

# CAUTION

## 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 prior to handling or operating a permanent magnet or magnetic assembly.**

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



#### 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 simple precaution, we recommend:

- Avoid unnecessary handling and uninformed handling/assembly of magnets.
- Avoid long-term close bodily contact with strong magnets.
- Keep strong magnets away from the head, eyes, heart, and trunk.
- Continuous daily exposure should not exceed 2,000 gauss or 0.2 tesla.
- Maximum one-off exposure should not exceed 20,000 gauss or 2 tesla.

- Persons with cardiac pacemakers, other sensitive devices implanted in the body, or metallic prosthetic implants must not handle or come into close proximity of magnets. Specialist medical opinion must be sought before such persons handle magnets or come into close contact with magnets or magnetic fields.
- Persons with cardiac pacemakers must not allow magnet within close proximity of their chest or be in an environment above .5mt (5 gauss).
- As a general guide, persons with cardiac pacemakers should not come closer than 300mm / 12" 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, pulleys, overband and cross belt magnets, etc which could require the minimum distance to be up to 2 metres. When in doubt a gauss chart should be undertaken.



## DAMAGE TO ELECTRONIC EQUIPMENT

Permanent magnets can cause damage to electronic equipment such as (but not limited to):

- Smart cards
- Credit cards
- Phone and gift cards,
- Computer equipment, laptops, mobile phones
- Video, cassette, and audio tapes



Close contact can erase stored information. Keep magnets away from electronic equipment.

Note: Magnattack® Global can advise on the insulation of vulnerable items.

## TRANSPORT OF MAGNETS - 'DANGEROUS GOODS'

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

## DISCLAIMER

Please note this sheet is presented without prejudice and with the compliments of Magnattack® Global.

We specifically remind you that it is your responsibility, under the Workplace Health & Safety Act, to undertake a risk assessment, review the SOP in the light of the risk assessment, make any modifications to reflect how the equipment is used at your workplace and then adequately train those people who are going to use the machine.

This document 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.

Please also refer to Magnattack® Global *Terms and Conditions of Sale* which is available upon request.



RE80® Magnetic Separation Solutions for  
Foreign Metal Fragment Control & Food Safety

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