



The Electrodyne Company

PRODUCT - SAFETY DATA SHEET (SDS)

Issued Date – **Aug. 21, 2018**

Revision Number: **1.20**

Section 1. Product and Company Identification

Product Name:	Plastalloy™ - Bonded Magnets	Code:	None
Product Type:	Flexible Magnet	Item #:	P1, P1A & P1 NBR
Restriction Use:	None Identified	Region:	United States
Contact Information:			
Company Address:	The Electrodyne Company 4188 Taylor Road Batavia, Ohio 45103 USA	Telephone #	1-513-732-2822
		Fax #:	1-513-732-6953
		Web Site:	www.edyne.com

Section 2. Hazard Identification

EMERGENCY OVERVIEW

This product when used under reasonable conditions and in accordance with the Electrodyne directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the production's directions for use may affect the performance of the product

Under standard conditions of use, this product is not expected to create any unusual emergency hazards.

This is a non-combustible, non-reactive solid material. Use methods suitable to fight surrounding fire.

Contact with the eye may result in unintentional rubbing irritation characterized by itching or redness.

Due to product form, exposures to dusts and fumes are not expected to occur.

NOTE: If this product is cut with power cutting equipment (such as saws, drilling, grinding or sanding equipment), dust generated may cause eye, skin, respiratory irritation and/or congestion in extreme cases. Prolonged and excessive skin contact may result in slight irritation.

Use proper of safety and protection apparatus (Safety Glasses, Respiratory Equipment, etc.) is recommended when using power cutting equipment.

Hazard Class

Hazard Category

Skin Irritation:

0

Eye Irritation:

0

Inhalation:

0

Ingestion:

0

GHS Pictogram

Hazard Statement:



Warning – Material that is magnetized “Only” - Individuals with pacemakers, other medical electronic devices or metallic implants, magnetized material may affect operation of the device, do not handle, seek medical advice.



Note: * Material will smolder when preheated to 850°F (454° C)

GHS Ratings: Health: 0 Fire: 4 Physical Hazard: 0

Hazard Scale: ■ 5 = Minimal Hazard ■ 4 = Slight Hazard ■ 3 = Moderate Hazard ■ 2 = Serious Hazard ■ 1 = Severe Hazard

Precautionary Statements

Skin:

This product may produce skin abrasions.

Prevention:

Avoid mechanical rubbing as it may increase skin irritation.

Response:

Wash thoroughly after handling. Wash exposed skin with soap and water. If irritation develops or persists, seek medical attention.

Eye:

Particulates from this product may cause slight irritation or discomfort of the eye from cutting, sanding, grinding or drilling of this product.

Prevention:

Avoid unintentional scratching or rubbing irritation of the eye, could result in permanent cornea damage.

Response:

Rinse/Flush eyes cautiously with copious/large amounts of water for 5-15 minutes while holding eyelids open. Remove contact lenses, if present and easy to remove. If eye irritation persists, get medical attention.

Precautionary Statements (Continued)

Inhalation:	Inhalation of dusts produced during cutting, drilling, grinding or sanding of this product may cause irritation of the respiratory tract.
Prevention:	Avoid inhalation/breathing dust when cutting, drilling, grinding or sanding of this product. Use only in well-ventilated area.
Response:	If inhaled, remove person to fresh non-contaminated air, if breathing is difficult. Keep the person comfortable for breathing. If not breathing, give artificial respiration, preferably mouth to mouth. (CPR). Get medical attention immediately.
Ingestion:	Product is not intended to be ingested or eaten. Not a likely route of entry.
Prevention:	Do not eat or ingest this product.
Response:	If the product is ingested, do not induce vomiting. Seek medical attention, immediately.
Product Storage:	Protect material against physical damage. Product should be kept dry and be protected from the elements. Store material at room temperature - normal conditions and should be kept out of direct sunlight. Warehouse storage should be in accordance with package directions, if any.
Disposal	Dispose of content and/or container in accordance with Federal, State/Provincial, Local Governmental, Regional, National, and/or International Regulations requirements. Note: This product should not be burned as construction waste.

Classification complies with OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 12 for Ecological Information

Section 3. Composition/Information on Ingredients

Ingredients (specific)	Formula:	%	CAS Number	Chemical Family
Ferrite; Strontium Dodecairon	Fe₁₂O₁₉Sr	91.043	12023-91-5	Strontium Ferrite
2-Propenenitrile, polymer with 1,3-butadiene	C₂₁H₂₇N₃X₂	7.479	9003-18-3	Acrylonitrile/Butadiene Copolymer
Sulfur, Homopolymer	(S)_n	0.117	9035-99-8	Insoluble sulfur
Stearic Acid - RG	CH₁₈H₃₆O₂	0.036	57-11-4	Acids, Carboxylic
Benzenamine,N-phenyl-, reaction products with 2,4,4-trimethylpentene	C₂₀H₂₇N	0.169	68411-46-1	Octylated Diphenylamine's
Trade Secret	--- N/A ---	0.062 – 1.156	--- N/A ---	No SVHC Chemicals present

See Section 11 for Toxicological Information.

Section 4. First-Aid Measures**Description of first aid measures**

Skin contact	<ul style="list-style-type: none"> ● Avoid mechanical rubbing as it may increase skin irritation. Wash thoroughly after handling. Wash exposed skin with soap and water. If irritation develops or persists, seek medical attention.
Eye Contact	<ul style="list-style-type: none"> ● Particulates from this product may cause slight irritation or discomfort of the eye from cutting, sanding, grinding or drilling of this product. Rinse/Flush eyes cautiously with copious/large amounts of water for 5-15 minutes while holding eyelids open. Remove contact lenses, if present and easy to remove. Continue to rinse. If eye irritation persists, get medical attention.
Inhalation	<ul style="list-style-type: none"> ● Inhalation of dusts produced during cutting, drilling, grinding or sanding of this product may cause irritation of the respiratory tract. If inhaled, remove person to fresh non-contaminated air, if breathing is difficult. Keep the person comfortable for breathing. If not breathing, give artificial respiration, preferably mouth to mouth. (CPR). Get medical attention immediately.
Ingestion	<ul style="list-style-type: none"> ● If the product is ingested, Do Not induce vomiting. If person is drowsy or unconscious and vomiting, place on the left side with head down. Seek medical attention, immediately.

Section 5. Fire-Fighting Measures

Extinguisher Media:	
Suitable extinguishing media:	<ul style="list-style-type: none"> ● H₂O, ABC* - Use any media suitable for the surrounding fires. Water, spray, fog, carbon dioxide (CO₂), dry chemical, foam.
Unsuitable extinguishing media:	<ul style="list-style-type: none"> ● None
Special firefighting procedures:	<ul style="list-style-type: none"> ● Not Necessary <p>Note: * Material will smolder when preheated to 850°F (454° C)</p>

Section 5. Fire-Fighting Measures (Continued)

Extinguisher Media (Continued):	
Unusual fire or explosion hazards:	<ul style="list-style-type: none"> ● Not Applicable
Hazardous combustion products:	<ul style="list-style-type: none"> ● None known - The decomposition products from this material are those that would be expected from any organic (carbon-containing) material, and are mainly derived from pyrolysis or burning of the polymer. <p>Note: This product should not be burned as construction waste.</p>
Advice for firefighters:	<ul style="list-style-type: none"> ● Promptly isolate the scene by removing all persons from the vicinity of the incident, if there is a fire. Wear appropriate protective equipment including respiratory protection as conditions warrant. <p>Special Fire Fighting Procedures - Not Necessary</p> <p>Note: * Material will smolder when preheated to 850°F (454° C)</p>

Section 6 - Accidental Release Measures

Use personal protection recommended in Section 8 and emergency procedures	
Personal Precautions:	<ul style="list-style-type: none"> ● Avoid breathing dust. when cutting, drilling, grinding or sanding of this product may cause irritation of the respiratory tract. Wear appropriate protective equipment including respiratory protection as conditions warrant. Provide adequate ventilation Wear appropriate respirator when ventilation is inadequate.
Evacuation & Special Procedure:	<ul style="list-style-type: none"> ● None necessary
For emergency responders:	<ul style="list-style-type: none"> ● Keep unauthorized personnel away. Avoid breathing dust. if product was processed by when cutting, drilling, grinding or sanding of this product. Wear appropriate protective equipment including respiratory protection as conditions warrant. Provide adequate ventilation Wear appropriate respirator when ventilation is inadequate.
Environmental precautions:	<ul style="list-style-type: none"> ● No Special handling. Material may be magnetized.
Clean-up methods:	<ul style="list-style-type: none"> ● Sweep up or gather material and place in appropriate container for disposal. ● Dispose of content and/or container in accordance with Federal, State/Provincial, Local Governmental, Regional, National, and/or International Regulations requirements. <p>Note: This product should not be burned as construction waste.</p>

Section 7. Handling and Storage

Precautions for safe handling	
Handling	<ul style="list-style-type: none"> ● Use only with adequate ventilation. If product is being processed by cutting, grinding or sanding, avoid mechanical rubbing as it may increase skin irritation. Prevent contact with eyes. Do not breathe dust. <p>Customary personal hygiene measures, such as washing hands after working with these products are recommended.</p>
Conditions for safe storage, including any incompatibilities	
Storage	<ul style="list-style-type: none"> ● Protect material against physical damage. Product should be kept dry and be protected from the elements away from heat, sparks and open flame. Store material at room temperature - normal conditions and should be kept out of direct sunlight. Warehouse storage should be in accordance with package directions, if any.
Incompatible Materials or Ignition Sources	<ul style="list-style-type: none"> ● Keep away from heat, ignition sources oxidizers and strong acids.

Section 8. Exposure Controls/Personal Protection

- Exposure limit values:** • Not Applicable
- Engineering Measures/Controls** • No special protective control measures are necessary for use of this product. Under normal conditions, this material is not expected to release, or otherwise result in exposure to a hazardous chemical. Use only with adequate ventilation. If user operations generate dust, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. In case of insufficient ventilation, wear suitable respiratory equipment.
- Respiratory Protection** • In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced
- Eye/Face Protection** • Material in its natural state, protective equipment is not known to be necessary. If user operations require additional process manufacturing, use of Safety glasses with side-shields may be worn to reduce the risk of eye injury. Example: If this product is cut with power cutting equipment (such as saws, drilling, grinding or sanding equipment) or related activities wear safety goggles or safety glasses with side shields.
- Hands** • Material in its natural state, protective equipment is not known to be necessary. Under normal conditions of use this product is not expected to cause skin irritation. If additional process manufacturing is required, to reduce the risk of skin irritation due to dust generated by power cutting equipment activities - leather or other appropriate work gloves are recommended.
- Skin/Body •** • Material in its natural state, protective equipment is not known to be necessary. Under normal conditions of use this product is not expected to cause skin irritation. If additional process manufacturing is required, to reduce the risk of skin irritation due to dust generated by power cutting equipment activities - leather or other appropriate work gloves and either an apron or lab coat are recommended.
- Personal Protective Equipment (Pictograms)** • Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Type of equipment should be approved by a specialist before additional process manufacturing of this product.



Section 9. Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	Dark Grey/Dark Brown Flexible Magnet Material
Color	Dark Grey/Dark Brown	Odor	Not Applicable - No Vapors
Taste	Not Available	Particulate Type	Not Relevant
Particulate Size	Not Relevant	Aerosol Type	Not Relevant – Not an Aerosol
Odor Threshold	Not Applicable - No Vapors	Physical & Chemical Properties	Not Available
General Properties			
Boiling Point (° C)	Not Applicable – Does Not Boil	Melting Point	Not Applicable – Does Not Melt
Freezing Point (° C)	Not Available	Decomposition Temperature	Not Available
Heat of Decomposition	Not Available	pH	Not Applicable

Section 9. Physical and Chemical Properties (Continued)

Information on Physical and Chemical Properties (Continued)

General Properties (Continued)

Specific Gravity/Relative Density	3.2		
Solubility in Water	Insoluble	Coefficient of Water/Oil Distribution	Reactivity in Water - None
Viscosity	Not Relevant	Explosive Properties	None
Oxidizing Properties	Not Relevant		
Volatility			
Vapor Pressure (mmHg)	Not Applicable - No Vapors	Vapor Density (air = 1)	Not Applicable - No Vapors
Evaporation Rate	Not Applicable - No Vapors	VOC (Wt.)	Not Applicable - No Vapors
Volatiles (Vol)	Not Applicable - No Vapors		
Flammability			
Flash Point	Material will smolder when preheated to 850°F (454° C)	Burning Time	Not Available
Burning Rate	Not Available	Auto ignition	Not Available
Flame duration	Not Available	Flame Height	Not Available
Ignition distance	Not Available	Flammability (Solid, Gas)	Not Available

Section 10. Stability and Reactivity

Reactivity	<ul style="list-style-type: none"> None Known - No dangerous reaction known under conditions of normal use.
Chemical stability	<ul style="list-style-type: none"> Stable under ordinary conditions of use, under normal temperatures, pressures and storage.
Possibility of hazardous reactions	<ul style="list-style-type: none"> None Expected - Hazardous polymerization will not occur.
Conditions to avoid	<ul style="list-style-type: none"> High temperatures, sparks, open flames, other sources of ignition. Prevent Dust accumulation.
Incompatible materials	<ul style="list-style-type: none"> None Known
Hazardous decomposition products	<ul style="list-style-type: none"> None Known - Decomposition products from this material are those that would be expected from any organic (carbon-containing) material, and are mainly derived from pyrolysis or burning of the polymer. <p>These decomposition products may include carbon dioxide, carbon monoxide, carbon particles, Nitrogen oxides, Hydrocarbons.</p> <p>Note: This product should not be burned as construction waste.</p>

Section 11. Toxicological Information

Information on toxicological effects

Component Name	CAS	Data
Plastalloy™ - Flexible Bonded Magnets Note: Material is a Solid	Not Listed	This product when used under reasonable conditions and in accordance with the Electrodyne directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the production's directions for use may affect the performance of the product.
Route(s) of entry/exposure	<ul style="list-style-type: none"> Inhalation, Skin, Eye, Ingestion – If this product is not used under reasonable conditions and in accordance with the Electrodyne directions for use. 	
Effects of Acute Exposure	<ul style="list-style-type: none"> None Known 	
Effects of chronic exposure	<ul style="list-style-type: none"> None Known 	
Irritancy of Product	<ul style="list-style-type: none"> None Known 	
Skin sensitization	<ul style="list-style-type: none"> None Known 	

Section 11. Toxicological Information (Continued)

Information on toxicological effects (Continued)

Respiratory sensitization	<ul style="list-style-type: none"> • None known significant effects or critical hazards.
Carcinogenicity – IARC Monographs	<ul style="list-style-type: none"> • None known significant effects or critical hazards.
Carcinogenicity - ACGIH	<ul style="list-style-type: none"> • No - Not Listed
Reproductive toxicity	<ul style="list-style-type: none"> • No - Not Listed
Teratogenicity	<ul style="list-style-type: none"> • No - Not Listed
Embrototoxicity	<ul style="list-style-type: none"> • No - Not Listed
Mutagenicity	<ul style="list-style-type: none"> • No - Not Listed
Name of synergistic products/effects	<ul style="list-style-type: none"> • None known significant effects or critical hazards.
Other Toxic Effects on Humans	<ul style="list-style-type: none"> • None known significant effects or critical hazards.

Section 12. Ecological Information

Toxicity

Solubility in Water	<ul style="list-style-type: none"> • Insoluble
Reactivity in Water	<ul style="list-style-type: none"> • None
Persistence and degradability	<ul style="list-style-type: none"> • No data available
Bioaccumulative potential	<ul style="list-style-type: none"> • No data available
Mobility in Soil	<ul style="list-style-type: none"> • No data available
Other adverse effects	<ul style="list-style-type: none"> • No studies have been found.
Other Information	<ul style="list-style-type: none"> • No data is available on the adverse effects of this material on the environment. Reactivity in Water – None

Section 13. Disposal Considerations

Waste treatment methods	
Product waste	<ul style="list-style-type: none"> • Dispose of content and/or container in accordance with Federal, State/Provincial, Local Governmental, Regional, National, and/or International Regulations requirements. <p>Note: This product should not be burned as construction</p>
Packaging waste	<ul style="list-style-type: none"> • Dispose of content and/or container in accordance with Federal, State/Provincial, Local Governmental, Regional, National, and/or International Regulations requirements. <p>Note: This product should not be burned as construction waste.</p>

Section 14. Transport Information

Special Shipping Information

Shipping Name This product is not classified as a hazardous material for transport	
Hazard Class None	Packaging Group None
Identification Number None	
TGS None	DOT None - Not Regulated - Not classified as a hazardous material for transport
IMO None	CAQ None

Section 15. Regulatory Information

15.1 US Federal Regulations

GHS Classification

GHS Ratings: Health: 0 Fire: 4 Physical Hazard: 0

Hazard Scale: ■ 5 = Minimal Hazard, ■ 4 = Slight Hazard, ■ 3 = Moderate Hazard, ■ 2 = Serious Hazard, ■ 1 = Severe Hazard



Note: * Material will smolder when preheated to 850°F (454° C)

OSHA

None - Not Regulated - Not classified as a hazardous material

WHMIS & NFPA

Refer to Section 15 – GHS Classification

SERA

None - Not Regulated - Not classified as a hazardous material

TSCA

Not Applicable - Not classified as a hazardous material

IATA – Not classified as a hazardous material.

Reference - Air Freight Shipments only - May be restricted as magnetized material. IATA (Class 9, Miscellaneous). Shipments of UN2807, Magnetized material field strength and identification (Labelled) which conform to IATA - Packing Instruction 953 can be shipped only to, from, and within certain countries. Refer to the IATA Dangerous Goods Regulations publication (you can get a copy of this documentation from your freight carrier or order it from IATA directly).

15.2 US State Regulations

Ingredient – Base Product - Synthetic Polymer, 2-Propenenitrile, polymer with 1,3-butadiene

**US - California – Proposition 65
Carcinogens List**

WARNING: This product contains traces/residual monomers - Acrylonitrile, 1,3-Butadiene & 4-Vinylcyclohexene chemicals known to the state of California to cause cancer.

**US - California – Proposition 65
Reproductive Toxicity List – Female only**

WARNING: This product contains traces/residual monomers - 1,3-Butadiene & 4-Vinylcyclohexene chemicals known to the state of California to cause (Female) reproductive harm.

Section 16. Other Information

Additional Information

Product Family: Plastalloy™ This SDS was prepared by The Electrodyne Company.

History:

Preparation Date: 28 May 2015
Issued Date: 28 May 2015
Last Revision Date: 21 August 2018
Version Number: 1.20

Notice to Reader

Disclaimer: The data in this Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use in combination with any other material or in any process. This Safety Data Sheet (SDS) has been reviewed to fully comply with the guidance contained in the ANSI MSDS standard (ANSI Z400.1-2010) and Classification complies with OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

This information and these recommendations are offered in good faith and believed to be correct as of the date hereof. Information and recommendations are supplied upon the condition that the recipients will make their own decision as to safety and suitability for their purposes. Final determination of suitability of any material is the sole responsibility of the user. This would include the Hazardous Statement in Section 2 Hazard Identification regarding to **Warning – Material that is magnetized “Only” - Individuals with pacemakers, other medical electronic devices or metallic implants, magnetized material may affect the operation of the device, do not handle, seek medical advice.** No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, are made with respect to the product or the information and recommendations. We make no representation as to completeness or accuracy. In no event we shall be responsible for damages of any nature whatsoever resulting from the use or reliance upon the information and recommendations.

Section 16. Other Information – Notice to Reader Continued on Page 8

**Section 16. Other Information – Notice to Reader
Continued**

Manufacturer 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. Furthermore, manufacturer assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

***** END OF SDS *****