TMX is a Division of Thyssen Inc., N.A.

MATERIAL SAFETY DATA SHEET

SECTION I. MATERIAL IDENTIFICATION

COMPANY	RE-ISSUE DATE	IDENTIFICATION NUMBER
Thyssen Inc. N.A./TMX Division 400 Renaissance Center, Suite 1800 Detroit, Michigan 48243	1-May-99	N/A
TRADE NAME Magnesium	**EMERGENCY PHONE NUMBER** (313) 567-5282	**PREPARED BY:** L. J. Switaj
CHEMICAL NAME Magnesium Alloys	**FORMULA**	**DOT IDENTIFICATION NO.** N/A

SECTION II. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT BASE METAL	CAS NUMBER	% COMPOSITION BY WEIGHT	PHYSICAL DESCRIPTION	OSHA-mg/m3 8-HR. - TWA	ACGIH mg/m3 8-HR. - TWA	WISHA PEL mg/m3
MAGNESIUM	7439-95-4	80.0-99.7	AS MAGNESIUM DUST	1.0	1.0	5.0
NOT ALL OF THE ELEMENTS LISTED BELOW ARE PRESENT IN ALL ALLOYS OF ALUMINUM						
ALLOYING ELEMENTS	CAS NUMBER	% COMPOSITION BY WEIGHT (1)	PHYSICAL DESCRIPTION	OSHA-mg/m3 8-HR. - TWA	ACGIH mg/m3 8-HR. - TWA	WISHA PEL mg/m3
ALUMINUM	7429-90-5	0.1-9.0	AS ALUMINUM DUST	15.0	10.0	10.0
MANGANESE	7439-96-5	0'.1-1.0	AS MANGANESE	1.0	1.0	5.0
ZINC	1314-13-2	1.0-3.0	AS OXIDE FUME	5.0	5.0	5.0

Magnesium alloys may be comprised of all or variations of the alloys shown here.

PEL=Permissible Exposure Limit

(1) % of Alloying Material Varies with Grade of Material. Other trace elements of <1% May be in Present.

SECTION III. PHYSICAL DATA

MATERIAL (At Normal Conditions):	APPEARANCE AND ODOR:
SOLID	Metallic appearance; No Odor
MELTING POINT:	**SPECIFIC GRAVITY:**
1160 Deg. F	1.77

SECTION IV. FIRE AND EXPLOSIVE

SPECIAL FIRE FIGHTING PROCEDURES: Use of water on burning magnesium will produce hydrogen gas and may cause an explosion. Magnesium Products In Their Solid State Present No Fire Or Explosive Hazard

SECTION V. REACTIVITY DATA

STABILITY:	CONDITIONS TO AVOID: Acid or water may cause the formation of Hydrogen Gas.
Stable under normal handling conditions.	

HAZARDOUS DECOMPOSITION PRODUCTS:
Metallic Dust Or Fumes May Be Produced During Welding, Burning, Grinding And Possibly Machining. Refer To ANSI Z49.1

SECTION VI. Environmental

SPILL OR LEAK PROCEDURES: N/A

WASTE DISPOSAL METHODS: Disposal must comply with applicable Federal, State and Local disposal and discharge laws.

SECTION VII. HEALTH HAZARD DATA

NOTE: MAGNESIUM PRODUCTS IN THEIR NATURAL STATE DO NOT PRESENT AN INHALATION OR CONTACT HAZARD, HOWEVER OPERATIONS SUCH AS BURNING, WELDING, SAWING, BRAZING AND GRINDING MAY RELEASE FUMES AND/OR DUST WHICH MAY PRESENT HEALTH HAZARDS.

EFFECTS OF OVEREXPOSURE:

Acute - Dust or fume may cause irritation to the eyes, nose, or throat and may leave a metallic taste in the mouth. Inhalation of oxides of Manganese may be manifested as flu-like symptoms commonly known as "metal fume fever".

Chronic -

Aluminum: Inhalation of Aluminum Oxide fume may result in benign pneumoconiosis.

Manganese: Inhalation may result in symptoms such as headache, restlessness, neurological dysfunction, or muscular weakness.

Magnesium: Inhalation may result in inflammation of the respiratory tract and fever. Dust and fume may cause irritation to the eyes, nose and throat.

Zinc: Dust or fume may cause irritation to the eyes, nose, or throat and may leave a metallic taste in the mouth. Inhalation of oxides may cause "Metal Fume Fever".

SECTION VIII. EMERGENCY AND FIRST AID PROCEDURES

Inhalation: In the event of excessive exposure to dust or fume, remove the employee to fresh air. If breathing is difficult administer artificial respiration or oxygen. Obtain immediate medical assistance.

Skin: Abrasions and cuts should be washed and closed by a clean compress and be immediately medically treated. Should skin irritation occur, wash affected area with mild soap and rinse with clean warm water.

Eyes: Depending on the type and nature of exposure, relief may be obtained by fresh air or rinsing the eyes with clean water. Obtain medical assistance.

Medical Conditions Aggravated by Exposure:

Persons with a predisposition to respiratory disorders may be adversely affected by particulates or respiratory irritants generated during the mfg. process.

SECTION IX. SPECIAL PROTECTION INFORMATION & CONTROL MEASURES

Note: Consult your regional codes or Code of Federal Regulations, Title 29, Part 1910, Subpart G-Occupational Health and Environmental Control, Subpart I Personal Protective Equipment, Subpart P-Welding, Cutting, and Brazing, and Subpart Z-Toxic and Hazardous Substances. Certain welding type activities may produce hazardous substances such as carbon monoxide, ozone, phosgene in the presence of certain chemicals, or produce inert suffocating atmospheres in addition to the production of ultraviolet radiation and/or noise.

Ventilation: Local exhaust or ventilation systems sufficient to maintain exposure levels to contaminates below prescribed limits may be required. When inhalation controls are not sufficient to reduce the exposure below the applicable exposure limit then use OSHA/NIOSH approved respiratory protection within the use limitations of the respirator.

Personal Protection: To avoid contact use appropriate protective gloves or clothing to protect against cutting edges. Appropriate heat shielding garments should be used for activities using or generating heat. Eyes should be protected by using safetyglasses, goggles, helmet, face shield as appropriate to the operation.

Precautions to be taken in handling and storage:

Be alert to sharp edges and unsecured lifts.

SECTION X. OTHER INFORMATION

SARA Section 313 Toxic Chemical List, de minimis Concentrations:

>1.0%: Aluminum, Zinc, and Manganese

Additional Information: Prevent dust clouds, use NFPA guidelines for the collection, storage, and disposal of chips, powder, dust or turnings from machining. Store magnesium in a dry location, wet, moist or high humidity storage may lead to corrosion of magnesium. See the National Fire Protection Association Bulletin NFPA 480, "Storage, Handling, and Processing of Magnesium".