

Magnet MSDS

SECTION 1

IDENTIFICATION

Product Name: N42M Sintered Neodymium Iron Boron (NdFeB) Magnet Alloy

Use: Permanent Magnet for various uses.

Label: Apache Pipeline Product. Part No. 95011314 or 95011348

SECTION 2

HAZARD IDENTIFICATION

Neodymium magnets have very strong magnetic forces which make them attract to other magnets and other ferromagnetic materials such as iron or steel and can cause fingers or other body parts injuries.

SECTION 3

COMPOSITION / INFORMATION ON INGREDIENTS

Component Chemical Name & Common Names	CAS No.	Concentration (Percentage)
Neodymium	7440-00-8	33%
Iron	7439-89-6	65%
Boron	7440-42-8	1%
Other	N/A	1%

SECTION 4

FIRST-AID MEASURES

Health Hazards (Acute & Chronic): Prolonged skin contact may cause irritation or allergic dermatitis.

Emergency and First Aid Procedures: Remove victim from dust and fume environment. Flush skin and eyes with water.



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SECTION 5

FIRE-FIGHTING MEASURES

Flash Point (Method Used)	n/a
Flammable Limits	n/a
LEL	n/a
UEL	n/a
Extinguishing Media	Dry chemicals for fighting magnesium or metal fires.
Special Fire Fighting Procedures	Isolate and contain burning materials. Smother with Argon gas or non-reactive dry chemicals. Avoid water. Do not use Halon. For solid dense magnet: None.
Unusual Fire and Explosion Hazards	Powders from chipping, crushing, grinding, slicing, etc: may ignite spontaneously and burn intensely. Rare earth metal powders burn vigorously in halogen or oxidizing atmospheres.

SECTION 6

ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled:

- Fine chips and powders should be gathered up by a damp mop or broom. Do not use a vacuum cleaner.

Waste disposal method

- Dispose in accordance with federal, state, and local regulations.

Precautions to be taken in Handling and Storing

- Powders may ignite and burn. Storage in water may generate hydrogen gas.

Other precautions

- Use water during machining processes to control sparking.

SECTION 7

HANDLING AND STORAGE

Avoid skin injuries. If powders generated are inhaled, train workers in safe practices for combustible powders. Magnetized parts are strongly attracted to each other and to steel – handle firmly to avoid injury causing impacts.

Magnetized products should be packed with lining and shielding.

Products should be stored in ventilated, dry and anti-collision places.

Move carefully with shake-proof, collision-proof, and water-water proof measure.



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SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions. No engineering controls are necessary.

Eye Protection	Use safety glasses or goggles when handling magnets.
Skin Protection	Protective gloves are recommended when handling magnetized part or parts which may have sharp edges.
Ventilation	Use wet machining/grinding processes and adequate local ventilation to reduce dust levels.

SECTION 9

PHYSICAL/CHEMICAL PROPERTIES

Magnetic Properties:

Remanence Br:	12,800 - 13,200 Gauss
Coercive Force Hc:	12,000 Oe Mini.
Intrinsic Coercive Force Hci:	14,000 Oe Mini.
Energy Product (BH) max:	40 - 43 MGOe
Operate Temperature:	100°C Max
Boiling Point:	Unknown
Vapor Pressure (mm Hg.):	Unknown
Vapor Density (AIR=1):	Heavier Than Air
Solubility in Water:	Not Determined (very low)
Density:	7.5 grams per cubic cm
Specific Gravity (H2O=1):	7.5
Melting Point:	Above 1,000°C
Evaporation Rate (Butyl Acetate=1):	Very Low
Appearance and Odor:	Dark Metallic, No Odor

SECTION 10

STABILITY AND REACTIVITY

Stability:	Stable
Incompatibility (Materials to Avoid):	Acids, highly active oxidizers.
Condition to Avoid:	Avoid exposure of powdered magnet material to air, oxygen or halogenated hydrocarbons, and to elevated temperatures above 150°C.
Hazardous Decomposition or Byproducts:	Hydrogen may be released when powders react with water.
Hazardous Polymerizations:	Will not occur.



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SECTION 11

TOXICOLOGICAL INFORMATION

Neodymium compounds are of low moderate toxicity, yet its toxicity has not been thoroughly investigated. Avoid breathing dusts. Avoid direct or prolonged contact with skin and eyes. Wash hands thoroughly after handling. Do not rub eyes with soiled hands.

SECTION 12

ECOLOGICAL INFORMATION

No specific information available for this product.

SECTION 13

DISPOSAL CONSIDERATIONS

Dispose in accordance with federal, state, and local regulations. Large, powerful magnets may be demagnetized with high temperatures before disposal to prevent possible handling injury.

SECTION 14

TRANSPORT INFORMATION

Magnets can generate magnetic fields that may affect navigation equipment. Magnets are able to attract ferromagnetic materials.

SECTION 15

REGULATORY INFORMATION

This products in compliance and conforms to National Standard of the People's Republic of China GB/T13560-2009.

SECTION 16

OTHER INFORMATION

WARNING

RARE EARTH MAGNETS ARE EXTREMELY POWERFUL!

They have very strong magnetic forces which make them attract to other magnets and other ferromagnetic materials such as iron or steel.

HANDLE WITH EXTREME CAUTION!

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Apache pipeline Product shall not be held liable for any damage resulting from handling or from contact with the above product.

