

IMPORTANT!

SAFETY IN HANDLING MAGNETS

MAGNET INFORMATION WARNING SHEET - M21.798

In some circumstances strong permanent magnets or magnetic assemblies can be dangerous or cause injury or inconvenience to persons or property. This warning must be read before operating a permanent magnet or magnetic assembly.

1. Accidental Injuries caused by handling Permanent Magnets.

Magnets can fly together or to steel objects causing severe pinching or lacerations to the skin.

Magnets can shatter on impact causing eye injury - goggles must be used when handling.

Children must not be permitted to handle or play with Magnets.

Avoid flame or oven heating, grinding, or cutting of Magnets. These procedures carry a risk of oxygen absorption and possible shattering. Enclosed magnets if heated may explode.

2. Other Health Considerations.

Long term daily handling of Permanent Magnets may represent a health risk. These health risks are discussed in British Pre-Standard No. 50166-1. We conclude from this Standard that there is usually no danger to operators occasionally cleaning or handling magnets with static magnetic field levels up to 20,000 gauss or 2 Tesla. A more recent paper INCIRP "Guidelines on limits of exposure to static magnetic fields" can also be referred to on this subject.

HOWEVER, AS A PRECAUTION WE RECOMMEND:

1. Avoid unnecessary handling, uninformed handling, and assembly of magnets.
2. Avoid long term close bodily contact with strong magnets.
3. Keep strong magnets away from head, eyes, heart, and trunk.
4. Continuous daily exposure should not exceed 2,000 gauss or 0.2 tesla.
5. Maximum one-off exposure should not exceed 20,000 gauss or 2 tesla.
6. Persons with **cardiac pacemakers**, other sensitive devices implanted in the body or metallic prosthetic implants must not handle or come into proximity of magnets. A specialist medical opinion must be sought before such persons handle or come into close contact with magnets or magnetic fields.
7. Persons with **cardiac pacemakers** must not allow magnet within proximity of their chest or be in an environment above .5mt (5 gauss).
8. As a general guide, persons with cardiac pacemakers should avoid coming closer than 300mm from the working or field throwing face of magnets such as small plate magnets, grate magnets, probe magnets, magnet bars, spherical magnets, etc.

Note: there are other magnets such as suspension magnets, magnetic drums, and pulleys, overband and crossbelt magnets, etc. which could require the minimum distance to be up to 2 meters. Where in doubt a gauss chart should be undertaken.

3. Damage to Electronic Equipment.

Permanent Magnets can cause damage to electronic equipment such as:

- a) Phone cards
- b) Smart cards
- c) Credit cards
- d) Computer discs
- e) Video, audio, and computer tapes
- f) Computer equipment

Close contact can erase stored information. Keep Magnets away from electronic equipment. (N.B. We can advise on the insulation of vulnerable items.

4. Lifting or Holding Magnets.

Lifting Magnet Safety and Training sheet must be consulted before carrying out lifting or holding operations with Magnets. This is supplied with magnet delivery. If missing, please obtain before use.

5. Transport of Magnets—" Dangerous Goods"

- a) Strong Magnets may affect navigation instruments in aircraft.
- b) If air-freighting Magnets advise freight agents and airline and consult your Dangerous Goods Management Authority. Magnets should usually be road-freighted, and freight company must be provided with a copy of this "Safety and Handling Magnets" sheet.
- c) We can advise on or provide special insulation packaging which satisfies transport regulations.

PLEASE NOTE THIS SHEET IS PRESENTED WITHOUT PREJUDICE AND WITH THE COMPLIMENTS OF MSA MAGNETICS.

IT IS NOT INTENDED TO PROVIDE COMPREHENSIVE SAFETY INSTRUCTIONS, BUT TO PROVIDE SAFETY GUIDELINES IN THE INTERESTS OF OUR VALUED CUSTOMERS.

YOU MUST CONSULT THE APPROPRIATE AUTHORITIES AS TO THE PROPER USE OF MAGNETS.

REFER ALSO MSA MAGNETICS "TERMS AND CONDITIONS OF SALE" WHICH IS AVAILABLE ON REQUEST.

Please phone us on (02) 4272 8180 with any questions – Thank you!