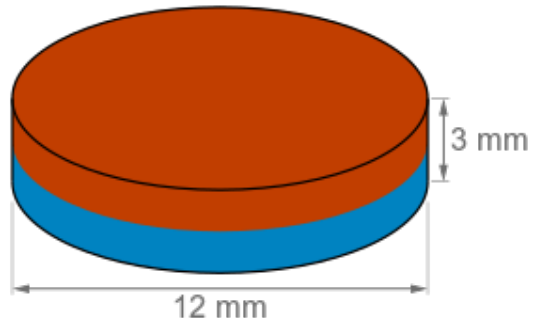
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Disc magnet 12x3 mm

Data sheet · Item no. D-12-03-N45 · Technical data and application safety

1. Technical information

Item number	D-12-03-N45
Strength (kg)	2.40 kg
Type	Disc magnet
Diameter (D)	12.00 mm
Height (H)	3.00 mm
Brand	Brisingi
Material	NdFeB
Magnet grade	N45
BHmax (Maximum Energy Product)	43-45 MGOe
Brmax (Residual Flux Density)	13200-13700 gauss
Max operating temperature	80 °C
Coating	Nickel (Ni-Cu-Ni)
Delivery	3-6 days



Dimensional drawing · all measurements in mm

Complies with the current EU RoHS Directive Complies with the current EU REACH Regulation

Prices

Order quantity	Price incl. VAT
1 pcs	EUR 0.71
from 10 pcs	EUR 0.55
from 40 pcs	EUR 0.46
from 80 pcs	EUR 0.43
from 160 pcs	EUR 0.40

Prices as of Nov 24, 2026. Subject to change.

2. Safety

DANGER **Swallowing**

Children could swallow small magnets. If two or more magnets, or a magnet together with a metal object, are swallowed, they can attract each other through the intestinal walls, pinch the tissue and cause blockages, perforation or life-threatening infections, often requiring emergency surgery. Magnets are not toys. Keep them out of the reach of children and seek medical attention immediately if swallowing is suspected.

DANGER Electrical conductivity

Magnets are made of metal and conduct electricity. Children might try to put a magnet into a power outlet and suffer an electric shock.

WARNING Pinching hazard

Strong magnets attract one another and ferromagnetic objects powerfully, even across a distance. Fingers and skin can be pinched between two magnets or between a magnet and a metal surface, which may cause bruising or cuts. Bring magnets together in a controlled way and keep them apart while handling them.

WARNING Metal splinters

Neodymium magnets are brittle and can crack when they collide. Sharp splinters could be catapulted several metres and injure your eyes.

- Avoid the collision of magnets.
- Wear safety glasses when handling larger magnets.
- Make sure bystanders are also protected or keep their distance.

WARNING Medical devices and implants

The strong magnetic field can affect pacemakers, defibrillators, insulin pumps and other active implanted medical devices, some of which may switch mode unintentionally near a magnet. People with an implanted medical device should keep a safe distance and should not carry magnets close to the body.

3. Handling and storage

CAUTION Magnetic field

Magnets produce a far-reaching, strong magnetic field. They could damage TVs and laptops, hard drives, credit and ATM cards, data media, mechanical watches, hearing aids and speakers.

- Keep magnets away from objects that strong magnetic fields could damage.

CAUTION Nickel allergy

Many neodymium magnets contain nickel, both in the material itself and in certain coatings. Some people react allergically on contact with nickel, and an allergy can develop over time through repeated contact. Avoid prolonged skin contact, and do not handle magnets if you already have a nickel allergy.

CAUTION Fire hazard when machining

Drilling, grinding or otherwise machining neodymium magnets creates fine dust that ignites easily and can burn fiercely. Do not machine magnets without suitable tools and adequate cooling. If dust forms, do not collect it dry; keep it in a sealed, non-combustible container away from open flames and sparks.

NOTICE Mechanical machining

Neodymium magnets are brittle, heat-sensitive and oxidise easily. Drilling or sawing with unsuitable tools can shatter the magnet, and the resulting heat can demagnetise it permanently. The damaged coating will then start to corrode. Only machine magnets if you have the proper equipment and experience; otherwise request a custom-made product instead.

NOTICE Coating flaking off

Most neodymium magnets have a thin protective coating against corrosion that can flake or crack on impact or under high pressure. If this happens, the magnet becomes more sensitive to moisture and may oxidise. Avoid hard collisions and repeated mechanical stress, and separate stacked magnets with a spacer such as cardboard during storage.

NOTICE Oxidation and corrosion

Untreated neodymium magnets oxidise quickly. A coating provides some protection against corrosion but is usually not robust enough for continuous outdoor use. Use the magnets only in dry indoor conditions, or protect them against moisture.

NOTICE Temperature resistance

Depending on type and magnetisation, neodymium magnets have a maximum working temperature, which is stated in the technical data for this product. Above it, the magnet permanently loses part of its holding force. Do not use the magnet where it is exposed to high heat, and do not cure any adhesive with hot air.

NOTICE Effect on people

According to current knowledge, the magnetic field of a permanent magnet has no proven positive or negative effect on healthy people. A health risk is considered unlikely but cannot be entirely ruled out. As a precaution, avoid prolonged body contact with the magnet.

4. Transport

CAUTION Air freight

Magnetic fields from inadequately packaged magnets can interfere with the navigation and communication equipment of an aircraft. For air freight, magnets fall under the IATA Dangerous Goods Regulations, classified as Magnetized Material, UN2807, Class 9, per Packing Instruction 953.

- A shipment is not subject to the rules if the field strength is below 0.00525 gauss (5.25 milligauss) measured 4.6 m (15 ft) from the package.
- Above this limit, the shipment is forbidden by air unless it is shielded back below the threshold.
- Only air-freight magnets in packaging with sufficient magnetic shielding, and comply with the applicable regulations.

CAUTION Postal shipment

Magnetic fields from poorly packaged magnets can disrupt sorting equipment and damage sensitive goods in other shipments.

- Use a roomy box and place the magnets in the centre of the package with filling material to reduce the field at the outer wall.
- Where possible, stack the magnets so their fields cancel out.
- If necessary, shield the field with thin iron or steel sheets (0.5-1.0 mm).
- Check the packaging with a simple test: ordinary paper clips must not stay attached to the outside of the box.

5. Disposal

Small amounts of used neodymium magnets can be thrown out with the regular trash. Larger amounts need to be recycled as scrap metal.

- Neodymium is a sought-after rare earth metal, so recycling is preferable to disposal. Hand in larger amounts for metal recovery.
- Demagnetise large or strong magnets by heating them above the Curie temperature before disposal, to avoid handling injuries and interference with waste-handling equipment. If that is not possible, place the magnets in a closed steel or iron container to shield the field before discarding them.
- Magnets that form part of electronics, such as motors, hard drives or speakers, must be handed in as electronic waste (WEEE), not as residual waste.

6. Statutory provisions

Country of origin	China

Last updated: Nov 19, 2026