

120-PSI BlastSeal Retrofit of Existing 20-psi MICON 550 Seal
MSHA SEAL APPROVAL NUMBER 120-75.336.1.07.08.0

120-PSI BlastSeal Retrofit of Existing 20-psi MICON 550 Seal (for entries up to 8.5-foot high and 23-foot wide)

This seal design provides a method to retrofit existing MICON 550 seals¹ to withstand a 120-psi overpressure from a mine explosion. The retrofit involves the use of shotcrete, steel reinforcement and BlastSeal (carbon-fiber mats). The reinforcing bars are drilled and grouted into the roof and floor. This retrofit is for entry openings up to 8.5-foot high and up to 23-foot wide (note that seal approval number 120.75.336.1.07.07.0 is a similar retrofit design that applies for entries up to 7 feet in height).

The retrofit design is detailed in a report entitled "BlastSeal Retrofit of Existing 20 psi Micon 550 Seals," dated July 25, 2007, prepared by Crosby Group, Structural Engineering and Design. The design is certified by a registered professional engineer as being in accordance with accepted engineering practices. MSHA Seal Approval Number 120-75.336.1.07.08.0 was issued on July 25, 2007.

For detailed information on this retrofit design, contact:

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¹ A MICON 550 seal consists of a polyurethane foam and gravel core placed between two masonry block walls. The MICON 550 seal passed 20-psi alternative seal explosion testing at NIOSH's Lake Lynn Experimental Mine.