

Technology in Brief

Expansive mortar is a soundproof, safe, and non-explosive demolition agent; the major chemical constituent is calcium oxide and a low percentage of other additives. Expansive mortar does not contain any harmful compounds; it can be safely used while providing controlled expansion or cracking. The expansion capacity of mortar is tunable and can break from soft stone (Sand stone) to hard stone (Granite).

Salient features/Advantages

- The use of expansive mortars offers several advantages in mining, as it requires minimal Linear drilling into the rock, does not cause environmental impact, and requires no manual operations for simple implementation.
- Cracking of pattern 15h.
- Poured into holes, breaks reinforced concrete & rock safely and quietly, while providing Silent cracking.



1/2-M3 MBO Concrete sample mortar cracking in 12h

Several laboratory trials Have been conducted on different sizes of concrete samples and locally Available different types of sand stones

Cracking pattern of CBRI

formulation cracked after 15h



Cracking pattern of CBRI silent cracking



Properties & Standards	Eco-friendly, Controlled expansion, Soundproof, Cost effective
End Product(s)	Powder Form
License/Commercialization	M/s Poysha Nano Tech. LLP., Haridwar
TRL	8
Environmental Impact	Non hazardous
Setup - Equipment required	Dry Mixture
Linkedin Video Link	https://www.linkedin.com/posts/csircbri_csircbri-silentcracking-sustainablemining-ugcPost-7423247211284766720-mB2q?utm_source=share&utm_medium=member_desktop&rcm=ACoAAD_9kj4B2jUfyt81pCfAIZ1Ld-pdHpEo7m4

Youtube Video Link

https://youtu.be/cTAY3XG5n5Q?si=JkpIlaCrbktw0M_k