BETONAMIT® *Instructions for use*

BETONAMIT is a non-explosive cracking agent, which enables comparatively precise cracking of rock and concrete, without additional special requirements or equipment being necessary. After a reaction time of just a few hours, BETONAMIT develops an enormous expansion pressure, which is soon so high, that any hard rock and concrete is ripped asunder. In comparison with other conventional explosion methods, demolition works with BETONAMIT do not require any licence for explosives.

Preparation

Please ensure that the following equipment is prepared before the start of work:

- ✓ BETONAMIT – the original
- ✓ Safety goggles and protective gloves)
- ✓ Mixing container (made of plastic or metal)
- ✓ Electric mixer
- ✓ Impact drill
- ✓ Drill bit ($1^1/_4$“, $1^3/_8$“, $1^1/_2$“ | 30 - 40 mm)
- ✓ Cold and clean water
- ✓ Cover material

Work process

In the first step, holes are drilled with a diameter of $1^1/_4$“ - $1^1/_2$“ (30-40mm). The optimum drill hole distance is around 10 times drill hole diameter. Now add the BETONAMIT powder into the mixing container. Then add 34 to max. 40 fl. oz. per 11 LBS of cold and clean water (1.0-1.2 litre per 5 kg/11lbs). Mix the mixture for approx. one minute with a stirrer, until there is a fluid, homogeneous mixture. Pour the mixture directly from the mixing container into the drill holes. The drill holes must be as clean and dry as possible. No additional mechanical closure is required.

Technical information

Crack formation always occurs in the direction of the lowest resistance. A larger drill hole diameter means more power, shorter reaction time and wider crack formation. Therefore, if possible, use drills around $1^1/_2$ (40mm). Smaller drill hole distances mean smaller fragments and a faster reaction time.

Temperature	**5 °C 41 °F**	**10 °C 50 °F**	**15 °C 59 °F**	**20 °C 68 °F**	**25 °C 77 °F**	**30 °C 86 °F**	**35 °C 95 °F**
Recommended Borehole diameter	30 - 40 mm 1 ¼" - 1 ½"	30 - 40 mm 1 ¼" - 1 ½"	30 - 40 mm 1 ¼" - 1 ½"	30 - 40 mm 1 ¼" - 1 ½"	30 - 40 mm 1 ¼" - 1 ½"	30 - 40 mm 1 ¼" - 1 ½"	30 - 40 mm 1 ¼" - 1 ½"
Minimum Borehole depth	5 times Ø Drill bit	5 times Ø Drill bit	5 times Ø Drill bit	5 times Ø Drill bit	5 times Ø Drill bit	5 times Ø Drill bit	5 times Ø Drill bit
Maximum Borehole depth	6 m 20 ft.	6 m 20 ft.	6 m 20 ft.	6 m 20 ft.	6 m 20 ft.	6 m 20 ft.	6 m 20 ft.
Recommended Borehole distance	10 times Ø Drill bit	10 times Ø Drill bit	10 times Ø Drill bit	10 times Ø Drill bit	10 times Ø Drill bit	10 times Ø Drill bit	10 times Ø Drill bit
Amount of water per 5 kg | 11 LBS	1.0 - 1.2 ltr. 34 - 40 oz.	1.0 - 1.2 ltr. 34 - 40 oz.	1.0 - 1.2 ltr. 34 - 40 oz.	1.0 - 1.2 ltr. 34 - 40 oz.	1.0 - 1.2 ltr. 34 - 40 oz.	1.0 - 1.2 ltr. 34 - 40 oz.	1.0 - 1.2 ltr. 34 - 40 oz.
Reaction time	**10 - 36 hrs**	**10 - 18 hrs**	**8 - 16 hrs**	**6 - 14 hrs**	**6 - 10 hrs**	**4 - 8 hrs**	**2 - 6 hrs**

Safety regulations

1. Use BETONAMIT exclusively for breaking up rock and concrete.
2. Only use BETONAMIT within the temperature ranges between 40°F and 95°F. (5°C – 35°C).
3. Never use warm water (max. 65°F/20°C).
4. Adhere to correct amount of water: 34 to max. 40 fl. oz. per 11 LBS BETONAMIT. (1.0 – 1.2 litre per 5kg / 11lbs)
5. Only use drill bits with a diameter between $1^1/_4$“ and $1^1/_2$“ in diameter. (30-40mm)
6. The maximum drill hole depth is around 20 feet. (6m)
7. The minimum drill hole depth corresponds to 5 times the drill hole diameter.
8. The drill holes must be as clean and dry as possible.
9. Do not mix more than one bag of BETONAMIT with water at the same time.
10. On very hot days, fill the drill holes early in the morning.
11. Pour BETONAMIT into the boreholes immediately after mixing.
12. Dilute residues with plenty of water and dispose of according to the local regulations.
13. **Never look directly into filled boreholes (danger of blow-out).**
14. Secure the workplace against unauthorised persons.
15. When working with BETONAMIT in closed rooms, always wear a dust mask.
16. Do not cover filled boreholes with sand or any other loose materials, but with a tarpaulin or shuttering board.
17. Do not place any iron rods etc. into the boreholes to reduce the borehole diameter.
18. BETONAMIT must not be pumped.

Checklist for the safe use of BETONAMIT

1. Am I wearing the obligatory personal protective equipment? Safety goggles and safety gloves!
2. Is my drilling machine suitable for drilling the required drill hole diameter in rock or concrete?
3. Is the diameter of my drill between $1^1/_4$“ and $1^1/_2$? (30-40mm)
4. Have I provided the correct quantity of water? Measured – not guessed!
5. Does the size of my mixer fit the mixing container provided?
6. Is the mixing temperature in the recommended range? Under 65°F! (20°C)
7. Is the ambient temperature between 40°F and 95°F? (5°C – 35°C)
8. Is the temperature of the object to be blasted below 95°F? (35°C)
9. Can the exploded or displaced material give way in one direction?
10. Can I rule out the high expansion pressure or the displaced material causing unwanted damages? (Masonry? Base plate?)
11. Are the fragments secured against rolling away after explosion? (e.g. on sloping surfaces)
12. Have I read and understood the instructions for use and safety regulations?

What is a blow-out effect?

In the case of non-adherence to the regulations, a blow-out can occur. A blow-out effect is when BETONAMIT suddenly spurts out of the borehole, like a volcano. After a first blow-out has occurred, this effect is repeated around 3-6 times, at short intervals, and can also happen in further boreholes. So, in the case of a blow-out effect, please do not enter the danger zone. BETONAMIT is an inorganic compound and primarily consists of caustic lime. BETONAMIT is not toxic. However: BETONAMIT is a highly alkaline product like lime or cement and can lead to severe eye injuries or blinding in some cases if it comes into contact with the eyes! If you have any questions in relation to safety or handling, please ask for information from us or your vendor.

You can find further information about the product, examples of use, data sheets and technical information on our website at: www.betonamit.com.

Hazard warnings / urgent measures

H315 Causes skin irritation. H318 Causes severe eye damage. H335 May irritate the respiratory tract. **Safety regulations:** P261 Avoid breathing in dust. P280 Wear protective gloves and safety goggles. P305+P351+P338 **IN CASE OF CONTACT WITH THE EYES:** Rinse carefully with water for a few minutes. Remove contact lenses if possible. Continue to rinse. P310 Call the POISON INFORMATION CENTRE/doctor immediately. P302+P352 IF IT COMES INTO CONTACT WITH SKIN: Wash with plenty of water and soap.