

Application No. 87: Magnetic Version of the speed cube

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A speed cube made entirely out of real dice for a change

Hello supermagnete! I used your magnets to build a functioning replica of a speed cube.

You can find the idea in many places on the internet; I didn't invent it myself, I simply tried it out.

The whole thing requires a bit of patience but it's a fun project and the result is very satisfying. At the very least because even if you can't solve the puzzle, you can just take the cube apart and put it back together again in the right order. ;-)



I used:

- 30 standard plastic game dice
- 96 S-05-02-N52N (www.supermagnete.fr/eng/S-05-02-N52N)-disc magnets
- 12 S-10-03-N (www.supermagnete.fr/eng/S-10-03-N)-disc magnets
- Bench drill
- Superglue, e.g. UHU MAX REPAIR (www.supermagnete.fr/eng/WS-ADH-01)

As shown in the photos, I used standard 19 mm plastic game dice. Rather than the traditional six colours of a speed cube, the six numbers of the dice will be sorted on the six sides of the cube.

I bought a total of 30 dice, of which 27 eventually were used to build the cube. The others were damaged during construction. Little accidents can easily happen, as I will explain...

A hole was drilled into the contact surface of each red die, into which a magnet was countersunk. In this way, the dice hold together well, but the friction is minimized so that it's still relatively easy to turn the cube during the game.



To attach the outer dice, I used 96 5 mm x 2 mm disc magnets (www.supermagnete.fr/eng/S-05-02-N52N). However, to connect the centre dice on all sides with the core die, 12 larger and stronger 10 mm x 3 mm disc magnets (www.supermagnete.fr/eng/S-10-03-N) were used.

Since the assembly was fairly tricky, it was worth having purchased a few magnets too many of each type (100 or 20 magnets respectively).

The magnets were glued using normal superglue. The only real difficulty is determining the correct alignment of the magnets so that the dice sit properly in cube form. But with a little patience and time, it's possible. (Really! It's possible!! I did it!)



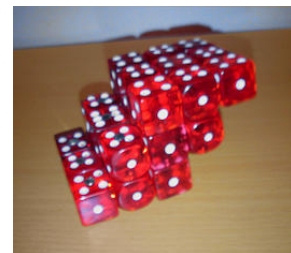
When you place a magnet in a die to glue, it can also happen that the other magnets pull the new magnet out due to their own polarity. You have to hold the new magnet firmly to prevent it from spontaneously turning and for the glue to set with the magnet's polarity pointing in the wrong direction.

That can really happen and I warn you, if you have to drill out a magnet which is glued wrongly, don't take lightly the warning from SuperMagnete regarding "combustible dust"...!

Expect a flame now and again and *oops*: "Another magnet please!!"

Ready for intense puzzling...

With this twisty puzzle version, you can do a few things that are not possible with the original :-).



The presumably original instructions for comparable magnetic speed cubes can be found with the following link: Magnetic cube on the website Instructables (www.instructables.com/id/Magnetic-Acrylic-Rubik-s-Cube/).

Those who would like more detailed instructions on building such a speed cube will find them on YouTube. Even though the cube in the following video (in English) is being built with wooden dice, the functionality remains the same.

Due to your current cookie settings, you cannot start the video. With consent to the data privacy statement, you can view this content.

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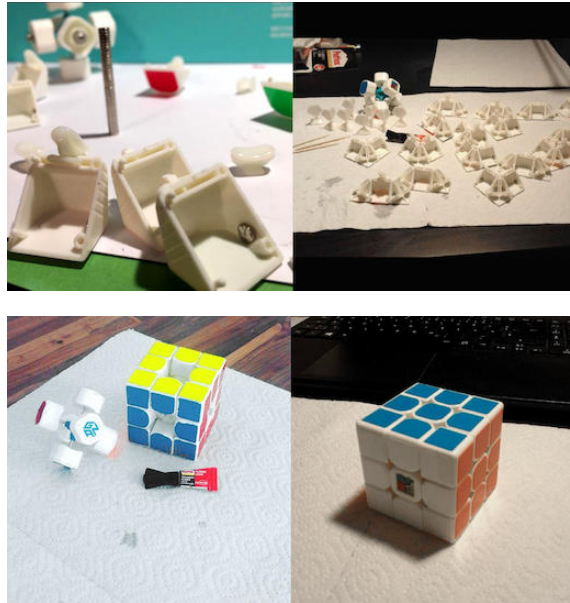
Nicht einverstanden

Einverstanden

Addition by supermagnete.fr: Tuning standard magic cubes

Another customer shows on his Instagram account @daily_cubing_page (www.instagram.com/daily_cubing_page/) how he tuned two of his standard cubes with our S-04-02-N disc magnets 4x2 mm (www.supermagnete.fr/eng/S-04-02-N). One was a "Gans 356 Air" and the other a "MoFang JiaoShi MF3RS".

He made turning the individual parts easier by systematically adding magnets. Below are some pictures from his Instagram account.



Articles used

96 x S-05-02-N52N: Disc magnet Ø 5 mm, height 2 mm (www.supermagnete.fr/eng/S-05-02-N52N)

12 x S-10-03-N: Disc magnet Ø 10 mm, height 3 mm (www.supermagnete.fr/eng/S-10-03-N)

S-04-02-N: Disc magnet Ø 4 mm, height 2 mm (www.supermagnete.fr/eng/S-04-02-N)

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