



## Step by Step Instructions for Using Expansive Grout to Break Concrete, Rock and Boulders

### Step by Step Instructions for Using Dexpan

#### 1. DRILL HOLES

Determine your Drill Pattern & spacing based on:

- › project objectives, equipment available
- › material hardness
- › expansion space or open face available
- › desired size of broken material
- › project timelines (closer the holes = faster breaking)
- › if unfilled relief/expansion holes would be advisable

	<b>Reinforced Concrete</b>	<b>Hard Rock</b>	<b>Soft Rock</b>	<b>Concrete</b>	<b>Boulders</b>
<b>Diameter</b>	1.5"	1.5"	1.5"	1.5"	1.5"
<b>Spacing</b>	10 - 12"	10 - 12"	12"	12"	10"
<b>Depth</b>	90%	105%	105%	80%	75%

#### 2. MIX DEXPAN

##### **IMPORTANT**

- › Use safety goggles, dust mask and gloves when mixing.
- › Organize personnel & equipment to ensure mixture is poured into holes within 5 - 10 minutes of mixing.

Assemble:

- › Personal protective equipment
- › Dexpan demolition agent
- › Clean cool water & method to measure 1.5 litres
- › Flat bottomed mixing bucket
- › Electric Drill with mixing paddle (recommended)
- › Funnel (optional)

In a flat bottom bucket:

- › add 1.5 L of cool water
- › slowly add one bag of Dexpan
- › mix well, using hand drill + mixing paddle
- › rinse the bucket between batches

### **3. FILL HOLES**

Gradually fill holes with mixture.

Leave ½ to 1 inch of space from the top (not necessary to fill to the very top).

Fill the holes nearest your open face (where there is room to expand) first.

Pour first row, left to right. Next row, left to right.

#### ***IMPORTANT***

Protect filled holes from sun, rain and snow with a tarp.

#### **KEYS TO SUCCESS**

##### ***CORRECT PRODUCT***

Select the correct Dexpan product based on material temperature and anticipated weather conditions.

Dexpan I: 25 - 40 °C

Dexpan II: 10 - 25 °C

Dexpan III: -5 - 10 °C

##### ***EXPANSION SPACE***

To be effective, the material to be cracked requires space to expand and break apart.

Breaking a flat rock bed or a boulder submersed in earth or concrete enclosed on all sides does not allow for room for the material to expand, break.

Possible strategies to create expansion room or an open face:

- › trenching drill to remove material around the case
- › drill a series of empty relief holes
- › drill holes at a 45 degree angle

##### ***DRILL PATTERN***

A well-designed hole Drill Pattern will:

- › achieve breaking objectives
- › minimize labour

- › reduce use of Dexpan
- › direct and control breaking
- › shorten time for breaking to occur
- › direct breaking away from sensitive structures

### **MIXING**

Mix one bag of Dexpan at a time

Add water first, then Dexpan

Mix well, preferably with an electric hand drill with a mixing paddle to achieve a lump free slurry.

Use only open pails or containers for mixing

Rinse the bucket between batches.

### **POURING**

Clear any water and excessive dust from holes.

Do not pour Dexpan in holes with water.

Gradually fill holes to minimize air bubbles.

Pour into holes within 5 - 10 minutes of mixing

Always start pouring row of holes closest to open face / where there is room for expansion first.

Pour first row, left to right. Return to the start of next row, pour left to right. You do not want to go in a snake pattern (first row left to right, second row right to left).

Use plastic sleeves if rock has noticeable ground water.

Gradually fill holes to minimize air bubbles.

### **SAFETY**

For your protection, ALWAYS wear Safety Goggles, a Dust-Proof Mask, Rubber Gloves and proper clothing when working with Dexpan®. Avoid eyes, skin contact and do not inhale the dust. NEVER look or stand over filled holes.

We are here to help. We want you to feel comfortable and confident using our product. **CONTACT US** by phone or email if you have questions or need advice with your project.

Dexpan Support: 575-332-9458