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ARE YOU PROTECTED?

protecting your people

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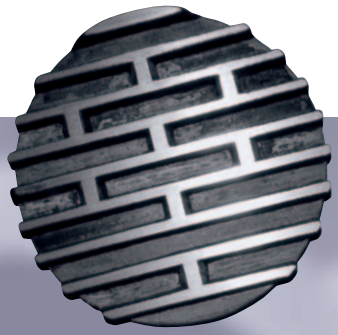


EXOTE-ARMOUR PROTECTING YOUR PEOPLE.

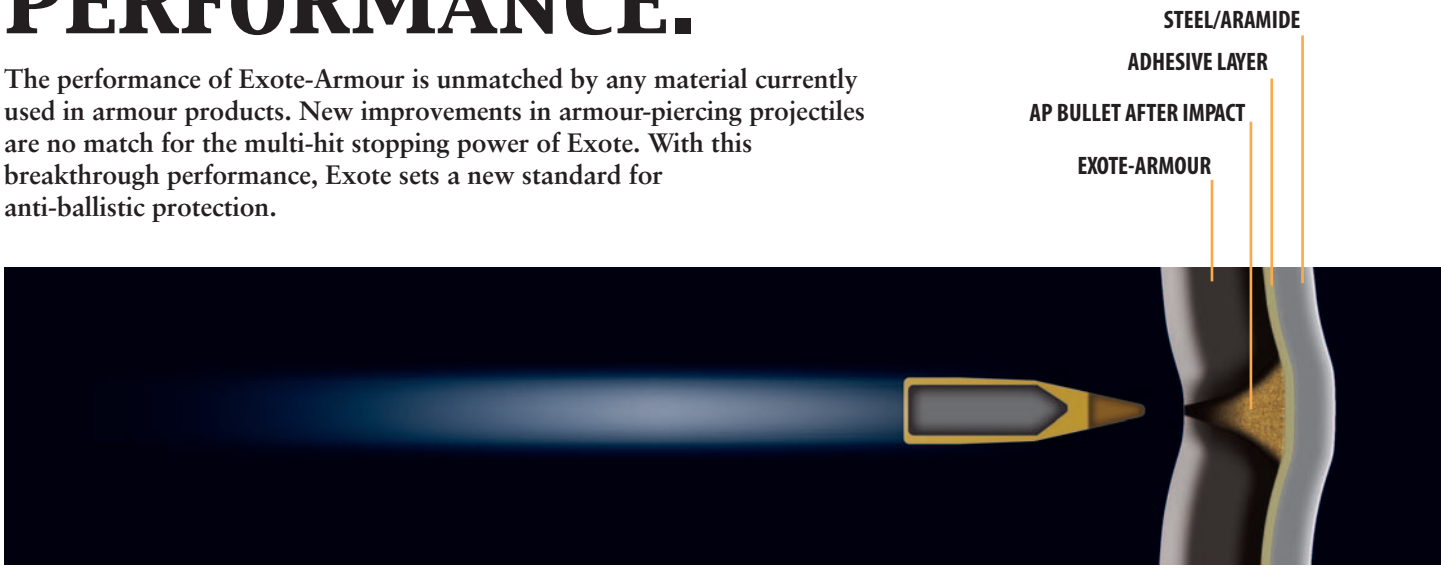
EXOTE™ – THE ULTIMATE ARMOURING SOLUTION

Exote-Armour is a completely new ballistic armour material, with features far superior to those of conventional armour. Its unique properties include extremely high strength, hardness, toughness, and durability. Exote is the only lightweight armour material with an enhanced capability to stop multiple impacts from the latest generation of armour-piercing (AP) bullets. Exote's application areas range from portable protective equipment to armouring on vehicles as well as protecting stationary targets of strategic importance.

Using a unique manufacturing process, Exote-Armour materials can be produced at a low cost in high volumes and in virtually any shape and thickness.

SUPERIOR PERFORMANCE.

The performance of Exote-Armour is unmatched by any material currently used in armour products. New improvements in armour-piercing projectiles are no match for the multi-hit stopping power of Exote. With this breakthrough performance, Exote sets a new standard for anti-ballistic protection.



Exote-Armour breaks the penetrating AP bullet to dust and eliminates the hit. The impact is divided and distributed over a larger cone-shaped area that effectively absorbs the energy of the bullet.

PRODUCT BENEFITS

Exote's benefits for armour applications include a combination of reduced weight, reasonable cost, and effectiveness at stopping bullets, including armour-piercing rounds. Armour-piercing rounds (often composed of tungsten carbide) are extremely hard and dense. They can penetrate soft (metal) material, and some harder conventional ceramic armour. The extreme hardness of Exote has proven effective for stopping bullets, including armour-piercing rounds. In terms of effectiveness, the properties of Exote significantly limit the fracture area of the material when impacted by a bullet. The material properties of Exote allow for a thinner layer of steel or fiber lining material than conventional ceramic armour. Lighter armour increases the mobility of personnel and vehicles.

Thus, the complete Exote-Armour system is lighter and yet provides superior protection.

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THE ULTIMATE COMBINATION OF HARDNESS, TOUGHNESS, LIGHTNESS AND VERSATILITY.

Due to its unique microstructure, the multi-hit capacity of **Exote materials is superior in comparison to normal ballistic ceramics (Aluminium oxide, Silicon carbide or Boron carbide).**

Several proprietary processes in the manufacture of Exote are critical for the synthesis of the material. The formulation and processes for manufacturing Exote are the result of over eight years of focused research and development to optimize specific armour-related properties. This process is in no way discernible by examining the post-production material.

THE COMPETITIVE ADVANTAGE

Materials used for armouring today typically consist of metal, synthetic fibers, ceramics, or combinations of these. Metallic armour is hard and can be produced at a reasonable cost, but its weight imposes significant constraints upon the applications and extent in which it can be utilized. Synthetic fibers, such as Kevlar™ and Spectra™, are lightweight but relatively soft materials. High-performance materials, such as ceramics, are lightweight and hard but also brittle, exhibiting thus poor multi-hit capabilities. In addition, the production of ceramics-based armour entails a complex manufacturing process, and consequently long lead times and low production volumes.

Exote-Armour, a material combination of ceramics and metals, combines the best properties of metals and ceramics. Exote is tough, lightweight and as hard as ceramics, and it possesses enhanced multi-hit capabilities. The production of Exote materials involves a process of low complexity, resulting in shorter lead times, larger volumes, cost-efficiency, and greater product versatility.

1 2 3

1 Hardness & Toughness

Exote-Armour is harder than any modern AP ammunition's penetrating tungsten carbide core and the armour breaks the bullet into dust. Exote-Armour spreads the energy of the hit and distributes it over a larger area thus fully neutralizing the impact.

Exote-Armour's damage area is only 20–30% larger than the caliber of the hit, significantly smaller than that of ballistic Aluminium oxide or Boron carbide.

A 100x100x9 mm Exote-Armour plate on 4 mm steel (400 HB) can stop 4–5 Carl Gustaf WC AP(M993) bullets at a 10 m distance (NATO 0° angle) – performance that no other ballistic material is capable of. Exote-Armour is by this nature the superior multi-hit armour material.

2 Lightness & Versatility

With a density of only 5.45 g/cm^3, Exote-Armour is the only lightweight armour material in its performance category. Exote materials can also be produced in complex shapes and forms to be used for a variety of applications.

3 High-volume, Low-cost Production

Due to the unique Exote manufacturing process, lead times for producing Exote materials are short and production volumes large.

The material properties of Exote are the result of a unique, easily scalable, proprietary process that has been developed by Exote Ltd. and the Technical Research Center of Finland.

Exote Ltd. maintains the exact details of its manufacturing process as a trade secret.

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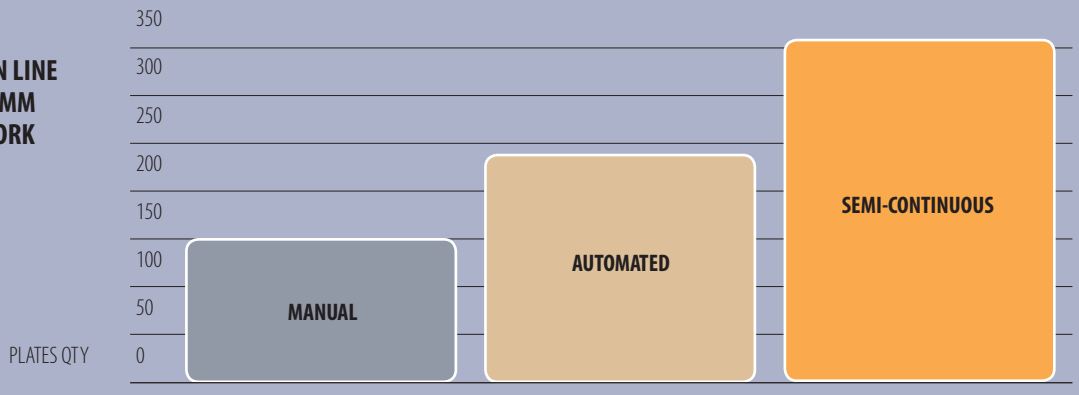
OUTSTANDING PRODUCTION SPEED AT LOW COST.

The unique Exote manufacturing process enables extremely high production rates, in comparison to all other ceramic armour materials. Using only a handful of high-volume manufacturing plants, Exote will be able to satisfy a large portion of the global demand for lightweight AP-resistant armouring materials.

The expenses of Exote production lines are exceptionally low. Manufacturing can be situated in virtually any standard-equipped industrial facility. No vacuum chambers or high-tech manufacturing machinery is required. Exote materials can be produced in any geographical region where appropriate raw materials are available. The actual production method of Exote material is a trade secret.

Exote plates and components can be manufactured in all sizes from 50mm x 50mm through 500mm x 500mm and in thicknesses ranging from 6–30mm. Annual production output (per m^2) may be boosted by increasing plate dimensions, the number of work shifts per day, the amount of workdays per year, and the number of production lines per factory.

DAILY MANUFACTURING CAPACITY PER PRODUCTION LINE FOR 250MM x 250MM x 30MM PLATES — ONE 6-HOUR WORK SHIFT



Close-up of 7.0 mm thick Exote Armour plate after stopping two 7.62x51 Carl Gustaf AP(M993) rounds with WC cores. Distance between impacts only 25 mm (center to center).

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Sales & Marketing:

p r o t e c t i n g y o u r p e o p l e

Exote Oy

Address:
Borgbyntie 5
10440 BOLLSTA, FINLAND

Tel.+358-400-860 198
website: www.exote-armour.com
e-mail: info@exote-armour.com