

# **3M Co. launches new Combat II Ballistic Helmet**

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3M Co. has introduced a new combat helmet designed to help soldiers survive an expanded number of ballistic threats during combat.

It's part of an effort to produce the next level of safety products for soldiers.

With enhanced ceramics and special engineering, the new Combat II Ballistic Helmet L110 can help protect service members from bomb fragmentations, blunt impacts, certain rifle projectiles, handgun bullets and "small arms projectiles" such as the M80 NATO ball projectile, officials said.

The upgrades - introduced last week at the Association of the United States Army Exposition in Washington, D.C. - offer the highest ballistic protection offerings to date from 3M, the Twin Cities-area company that has supplied the U.S. Army, Navy and Marine Corps with more than 114,000 helmets in recent years.

3M gained the technology to make its enhanced and ballistic helmets in 2012, when it paid \$860 million for the California-based ceramics and auto components master Ceradyne Inc.

Since the acquisition, 3M has worked on improving the strength of its lightweight protective offerings. Market research analysts who follow defense suppliers, such as Technavio, say 3M is now considered one of the top five manufacturers of bullet-resistant and ballistic helmets in the

world.

Competitors in the growing \$3 billion bullet-resistant helmet market include BAE Systems, MKU, Elmon and ArmorSource, Technavio said.

The market is expected to grow to \$4 billion by 2020, analysts said. And 3M expects its sales to increase right along with the industry because of a growing need.

"Many of our global military and law enforcement customers are encountering increasingly dangerous ballistic threats during military combat operations, counterterrorism police missions and civil unrest, such as rifle fire and explosive devices," said Cheryl Ingstad, business manager for 3M Defense's Advanced Ceramics Platform. "We are committed to expanding our defense technologies and designs to meet their needs, and the Combat II Ballistic Helmet L110 is part of that commitment."

3M's helmets are made using lightweight polyethylene composites and seamless molding technology to form a durable shell that is available in various sizes and capable of supporting communication accessories.

The product is expected to be of interest to the U.S. military, its allies and various police forces. It is the latest offering from 3M, which also provides the U.S. Armed Forces with hearing and eye protection, body armor and harnesses.

The helmet products belong to 3M's largest business division: 3M Industrial, which reported \$10.3 billion in 2016 revenue. That business, plus 3M's \$5.7 billion Safety & Graphics Business, have both grown in recent years with the help of acquisitions and growing demand for automotive and aerospace products, industrial adhesives and industrial advanced materials.

3M's advanced materials offerings, which include bullet-resistant helmets, increased significantly in 2012 with the purchase of Ceradyne. 3M separately grew its Safety & Graphics business with its \$2.5 billion purchase of Capital Safety in 2015 and with this month's \$2 billion purchase of Scott Safety from Johnson Controls.

In past interviews, 3M CEO Inge Thulin said that protective gear, worker safety equipment and health-related products all offer significant growth opportunities for 3M.

Regarding its bullet-resistant helmets, Ingstad noted that the new 3M product should be particularly appealing to customers because the protective head gear increases protection without increasing weight or sacrificing a soldier's mobility.

It took a team of 3M designers, engineers and materials experts months to deliver the latest improvements.

With added engineering, 3M officials said its Ceradyne unit can now manufacture the helmets in large quantities, at high quality and while under tight timelines.

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