUMINUM ALLOYS, 3XXX

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Section III Physical/Chemical Characteristics - (CONT.)

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APPEARANCE AND ODOR:  
METALLIC APPEARANCE; NO ODOR

\*\*\*\*\* ADDITIONAL INFORMATION \*\*\*\*\*  
MATERIAL IS (AT NORMAL CONDITIONS): SOLID

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Section IV Fire And Explosion Hazard Data

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NFPA CODES:	HEALTH .....	: 0	HMIS CODES:	HEALTH .....	: NO
	FLAMMABILITY ..	: 1		FLAMMABILITY ..	: NO
	REACTIVITY .....	: 0		REACTIVITY .....	: NO
	OTHER .....	: U		PROTECTION .....	: NO

FLAMMABLE LIMITS IN AIR  
UPPER LIMIT ...: NA  
LOWER LIMIT ...: NA

FLASH POINT  
VALUE .....

>200  
METHOD USED : NO

AUTOIGNITION TEMPERATURE: NA

EXTINGUISHING MEDIA:  
COVER FIRE WITH SAND, MAT, OR FLAX  
(BURLAP) SACKS. WATER SPRAY IS DANGEROUS  
IN EARLY STAGE OF FIRE. NOTE CHIRS91

SPECIAL FIRE FIGHTING PROCEDURES:  
DO NOT USE WATER OR FOAM.  
SMALL FIRE: DRY CHEMICAL, SODA ASH, LIME  
OR SAND.  
LARGE FIRE: WITHDRAW FROM AREA AND LET  
FIRE BURN.

UNUSUAL FIRE AND EXPLOSION HAZARDS:  
DAMP ALUMINUM DUST MAY SPONTANEOUSLY  
HEAT WITH LIBERATION OF HYDROGEN TO FORM  
EXPLOSIVE AIR MIXTURES. (SEE ADDITIONAL  
INFORMATION, SECTION VIII, HEREIN.)

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Section V Reactivity Data

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IS THIS CHEMICAL STABLE UNDER NORMAL CONDITIONS OF HANDLING/STORAGE (Y/N)? Y  
CONDITIONS TO AVOID (REGARDING STABILITY):

MSDS NUMBER : 0139-NHC  
PRODUCT NAME: ALUMINUM ALLOYS, 3XXX

Section V      Reactivity Data - (CONT.)

(SEE OTHER SECTIONS HEREIN.)

INCOMPATIBILITY (MATERIALS TO AVOID):

ANHYDROUS BROMINE. HALOCARBONS,  
MERCURY (AMALGON), CHLORINE,  
IODINE, (ALUMINUM+BARIUM, NITRATE  
+BARIUM, NITRATE+K POTASSIUM,  
NITRATE+SULFUR+ORGANIC MATTER).

HAZARDOUS DECOMPOSITION PRODUCTS:

(SEE OTHER SECTIONS HEREIN.)

HAZARDOUS POLYMERIZATION POSSIBLE (Y/N)? N

CONDITIONS TO AVOID (REGARDING POLYMERIZATION):

NA

Section VI      Health Hazard Data

ROUTES OF ENTRY:

INHALATION, EYES

SIGNS AND SYMPTOMS OF ACUTE OVEREXPOSURE:

INHALATION: NOT LIKELY UNLESS MATERIAL MACHINED,  
WELDED OR REMELTED. SHORT TERM OVEREXPOSURE TO  
WELDING FUMES MAY RESULT IN DISCOMFORT SUCH AS  
DIZZINESS, NAUSEA, OR DRYNESS OR IRRITATION OF  
THROAT AND NOSE. INGESTION: NOT LIKELY. SKIN:  
NOT LIKELY. EYES: MAY IRRITATE EYES WHEN WELDING  
OR PLASMA CUTTING.

CHRONIC OVEREXPOSURE:

NA

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

NO

CHEMICAL LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN  
NATIONAL TOXICOLOGY PROGRAM

(Y/N): N

IARC MONOGRAPHS

(Y/N): N

OSHA

(Y/N): N

\*\*\*\*\* ADDITIONAL INFORMATION \*\*\*\*\*

(THRESHOLD LIMIT VALUE: SEE SECTION II.)

MSDS NUMBER : 0139-NHC  
PRODUCT NAME: ALUMINUM ALLOYS, 3XXX

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### Emergency And First Aid Procedures

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EMERGENCY PHONE NUMBER OF MANUFACTURER: 319/328-6371

**INHALATION:**

NA

**EYE CONTACT:**

FOR EYE CONTACT, FLUSH WITH WATER FOR AT LEAST 15 MINUTES.  
GET MEDICAL ATTENTION IF IRRITATION PERSISTS.

**SKIN CONTACT:**

FOR SKIN CONTACT, REMOVE PARTICLES BY THOROUGHLY WASHING  
WITH SOAP AND WATER.

**INGESTION:**

NA

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### Section VII Precautions For Safe Handling And Use

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HAZARD CLASS ...: 4.3 DANGEROUS WHEN WET  
US DOT ID .....: SOLID  
UN/NA NUMBER ...: UN1396

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**

NA

**OTHER PRECAUTIONS:**

NA

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**

NA

**WASTE DISPOSAL METHODS:**

USED OR UNUSED PRODUCT SHOULD BE TESTED TO  
DETERMINE HAZARD STATUS AND DISPOSAL REQUIREMENTS.  
UNDER FEDERAL, STATE, OR LOCAL LAWS AND  
REGULATIONS. DISPOSER MUST COMPLY WITH FEDERAL,  
STATE AND LOCAL DISPOSAL OR DISCHARGE LAWS.

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### Section VIII Control Measures

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**RESPIRATORY PROTECTION:**

MSDS NUMBER : 0139-NHC  
PRODUCT NAME: ALUMINUM ALLOYS, 3XXX

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Section VIII Control Measures - (CONT.)

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(SEE PERSONAL PROTECTIVE  
EQUIPMENT, BELOW)

VENTILATION REQUIREMENTS:

ND

LOCAL EXHAUST:

ND

MECHANICAL:

ND

SPECIAL:

ND

OTHER:

ND

EYE PROTECTION:

(SEE PERSONAL PROTECTIVE EQUIPMENT, BELOW)

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

(SEE PERSONAL PROTECTIVE EQUIPMENT, BELOW)

WORK/HYGIENIC PRACTICES:

ND

\*\*\*\*\* ADDITIONAL INFORMATION \*\*\*\*\*

PERSONAL PROTECTIVE EQUIPMENT:

APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED WHEN MELTING, CASTING, MACHINING, FORGING, OR OTHERWISE PROCESSING. THE NATURE OF THE PROCESSING ACTIVITY WILL DETERMINE WHAT FORM OF EQUIPMENT IS NECESSARY, I.E., GLASSES, RESPIRATOR, PROTECTIVE CLOTHING, AND EAR PROTECTION.

NA = NOT APPLICABLE

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ADDITIONAL INFORMATION

1. HALOGEN ACIDS AND SODIUM HYDROXIDE IN CONTACT WITH ALUMINUM MAY GENERATE EXPLOSIVE MIXTURES OF HYDROGEN.
2. FINELY DIVIDED ALUMINUM WILL FORM EXPLOSIVE MIXTURES IN AIR. IT WILL ALSO FORM EXPLOSIVE MIXTURES IN AIR IN THE PRESENCE OF BROMATES, IODATES, OR AMMONIUM NITRATE.
3. WHEN REMELTING ALUMINUM SCRAP, ENTRAPPED MOISTURE OR THE PRESENCE OF STRONG OXIDIZERS SUCH AS AMMONIUM NITRATE COULD CAUSE AN EXPLOSION. THIS APPLIES TO THE COLLECTION OF MOISTURE IN SOW CAVITIES AS WELL. MOISTURE MUST BE DRIVEN OFF PRIOR TO REMELTING.

MSDS NUMBER : 0139-NHC  
PRODUCT NAME: ALUMINUM ALLOYS, 3XXX

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Section VIII Control Measures - (CONT.)

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4. DO NOT TOUCH CAST ALUMINUM METAL OR HEATED ALUMINUM PRODUCT WITHOUT KNOWING METAL TEMPERATURE. ALUMINUM EXPERIENCES NO COLOR CHANGE DURING HEATING. IF METAL IS HOT AND TOUCHED, BURNS CAN RESULT.
5. ALUMINUM POWDER MUST BE PACKAGED AND SHIPPED AS A FLAMMABLE SOLID, UN1396.
6. HARD ALLOY INGOTS IN THE 2000 AND 7000 SERIES MUST BE STRESS-RELIEVED TO PREVENT EXPLOSION WHEN SAWED.
7. THE WELDING OF ALUMINUM ALLOYS MAY GENERATE CARBON MONOXIDE, CARBON DIOXIDE, OZONE, NITROGEN OXIDES, INFRA-RED RADIATION AND ULTRA-VIOLET RADIATION.

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\*\*\*\*\* GENERAL INFORMATION \*\*\*\*\*

ND= NO DATA AVAILABLE