



2009

INSTRUCTIONAL GUIDE



Demosol

[www.demosol.com](http://www.demosol.com)

1-800-816-3121

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## Requirements

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- DEMOSOL Agent
- Clean cold water
- Plastic bucket
- Beater or wooden rod for mixing
- Safety Goggles
- Rubber Gloves
- Dust-proof mask
- Air Hammer Drill w/ appropriate drill bit for rock type

## Safety

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This section deals with important safety measures to be taken when dealing with DEMOSOL. Please read thoroughly.

### i. Precautions

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- Make sure everyone working with DEMOSOL understands the possibility of blowouts, and has **read the technical instructions thoroughly**.
- DEMOSOL is a highly alkaline product; pH reaches 13 after contact with water and can cause severe irritation, especially to the eyes. Any skin or eye contact with DEMOSOL must be rinsed off with large amounts of cold water immediately without rubbing. See First Aid Measures.
- Wear safety goggles and rubber gloves at all times when handling, mixing and filling DEMOSOL. Dust-proof mask is recommended in poorly ventilated areas such as tunnels or mines.
- Cover the holes with a waterproof tarpaulin if rain occurs in the first 30 minutes after filling.
- Keep your face away from the holes filled by mortar. Stay away from filled holes at least 3 hours after filling to avoid blow-out shot.
- Keep people away from job site after filling.
- Do not fill holes with warm or bubbling mortar. Once filled holes start to smoke or steam, it is a sign that a **blow-out is about to occur**. Clear the area of people immediately.
- Beware of falling debris when expansion occurs.

### ii. First Aid Measures

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**CONTACT WITH EYES:** Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Seek medical attention.

**CONTACT WITH SKIN:** Remove affected person from source of contamination. Wash skin **thoroughly** with soap and water. Seek medical attention if irritation develops.

**INGESTION:** Do Not Induce Vomiting. Promptly get affected personnel to drink large volumes of water to dilute the swallowed chemical. Seek medical advice. Provide rest, warmth and fresh air.

**INHALATION:** Move exposed person to fresh air immediately. Provide fresh air, warmth and rest, preferably in a comfortable upright position. Seek medical attention if discomfort continues.

### iii. Environmental Precaution

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- Avoid subsoil penetration.
- Prevent product from entering drains.
- Do not contaminate surface water.

### iv. Spill Cleanup

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1. Gather the released or spilled product with a broom or shovel.
2. Mix it with a large amount of water.
3. Sprinkle it onto open ground.

## Storage

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- Although DEMOSOL is stored in anti-moisture bags, long storage may cause deterioration of its working ingredients. Therefore, store in a dry place and use as soon as possible.
- When storing, do not place the bags of DEMOSOL directly on the floor, put them on a pallet and keep in a dry place.
- When properly stored, DEMOSOL has a shelf life of up to 18 months.
- When storing the portion of DEMOSOL remaining after use, push the air out of the bag, then seal with gum tape and use as soon as possible. However, as it may get exposed to moisture, there is a risk of DEMOSOL losing its effectiveness once the bag has been opened.
- If you receive broken bags of DEMOSOL, they may not work due to chance of moisture absorption. Call DEMOSOL @ 1-800-816-3121

## Drilling

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1. Drill holes using an Air Hammer Drill with a drill bit appropriate to the rock type.
2. Holes should be drilled no further than 30 – 60 cm (1ft – 2ft) apart.
  - a. Reinforced Concrete no more than 20cm (8") apart.
3. Recommended hole diameter 38mm – 50mm (1 ½" – 2"). Depth would be 70 – 90% of the way depending on type of rock/material being cracked.

Visit [www.demosol.com](http://www.demosol.com) for specific drilling patterns for different types of rock / concrete.

## Mixing

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**Safety Tip:** Remember to always wear rubber gloves when mixing.

**Safety Tip:** Longer mixing time increases likely hood of blow-out shot.

DEMOSOL is a powder that must be thoroughly mixed with clean, cold water before use.

1. In a ratio of 30% of overall weight, please put 1.5 – 1.7 liters of water into a bucket.
2. Gradually add one 5kg bag of DEMOSOL powder into water.
3. Using a drill and paddle or mixing rod continuously stir to obtain a smooth, lump-free slurry.

## Filling

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1. Clean holes with air hose to clear excess dust from drilling.
2. Pour DEMOSOL slurry into holes within 10 – 15 mins of mixing.
3. Only fill holes to about ½” – 1” from top.
4. For vertical holes, pour DEMOSOL slurry into hole directly. Agitate the mortar while filling the holes with a piece of rod.
5. For horizontal and slant holes, insert a slightly smaller plastic pipe into the hole. Fill the mortar into the pipe slowly, withdrawing the pipe from the hole simultaneously. A grouting pump can be used for this.

## Tips

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- For optimal results, it is advisable to carry out a test before starting work.
- When using DEMOSOL with highly absorbent materials like concrete, the holes should be dampened before the mortar is poured. Make sure however, that there is no presence of water.
- Large diameter holes positioned closer together accelerate breaking times.
- Make sure the holes are clean and no water or residue is left in the holes. Use a high pressure air hose to clean out.
- Fresh mortar should be poured into holes within 10 – 15 mins of mixing.
- Do not mix more than 2 bags (10kg) for each lot at a time.
- The feeding depth should be 100% of the pre-drilled holes.
- Do not plug the holes after filling. Cover them only in the event of rain with a waterproof tarp for the first 30 mins after filling.
- To guarantee the maximum expansive stress of all holes occurring at the same time, the assigned workers need to be synchronized in their operations for mixing, filling and stirring. Especially with hard stone.
- DEMOSOL can only be used in holes. It will not work in existing cracks.
- Never fill glass or metal containers with DEMOSOL mixture, or any container which widens towards the bottom. The pressure will cause the container to shatter.
- If the mixed DEMOSOL begins to steam in the mixing container, add some water to dilute and dispose to an open surface.

## Contact Info

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