

BMS Ultrafine-12

TECHNICAL DATA SHEET

BMS Ultrafine-12 is a high-performance ultrafine cement powder designed for critical injection, consolidation, and sealing works in mining, tunnelling, and civil construction. With a **d95 particle size of $\leq 12\text{ }\mu\text{m}$ and laser diffraction specific surface area (SSA) of $\geq 1000\text{ m}^2/\text{kg}$** , it enables effective penetration of tight fractures, porous zones, and fine soils where conventional cementitious grouts cannot reach.

Produced through **air classification of high-quality general purpose cement** conforming to AS 3972 (Type GP), BMS Ultrafine-12 avoids additional mechanical milling while achieving a refined and consistent particle size distribution. This controlled manufacturing process results in a dry, free-flowing powder with **high reactivity and predictable setting time**, making it ideal for demanding underground and surface grouting environments.

BMS Ultrafine-12 is **compatible with a wide range of additives**, including plasticisers, retarders, and accelerators, and may be used as a stand-alone grout or in engineered mix designs to suit project specifications or performance requirements.

FEATURES & BENEFITS

- **Ultrafine Particle Size:** Enables effective penetration into rock micro-fractures and permeation into fine-grained soils.
- **Versatile Application:** Suitable for rock micro-fracture sealing, dam remediation, pre-excavation grouting, and tunnel waterproofing.
- **Rapid Strength Gain & Controlled Setting:** Predictable and rapid early strength development, minimising operational downtime.
- **Classified, Not Milled:** Precision air classification of GP cement offers particle refinement without thermal or mechanical degradation.

TYPICAL APPLICATIONS

- Soil and rock permeation grouting (e.g., tunnels, dams, foundations).
- Cut-off barrier walls and seepage mitigation.
- Pre- and post-excavation stabilisation and consolidation.
- Reactive ground support and waterproofing systems.

TECHNICAL DATA

BMS Ultrafine-12 undergoes regular in-house quality control, including laser diffraction particle size analysis. Results are periodically verified externally by NATA-accredited laboratories.

Property	Typical Value	Test Method/Standard
Particle Size (d95)	$\leq 12\text{ }\mu\text{m}$	Laser Diffraction
Particle Size (d50)	$\leq 4\text{ }\mu\text{m}$	Laser Diffraction
Particle Size (d10)	$\leq 1\text{ }\mu\text{m}$	Laser Diffraction
Specific Surface Area (SSA)	$\geq 1000\text{ m}^2/\text{kg}$	Laser Diffraction
Particle Density Equivalent to Specific Gravity of 3.12	3.12 g/cm^3	ASTM C188 (NATA-accredited)

Note: These values are typical and subject to change based on manufacturing conditions. Performance-based properties, such as compressive strength, set times, bleed, etc, are highly dependent on water-to-solids (w:s) ratios, addition of admixtures, and end-user applications and requirements.

BMS Ultrafine-12

PACKAGING

- 20 kg paper bags (individual & palletised).
- 1.0 and 1.2 tonne bulk bags.
- Additional packaging options are available on request.
- All orders include Proof of Dispatch (POD) documentation with batch identification numbers and manufacturing dates for traceability.

SHELF-LIFE & STORAGE CONDITIONS

- **Shelf-Life:** Best used within 6 months from the date of manufacture when stored as recommended. Cement may be fit for purpose beyond 6 months, subject to assessment of storage conditions and verification testing of cement properties.
- **Storage Conditions:** Store unopened and undamaged packages in a cool, dry environment below 30°C. Shelf-life may decrease if exposed to high humidity, extreme temperatures, or external weather conditions.

SAFETY INFORMATION

- Cement dust is an irritant—avoid inhalation or skin/eye contact.
- Wear protective gloves, clothing, eye and face protection.
- Ensure adequate ventilation during mixing and application.
- In case of contact with the eyes, rinse with running water for 15 mins and remove contaminated clothing.
- Always consult the Safety Data Sheet (SDS) prior to handling or use.
- For detailed safety information, refer to the latest SDS available at www.bmscement.com.

CONTACT INFO

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Important Notice

Always refer to the BMS Specialty Cements website (www.bmscement.com) for the latest Technical Data Sheet (TDS) and Safety Data Sheet (SDS). Please read the SDS carefully prior to using this product. In an emergency, contact any Poisons Information Centre (Phone: 13 11 26 within Australia).

Recommendations and advice provided herein are intended as guidelines only. The manufacturer and affiliated companies shall not be liable for any loss or damage resulting from improper or incorrect use of this product. Product usage is beyond the manufacturer's control; liability is limited solely to the replacement of the material should it be proven defective. While every effort has been made to ensure accuracy and completeness, the manufacturer reserves the right to update or amend product information without prior notice. No express or implied warranty is provided concerning the product's performance or suitability for any specific application.