The explosion-free demolition agent

for the simple and targeted demolition of rock and concrete

Made in Liechtenstein
by KUBATEC BMT AG

www.betonamit.com

BETONAMIT®
The original.

Betonamit® – The explosion-free demolition agent

Simple. Effective. Environmentally-Friendly

Betonamit type R (liquid)

Betonamit is an explosion-free demolition agent which enables relatively accurate demolitions without the need for special conditions or equipment. It has a very good shelf life of at least 3 years. After a reaction time of only a few hours Betonamit develops an enormous expansion pressure, which is soon so powerful that every hard rock and even reinforced concrete is broken apart. Compared to other conventional demolition methods, Betonamit works virtually silently, vibration-free and environmentally-friendly.

Betonamit type S (putty-like)

Betonamit Type S is used primarily for overhead work, as well as for horizontal or hard-to-reach drill holes. The preparatory work and technical data for Betonamit type S corresponds to that of type R. The only and definitive difference is that, after the mixing process, the Betonamit presents itself as a kneadable mass. This mass is then shaped by hand into sausage forms and stuffed into the drill holes. Subsequently, these sausage forms are each compressed with a stick, the diameter of which corresponds approximately to that of the drill hole diameter.

Benefits of Betonamit

- **Simple and safe to use - also suitable for the DIY enthusiast!**
- **Neither a demolition license nor other permits are required.**
- **Free and professional advice.**
- **Vibration-free, silent and without splitter flight.**
- **A high-quality and tested product.**
- **Useable in both indoor and outdoor areas.**
- **Targeted demolition thanks to largely predictable crack formation.**
- **Storable for at least 3 years in original packaging.**

Preparation

Please ensure that the following equipment is provided before starting work:

- Betonamit – The Original
- Safety equipment (protective clothing, protective goggles and protective gloves)
- Mixing container (made of plastic or metal)
- Electric stirrer
- Impact drilling machine
- Drills (ø 30mm to 40mm)
- Correct volume of water (take note of temperature in accord with break-time table)
- Covering material (formwork boards, tarpaulins, etc.)

1

2

3

APPLICATION

1. For the first step, the holes are drilled. (Ø between 30 and 40 mm)
2. Empty the Betonamit into a bucket, add 1 litre of water per 5kg and stir for approx. 2 mins.
3. Fill the holes with Betonamit directly from the mixing container.

Technical Notices

- Only use drills with a diameter between 30mm and 40mm.
- The drill holes should be as clean and dry as possible.
- The minimum drill hole depth corresponds to 5 times the drill hole diameter.
- The maximum fillable drill hole depth is about 3 to 5 metres.

Material Consumption

The material consumption is calculated from the sum of all drill hole depths in metres times the corresponding factor of the drill hole diameter used.

Example:

15 drill holes (ø35mm) with 60cm depth — Consumption = 15 x 0.6 x 1.6 = 14.4 kg Betonamit

Drill hole diameter	Factor
30 mm	1.2 kg of Betonamit per drill hole metre
35 mm	1.6 kg of Betonamit per drill hole metre
40 mm	2.2 kg of Betonamit per drill hole metre

Drill hole spacing

	Drill hole spacing at 30mm ø	Drill hole spacing at 40mm ø
Rock/boulder	30-40 cm	40-50 cm
Concrete	30-40 cm	40-50 cm
Reinforced concrete	20-30 cm	30-40 cm

Cracking control

The Crack formation always takes place in the direction of the least resistance. With a little experience, these cracks can be directed very easily.

Splitting: On a concrete foundation or boulder, the holes are drilled in a line with a narrow drill hole spacing. The splitting thus always takes place from hole to hole.

Breaking: The holes are drilled offset in several rows, so as to obtain fragments as small as possible. Basic rule: the more drill holes, the smaller the fragments. The breaking takes place in a criss-cross fashion.

Loosening: For rocky subsoils or rock projections, the holes are drilled and filled to 10-20cm below the required floor level. The subsoil is loosened such that the rock can then be simply removed with an excavator bucket or hand shovel.

Unfilled drill holes: Using unfilled drill holes, a position can be determined along which the cracks should run or where a crack should end. Unfilled drill holes are mostly used for partial demolitions, where, for example, parts of a concrete foundation should remain undamaged.

Reaction time

The reaction time is influenced by the following factors: outside temperature, material and water temperature, drill hole diameter, drill hole spacing and the number of drill holes.

Demolition time table

	Drill hole diameter 40 mm						
Ambient temperature	5 C°	10 C°	15 C°	20 C°	25 C°	30 C°	35 C°
Water temperature	25 C°	25 C°	20 C°	20 C°	20 C°	20 C°	20 C°
Drill hole spacing	40 cm	40 cm	40 cm	40 cm	40 cm	40 cm	40 cm
Demolition time	**10-24 h**	**10-18 h**	**8-16 h**	**6-14 h**	**6-10 h**	**4-8 h**	**2-8 h**

	Drill hole diameter 30 mm						
Ambient temperature	5 C°	10 C°	15 C°	20 C°	25 C°	30 C°	35 C°
Water temperature	25 C°	25 C°	20 C°	20 C°	20 C°	20 C°	20 C°
Drill hole spacing	30 cm	30 cm	30 cm	30 cm	30 cm	30 cm	30 cm
Demolition time	**12-36 h**	**12-24 h**	**8-16 h**	**8-16 h**	**6-12 h**	**6-10 h**	**4-8 h**

Tip!

Betonamit continues to expand over several days. This means that the more time you give Betonamit to work, the easier the subsequent removal of the fragments will be. So, have some patience and let Betonamit do the really hard work for you.

Potential Applications

- Demolition of concrete foundations
- Demolition of concrete steps
- Slope stabilisation
- Removal of rock face projections
- Disintegration of boulders and other large rock fragments
- Removal of concrete and stone walls
- Quarries, for example in granite mining
- Facilitation of excavation work on rocky subsoils
- Splitting natural stones for size adjustment

Areas of application

- Demolitions
- Blasting contractors
- Civil engineering
- Drilling and sawing enterprises
- Road construction
- Tunnel construction
- Horticulture / Landscape gardening
- Home handyman
- Quarries
- Agriculture
- Underground construction / Mining
- plus many others

Safety

Only use Betonamit after you have read and understood the instructions for use and the safety regulations. These documents are available for download from our website. Please do not hesitate to contact us if you have further questions regarding application and safety.

KUBATEC

KUBATEC BMT AG T +423 375 78 78 office@betonamit.com **www.betonamit.com**

Safety regulations

BETONAMIT may only be used after the instructions for use and safety regulations have been read in their entirety and thoroughly understood. It is essential that they are observed. When working with BETONAMIT, safety goggles and safety footwear must be worn at all times.

Technical Specifications

1. Only use BETONAMIT for splitting aggregate, rocks and concrete.
2. Only use BETONAMIT within the temperature range specified (5 °C to 35 °C or 40 °F to 95 °F).
3. Do not use water that is too hot. (max. 25 °C or max. 75 °F).
4. Use precisely the right amount of water. One litre per 5 kg BETONAMIT (34 fl. oz. per 5 kg BETONAMIT).
5. Only use drill bits of diameters between 30 and 40 mm. (between 1¼" and 1½").
6. The maximum depth of drill-holes is about 3 metres (about 10').
7. The minimum depth of drill-holes corresponds to five times the diameter of the hole drilled.
8. Do not mix several bags of BETONAMIT at the same time.
9. Pack the BETONAMIT in the drilled holes immediately after it has been mixed.
10. Do not leave any residues of BETONAMIT in the mixing vessel; dilute any residues with plenty of water and then dispose of them in accordance with local regulations.
11. Never look directly into the packed drilled holes, since if any mistake was made in packing them, the danger exists of a blow-out.
12. After the drilled holes have been packed, the place of work must be cordoned off to prevent access by the general public as well as by the workers.
13. When working with BETONAMIT in enclosed spaces, always wear a dustproof face-mask.
14. Never fill containers or vessels of glass or metal or cans etc. which narrow towards the top with BETONAMIT.
15. Never pack BETONAMIT into pipes of vinyl chloride.
16. Do not cover the packed drilled holes with sand, mortar or any other loose material but cover with a tarpaulin or piece of formwork boarding.
17. Do not insert metal rods etc. into the drilled holes to reduce their effective diameter.
18. BETONAMIT may not be pumped.

Check list for the safe use of BETONAMIT

- ☐ 1. Am I wearing the mandatory personal protective equipment? Wrap-round protective goggles and protective gloves!
- ☐ 2. Is my power drill suitable for drilling holes of the necessary diameter in stone, rock and concrete?
- ☐ 3. Is the diameter of my drill-bit between 30 and 40 mm?
- ☐ 4. Have I placed the correct quantity of water ready for use – measured and not guessed?!
- ☐ 5. Is my mixer the right size for the mixing vessel I intend to use?
- ☐ 6. Is the temperature of the water within the recommended range – at all events below 25 °C (75 °F)?
- ☐ 7. Is the ambient temperature between 5 °C and 35 °C? (between 40 °F and 95 °F)?
- ☐ 8. Is the temperature of the object to be split 35 °C (95 °F) or less?
- ☐ 9. Can the material split off or displaced escape in just one direction?
- ☐ 10. Can I be absolutely certain that neither the high expansion pressure nor the displaced material will be able to cause any unwanted damage (Brickwork, floor slab, etc.)?
- ☐ 11. After the splitting, is the rubble prevented from running away (e.g., on a slope)?
- ☐ 12. Have I read the instructions for use and safety regulations thoroughly and understood them?

Tipps

1. In very hot weather, pack the drilled holes early in the morning.
2. A large-diameter drilled hole means more force, a shorter time taken for splitting and wider cracks. If possible, therefore, use drill bits close to 40 mm (1 ½") diameter.
3. Smaller spacing between the drilled holes means smaller pieces of debris and a shorter time taken for splitting.
4. On very cold days, use lukewarm water with a maximum temperature of about 25 °C or 75 °F
5. On very warm days, use cold water at a temperature of about 15 °C or 60 °F
6. To achieve better flow, the amount of water can be increased by up to 3 % by weight (i.e., plus a maximum of 1.5 dl per 5 kg BETONAMIT)

What is a «Blow-out effect»?

A blow-out effect is a sudden eruption of BETONAMIT from a drilled hole when this has not been correctly packed. After a first blow-out has occurred, the effect is likely to repeat itself at short intervals three to six times, and it may manifest itself in other drilled holes. Therefore, you should not enter the danger zone on the first occurrence of a blow-out effect. BETONAMIT is an inorganic combination composed mainly of quicklime. BETONAMIT is non-toxic, but even so, BETONAMIT is an extremely alkaline product, as are lime or cement and any contact with the eyes will possibly cause serious injury! For any unanswered questions regarding safety or handling, please ask your supplier or us for advice.

Safety regulations as per the GHS

Hazard: causes skin irritation. Causes serious damage to the eyes. May cause allergic skin reaction. May cause respiratory irritation.
Precautionary statements: avoid inhaling dust. In the event of contact with the eyes, rinse cautiously with water for several minutes. Remove contact lenses if worn and if this is possible. Continue rinsing. Consult a doctor or an ophthalmologist immediately. Keep BETONAMIT under lock and key out of the reach of children. Always keep BETONAMIT cool, dry and tightly sealed. Dispose of contents in accordance with local regulations.

DANGER!

Contains calcium oxide (CaO)

KUBATEC

KUBATEC BMT AG T +423 375 78 78 office@betonamit.com **www.betonamit.com**