# INTRODUCING NEW TECHNOLOGY FOR SPLITING , CUTTING & DEMOLISHING ROCKS AND CONCRETE

## SPLIT AGENT

### PROFILE

Split Agent is a Non-explosive Soundless Cracking Agent. It is economical, controllable, silent and highly expansive demolition agent. Split agent is the latest non-explosive demolition technology which can be applied to concrete cutting, concrete demolition, rock breaking, granite and marble quarrying, mining and so on.

### What is Split Agent?

SPLIT AGENT is a soundless and safe demolition agent which is quite different from ordinary demolition agents such as explosives and dangerous materials. It does not cause any fly rock, noise, ground vibration, gas, dust or any other environmental pollution when used properly.

Split Agent appears to be grayish white powder and be composed of multi-structured inorganic particles. There is no content of any harmful composition.

The explosive is not suitable for being applied to marble and granite quarrying. As requirements for demolishing reinforced concrete in construction increase in tight quarters, the use of explosives and explosive agents is becoming more restricted as far as safety and environmental pollution problems are concerned. Split Agent is the best solution.

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SPLIT AGENT can be used in an almost unlimited range of applications. It's particularly used for breaking, cutting or demolishing stones, concrete and reinforced concrete. It is ideal for use in situations where surrounding buildings or other structures would be damaged by flying debris or vibration. It maximizes production circle, product output, the rate of finished products and therefore profits, in quarrying and mining as it avoids waste of valuable stone.

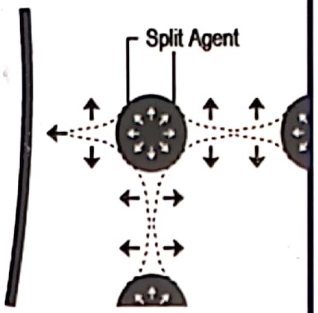
Generally, the compressive fracture stress of rocks is 1000 to 2000 kg/cm2 and that of concrete 150 to 500 kg/cm2. However, the tensile fracture stress is very small, i.e., it ranges from30 to 60 kg/cm2 in normal rock, 40 to 70 kg/cm2 in concrete,100 to 120 kg/cm2 in reinforce concrete(steel bar inside),, respectively. SPLIT AGENT? can provide a tensile stress almost 500 to 600kgs tensile stress in based on a fracture, all kinds of rocks and concrete can be cracked and broken by using SPLIT AGENT? when appropriate boreholes are properly drilled.

## Applications

A. Granite, marble, sandstone, limestone, quartzite quarrying and cutting
B. Rocks pre – splitting, fracture, cutting demolishing and removal
C. Controlled demolition or cutting concrete when explosives not allowed
D. Fracture and demolition of the concrete buildings and structures
E. Rocks cutting for road construction
F. Excavation of trenches and foundations
G. Underground excavations and removing boulders
H. Marine excavations including underwater operations

## Tips on how to use SPLIT AGENT

- For effective use and to obtain optimum results, a controlled trial of Split Agent is recommended.
- Secure the site to ensure that the material, once cracked, does not damage or harm surrounding property or persons. When using SPLIT AGENT with highly absorbent materials like concrete, dampen the holes before pouring; however make sure that there is no standing water.
- To accelerate breaking time position large diameter holes together
- Make sure the holes are clean without water and residue.
- Pour fresh SPLIT AGENT into holes within 10 minutes after mixing.
- Do not mix more than two bags (10 kg) for each lot at a time.
- The feeding depth should be 100% of the pre-drilled holes.
- Do not plug the holes after filling




- SPLIT AGENT can only be used in holes and will not work in existing cracks of stones or concrete
- Never fill glass or metal containers with SPLIT AGENT mixture, or any container which widens towards the bottom. The pressure will shatter the container.
- In the unlikely event SPLIT AGENT begins to steam in the mixing container, add some water to dilute the mixture and throw it away to an open surface.
- For best results it's important to take into account air ambient and internal material temperature of the materials to be broken.
  - I Object temp 25 - 40 degrees Celsius
  - II Object temp 10 - 25 degrees Celsius
  - III Object temp 0 - 15 degrees Celsius
- In summer fill holes at the end of the day to allow cracking overnight
- In summer cover filled holes from direct sunlight using a tarp or damp hay to provide shade.

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## SPLIT AGENT FAQs

**What size holes do I need to drill?**
Drill holes 28-40mm in diameter

**How deep do I drill?**
Drill to 80-90% of the depth of the materials – do not go through. Hole depth must be a minimum of four times the diameter of the hole.

**How far apart should I drill the holes?**
The spacing, length (or depth) angle and diameter of the drill holes will be determined by the properties of the material to be removed and may require adjustment when areas of different hardness are encountered in the same rock body.

**How much SPLIT AGENT will I use?**
32mm Drill x 1 meter deep hole = 1.3kg SPLIT AGENT
34mm Drill x 1 meter deep hole = 1.5kg SPLIT AGENT
38mm Drill x 1meter deep hole = 1.8 kg SPLIT AGENT
Before drilling consider the maximum broken rock or concrete size you can safely maneuver.
The following are some estimated weights per M2 of each material.
Sandstone 1M2 =2.2 to 2.7 Tone
Granite =3 Tone
Limestone 1M2 = 2.4 Tone
Concrete = 2.4 Tone

**How should I design my hole patterns?**
Consider the maximum broken rock or concrete you can safely manipulate. Then plan out your hole pattern.
The reaction time of SPLIT AGENT to crack stone varies from 24 hours to 72 hours, depending on the cracking object, material, hole design and temperature. Generally speaking, within the temperature
scope of each type, the higher the temperature of the object and the closer together the holes, the quicker the object will crack (otherwise, the opposite will occur).