

BETONAMIT[®]

Instructions for use

Expanding explosive for rock, stone and concrete

Simple. Safe. Effective.

Preparation

Please ensure you have the following equipment ready before starting work:

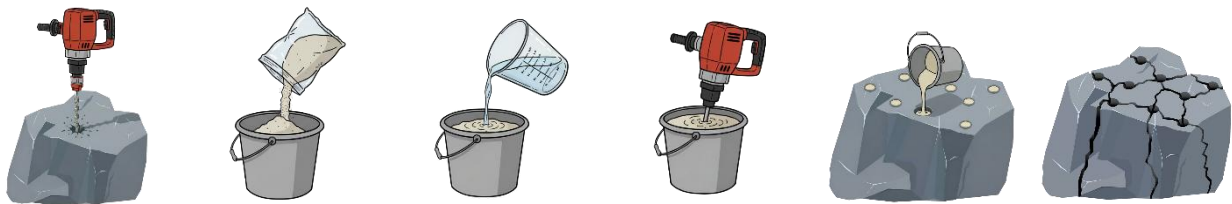
- ✓ BETONAMIT – The Original
- ✓ Safety goggles and protective gloves
- ✓ Plastic or metal mixing container
- ✓ Electric mixer
- ✓ Drill
- ✓ Drill bits (see technical specifications)
- ✓ Cold, clean water
- ✓ Covering material, if required

Workflow

The first step is to drill the holes in accordance with the technical specifications. The maximum distance between drill holes is 10 times the drill hole diameter. Smaller distances between drill holes lead to even better results. The drill holes should be as free of drill dust as possible and dry.

Now add the BETONAMIT powder to the mixing container. Then add 1.2 litres (per 5 kilograms) of cold, clean water and mix with a mixer for 2 minutes until a free-flowing, homogeneous mixture is obtained. The mixture will appear dry at first, but its consistency will change abruptly during the mixing process. Then pour the mixture directly from the mixing container into the drill holes.

Dilute any excess BETONAMIT mixture with plenty of water to deactivate it and dispose of it with the rest of the construction waste.



Technical specifications and reaction time

To achieve the best possible blasting result, it is essential to adhere to the following specifications:

Temperature (site)	5 – 15 °C	15 – 25 °C	25 – 35 °C
Drill bit diameter (borehole diameter)	30 – 50 mm	30 – 45 mm	30 – 40 mm
Maximum drill hole spacing	10 x borehole diameter	10 x borehole diameter	10 x borehole diameter
Water volume per 5 kg	1.2 litres	1.2 litres	1.2 litres
Reaction time	12–96 hours	6–72 hours	2–48 hours

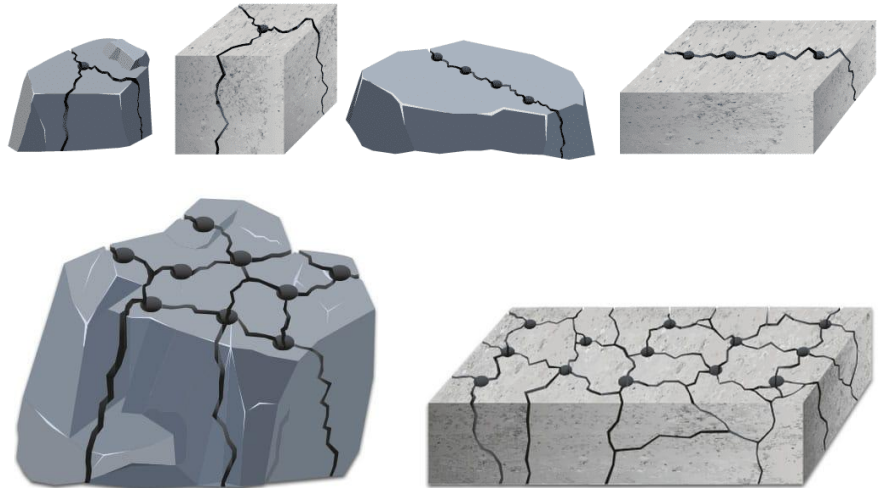
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Drilling instructions

Splitting, fracturing and crushing

Cracking always occurs in the direction of least resistance. A larger drill hole diameter means greater force, a shorter reaction time and wider cracking. Smaller distances between drill holes mean smaller fragments and a shorter reaction time.

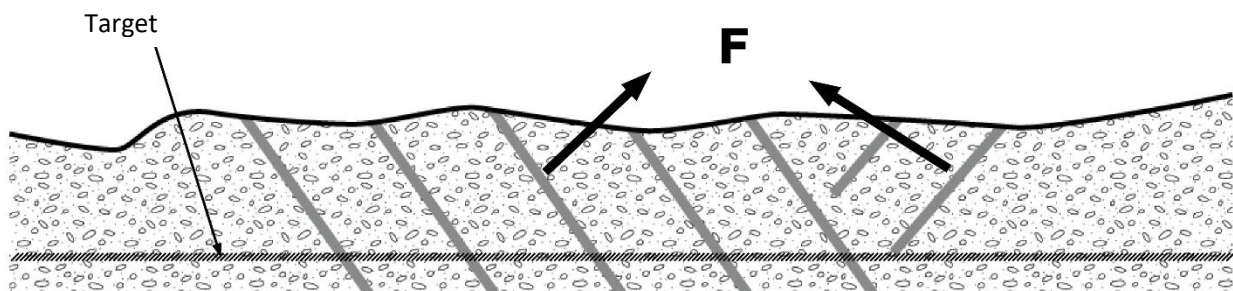
Tip: BETONAMIT continues to expand over several days. This means that the more time you allow the product to work, the easier it will be to remove the fragments. Therefore, please be patient and allow the product to work for as long as possible to achieve the best result.



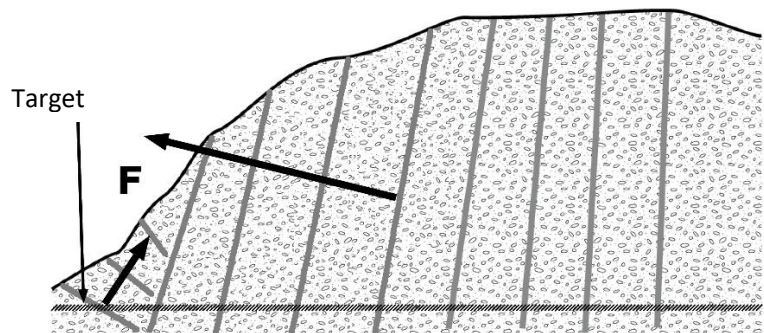
The drilling depth should be at least $\frac{3}{4}$ of the total depth.

Digging, loosening and removal

The target level is usually drilled 5–15 cm below to avoid subsequent chiselling work as far as possible. The expansion pressure (**F**) always develops at a 90° angle to the drill hole. With angled drilling, it is therefore possible, even in unfavourable situations, to create a clear path for the pressure or material to escape.



All rows of drill holes can be filled with BETONAMIT simultaneously. Cracks will first appear in the front row. The next row will then follow suit.

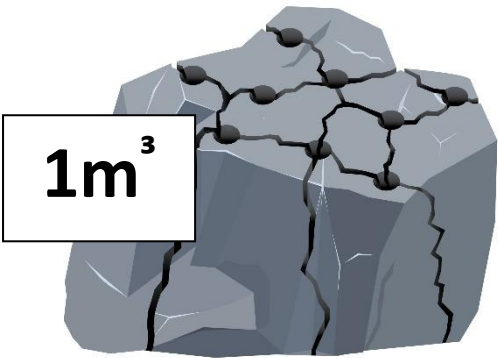


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Consumption

Consumption per cubic metre

This is the simplest way to calculate the approximate BETONAMIT consumption. To break up one cubic metre of rock, stone or concrete, you will need around 10 kg of BETONAMIT.



The consumption for breaking up 1 m³ of rock, stone or concrete is approx. 10 kg of BETONAMIT®.

Consumption per metre of borehole

The consumption per metre of borehole depends on the borehole diameter. To calculate the required quantity of BETONAMIT, the total length of all boreholes in metres is multiplied by the relevant factor.

Example: 10 holes | Depth 0.3 m | Ø 40 mm → Calculation: 10 holes x 0.3 depth x 2.2 kg = **6.6 kg BETONAMIT**

Drill hole diameter [mm]	BETONAMIT [kg per metre drilled]
20 mm	0.55 kg
25 mm	0.86 kg
30 mm	1.24 kg
31 mm	1.32 kg
32 mm	1.41 kg
33 mm	1.50 kg
34 mm	1.59 kg
35 mm	1.68 kg
36 mm	1.78 kg
37 mm	1.88 kg
38 mm	1.98 kg
39 mm	2.09 kg
40 mm (example)	2.20 kg (example)
41 mm	2.31 kg
42 mm	2.42 kg
43 mm	2.54 kg
44 mm	2.66 kg
45 mm	2.78 kg
50 mm	3.44 kg

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Safety regulations

Safety regulations

1. Only use BETONAMIT when the surface temperature is between -5°C and a maximum of 35°C. (see technical specifications)
2. Do not use warm water. (max. 20°C)
3. Use the correct amount of water: 1.2 litres per 5 kg of BETONAMIT.
4. Mix using a machine where possible. (Poor mixing increases the risk of blow-out)
5. Use only drill bits of the recommended diameter. (see technical specifications)
6. The minimum borehole depth is five times the borehole diameter.
7. The maximum drill hole depth depends on the situation, but is approximately 6 metres.
8. The drill holes must be as clean and dry as possible.
- 9. On hot days, fill the drill holes early in the morning.**
10. Pour the BETONAMIT into the drill holes immediately after mixing.
11. Dilute any residue with plenty of water and dispose of it in accordance with local regulations.
- 12. Never look directly into the filled boreholes (risk of blow-out)**
13. Secure the work site against unauthorised access. (Blow-out or material coming loose)
14. Do not pour the mixture into bottles or other closed containers. (Explosive effect)
15. Please also observe the hazard and safety instructions on the packaging. (GHS)

Checklist for the safe use of BETONAMIT

1. **Am I wearing the essential safety goggles?**
2. Am I using the correct drill hole diameter?
3. Have I provided the correct amount of cold, clean water?
4. Is the mixing water temperature within the recommended range?
5. Is the temperature of the object to be blasted below 35°C?
6. Can the fragments be displaced in at least one direction?
7. Can I rule out the possibility that the high expansion pressure or the displaced material will cause unintended damage? (Masonry? Floor slab?)

WARNING: What is a blow-out effect?

Failure to follow the instructions, improper handling or excessively warm conditions can lead to a blow-out. A blow-out is the sudden, explosive escape of BETONAMIT from the drill hole. If the material escaping at high pressure strikes you in the face, this can result in serious injury. **Therefore, never look directly into filled drill holes and always wear safety goggles when working with BETONAMIT.**

Once an initial blow-out has occurred, it will repeat itself around 3–6 times and may also occur in other boreholes. Close off the work area to all persons for at least 3 hours.

First aid

BETONAMIT is not toxic, but contains a high proportion of quicklime (calcium oxide). IF IN EYES: Rinse cautiously with water for several minutes. Remove any contact lenses if possible. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. Seek medical attention immediately in the event of pain, injury or allergic reactions.

You can find lots more helpful information on our website at: www.betonamit.com