

NEODYMIUM MAGNET SAFETY SHEET.

Neodymium magnets (neo-magnets) are extremely strong. They must be handled with care to avoid personal injury or damage to the magnets.

Powerful attraction forces can cause injury.

Neo-magnets are more powerful than other kinds of magnets. The powerful force between them can often be surprising to those unfamiliar with their strength. Fingers and other body parts can be pinched between two magnets.

Neo-magnets are not for children.

Neo-magnets are not toys. Children should not be allowed to handle neo-magnets. Small magnets can pose a choking hazard. If multiple magnets are swallowed, they can attach to one another through intestine walls. This can cause a severe health risk, requiring immediate, emergency surgery if correctly diagnosed.

Neo-magnets can affect pacemakers.

The strong magnetic fields near a neo-magnet can affect pacemakers, Implantable Cardioverter Defibrillators and other implanted medical devices. Many of these devices are made with a feature that deactivates it with a magnetic field. Therefore, care must be taken to avoid inadvertently deactivating such devices.

Neo-magnets are brittle and fragile.

Neo-magnets are made of a hard, brittle material. Despite being made of metal, and the shiny, metallic appearance of their nickel plating, they are nowhere near as durable as steel. They can peel, chip, crack or shatter if allowed to slam together. This is a particular risk with ringfield neo-magnets which are particularly fragile, and if allowed to bang into each other are easily broken. Eye protection should be worn when handling magnets, since shattering magnets can launch small pieces at great speeds. Neo-magnets are not easily drilled or machined.

Magnets can affect magnetic media.

The strong magnetic fields near neo-magnets can damage magnetic media such as floppy disks, credit cards, magnetic I.D. cards, cassette tapes, video tapes or other such devices. They can also damage televisions, VCRs, computer monitors and CRT displays. Avoid placing neodymium magnets near electronic appliances.

Neo-magnets can become demagnetized at high temperatures.

While operating temperatures are often listed as 80°C (175°F), the actual maximum operating temperature of a magnet can vary depend on the grade, magnet shape and how it is used.

Neo-magnet powder or dust is flammable.

Avoid drilling or machining neo-magnets. When ground into a dust or powder, this material is highly flammable.

Those with nickel allergies should avoid prolonged contact with magnets.

A small percentage of people have a nickel allergy, where an allergic reaction can cause redness and a skin rash. Those with nickel allergies should avoid directly handling nickel plated neo-magnets.

Strong magnetic fields can interfere with compasses and navigation.

IATA (International Air Transport Association) and US Federal rules and regulations cover shipping magnets by air and ground delivery. Magnetic fields can influence compasses or magnetometers used in air transport. They can also affect internal compasses of smartphone and GPS devices.

Neo-magnets can corrode.

Neo-magnets can rust or corrode in the presence of moisture. While the three layer, nickel-copper-nickel plating on most neo-magnets supplied for model railway use provides enough protection for many applications, they are not waterproof. If used underwater, outdoors or in a moist environment, they can corrode and lose magnetic strength.