

GEOLOGICAL SURVEY CALIBRATION BLOCKS



As a trusted supplier of advanced magnesium solutions, Vulcan Specialty Metal Products partners with world-class alloy developers to deliver precision materials for the most demanding industries. Through our close collaboration with Magnesium Elektron, Vulcan provides highly functional magnesium alloys engineered for accuracy, repeatability, and long-term performance in critical measurement applications.

Vulcan supplies AZ31B Magnesium Calibration Blocks that have a proven legacy in the Oil & Gas industry, supporting density logging applications since the technology's inception in the 1950s. This decades-long field history highlights the reliability of magnesium-based calibration systems in harsh downhole environments where material stability and dimensional integrity are essential.

When used alongside matched aluminum reference blocks, Vulcan-supplied magnesium calibration blocks enable precise calibration of borehole logging tools that determine formation density through gamma-ray scattering. These calibration systems are fundamental to ensuring measurement accuracy in gamma ray and nuclear logging operations, directly supporting reservoir evaluation and drilling decision-making.

To meet diverse customer and tool-specific requirements, Vulcan offers calibration blocks in multiple supply conditions—from cast slab raw material to fully machined and coated components manufactured to exact customer drawings and specifications. Our role extends beyond material supply, providing technical alignment, quality assurance, and dependable delivery for critical logging and measurement programs worldwide.

Material & Forms

- AZ31B Magnesium Alloy
- Cast slab raw material
- Fully machined to customer drawings
- Fully machined and coated to customer specifications

Key Applications

- Gamma Ray Density Logging
- Nuclear Logging Tools
- Borehole Measurement & Calibration Systems

Performance Advantages

- Proven long-term dimensional stability
- High consistency for calibration accuracy
- Suitable for harsh downhole environments
- Supplied with full material traceability