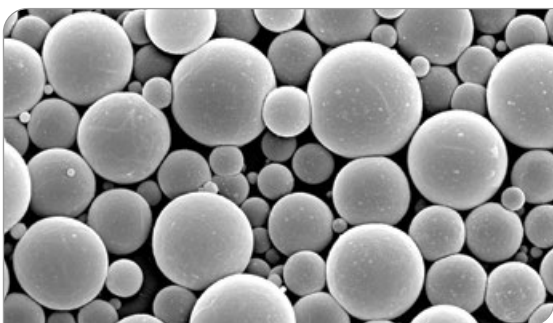


Blasting—Sensitizers

Controlled explosive sensitivity for predictable blasting performance



Emulsion explosives require controlled sensitization to achieve a detonable state, as the base matrix is inherently too dense to sustain detonation.

Introducing engineered void structures enables density reduction and hotspot formation, supporting reliable initiation and consistent detonation performance under mining conditions.

Function-led control of explosive sensitivity

Controlled density and initiation behavior

Lightweight sensitizer technologies create uniform void structures that reduce density and enable reliable detonation response.

Hotspot generation for initiation

Engineered voids act as localized “hot spots,” where energy is concentrated during shock, enabling consistent initiation.

Stability under handling and field conditions

Sensitizer systems maintain performance under mechanical, thermal, and environmental stresses encountered during pumping, loading, and use.

Application-driven performance support

Sensitizers function as material-level control tools, supporting explosive behavior without extending into blast design or execution decisions.

Sensitizer functionality supports

- Consistent explosive sensitivity and initiation behavior
- Reliable detonation under defined production and field conditions
- Stability during pumping, transport, and loading
- Reduced variability introduced prior to blasting

Operational outcomes

- More consistent detonation response across varying operating conditions
- Reduced variability caused by density fluctuations or handling stress
- Improved reliability during loading and charging operations
- More stable inputs to downstream processes, without influencing blast design

How this works in practice

Across emulsion systems and operating conditions, these technologies enable controlled density, hotspot formation, and reliable initiation—demonstrated in real blasting environments.

See the case example on page 2 for results in practice. Start a discussion to evaluate your materials at nouryon.com/mining/sensitizers

Core brand:

- Expancel® sensitizers

Case Example: Reliable detonation through controlled sensitization

Challenge

Unsensitized emulsions are too dense to detonate reliably—leading to inconsistent initiation and reduced performance.

Solution

Expancel® sensitizers create controlled density reduction and uniform “hot spot” distribution.

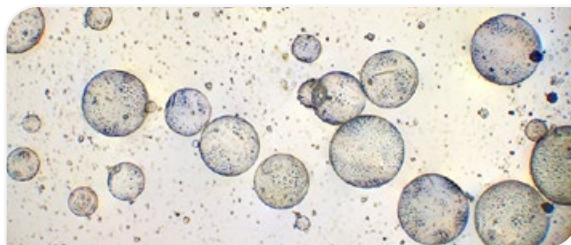
Proven performance

- Enables transition to detonable structure
- Improves initiation consistency
- Delivers uniform void distribution
- Reduces emulsion density

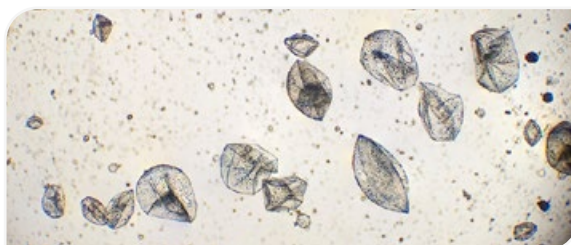
Impact

- Reliable, predictable blasting
- Reduced misfire risk
- Better control of explosive performance

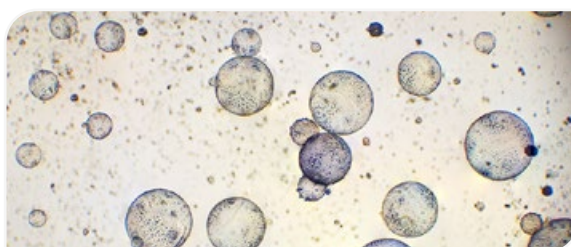
Review your blasting material conditions — request technical guidance at nouryon.com/mining/sensitizers



Expancel® microspheres at ambient pressure.



When pressure is increased, Expancel® microspheres compress and buckle, but their surface area remains unchanged. This keeps the spheres from breaking during processing or filling in cartridges.



When pressure is released, Expancel® microspheres regain their original spherical form and, depending on pressure/exposure time, the majority of their original volume.

Nouryon

Nouryon is a global, specialty chemicals leader. Markets and consumers worldwide rely on our essential solutions to manufacture everyday products, such as personal care, cleaning goods, paints and coatings, agriculture and food, pharmaceuticals, and building products. Furthermore, the dedication of approximately 8,200 employees with a shared commitment to our customers, business growth, safety, sustainability and innovation has resulted in a consistently strong financial performance. We operate in over 80 countries around the world with a portfolio of industry-leading brands. Visit our website and follow us @Nouryon and on LinkedIn.

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