

# IMPORTANT SAFETY INFORMATION REGARDING NEODYMIUM MAGNETS

This information sheet is supplied by QUICKTEST, [www.quicktest.co.uk](http://www.quicktest.co.uk)

## Danger for children

Do not let children play with neodymium magnets and always supervise any child. If several small magnets are swallowed, they can get stuck in the intestines, cause swelling injuries (which could be life-threatening) and require surgery to remove them. Keep larger magnets (more than 1 or 2cm) out of children's reach, as you would sharp knives or other dangerous materials - fingers can be crushed.

## Crushing, blood blisters and cuts

When larger magnets are brought close enough together they can have an amazing amount of power. Fingers are quickly caught between them which can cause blood blisters, cuts or, at worst, crushing. The power of attraction becomes greater the closer two magnets are placed to each other, so if you get your fingers stuck between two magnets, do not try to slide them apart – as they get towards the end of your finger and closer to each other, the force will become greater until it removes the end of your finger. Instead, lever them apart with a flat object. You may wish to wear gloves when handling larger magnets.

## Magnetically sensitive items

Neodymium magnets are very much stronger than "ordinary" magnets. Keep a safe distance (at least 200mm) between the magnets and all objects that can be damaged by magnetism. These include watches, heart pacemakers, CRT monitors and televisions, credit cards, diskettes and other magnetically stored media such as video tapes and computer hard drives.

## Pacemakers

Heart pacemakers can be affected by the **close** proximity of a magnet (though they return to normal function when the magnet is removed).

## Surface plating - Wearing and chipping

Neodymium Magnets are usually plated with 3 layers of protective plating. First a layer of Nickel, then a layer of Copper and then a final layer of Nickel. This plating can wear away in the course of normal use. If the plating layers are worn away, then the magnet will be exposed to corrosion and since the magnets contain a high percentage of iron, they will rust easily. Use the magnet in a way that mechanically prevents it from ever touching the part that it is attracting, e.g. a spacer that will hold the magnet 0.2mm away from the object.

## Cutting or drilling Neodymium Magnets

Neodymium magnets can be secured in place with adhesive or in some cases, with countersunk screws. Magnets are sintered and extremely hard and brittle. You should never attempt to cut or drill into a magnet unless using diamond tooling and also coolant (as the dust from cutting is very flammable).

## Nickel allergies

Neodymium magnets are nickel-plated. Nickel is a metal which can cause a rash if kept in prolonged contact with the skin. So avoid wearing magnets against the skin if you are sensitive to nickel.