

The Survivability Experts



AMAP™ - R

The ultralight Roof Protection Concept

AMAP™ – the High-Technology Protection System

AMAP is a synergistic modular High-Technology protection system. Developed and continuously improved by IBD (Ingenieurbüro Deisenroth / Germany), it is designed as a protection for all kinds of platforms: light vehicles up to heavy main battle tanks, vessels and aircrafts. The central goal of our AMAP-philosophy is the highest possible effectiveness. In order to achieve this we focus on high performance and flexible next-generation technologies in vehicle protection research and development.

Based on our experience in delivering 30,000 protection kits we know what actual challenges man and material are facing all over the world. Through AMAP we provide accurate, scalable and modular protection concepts for a wide range of vehicles, mission areas and threat scenarios. We always focus on one prime goal: to protect human lives in military operations and missions.

System Advantages:

- Highest level of protection due to application of advanced technologies (e.g. nano-technologies, composite materials)
- Synergistic modular design – flexible protection concepts for almost every threat scenario
- Individually adaptable to each vehicle
- Considerable reduction in areal density due to combination of passive and active protection systems
- Easy integration of new solutions into vehicle concepts due to the modular approach

User Benefits:

- Highest survivability for soldiers due to substantially reduced threat and risk potential
- AMAP significantly improves the protection of all kinds of platforms (land vehicles, vessels, aircrafts)
- High tactical mobility and payload due to the low weight of the AMAP system
- Substantially reduced damage related costs due to easy maintainability
- Top-of-the-line concepts due to continuous feedback from missions in operational areas

Threat Potential

Attacks by Bomblets, EFPs and Dive-Attack Weapons

The threat potential for the roof area of a vehicle mainly consists of fragments, bomblets, Explosively Formed Projectiles (EFPs) and dive-attack weapons. With AMAP-R IBD has developed a protection concept against bomblets, EFPs and fragments. In combination with AMAP-ADS the vehicle can be given a hemispherical protection to meet even further demands such as dive-attack weapons.



Bomblets

AMAP™-R – Intelligent Roof Protection

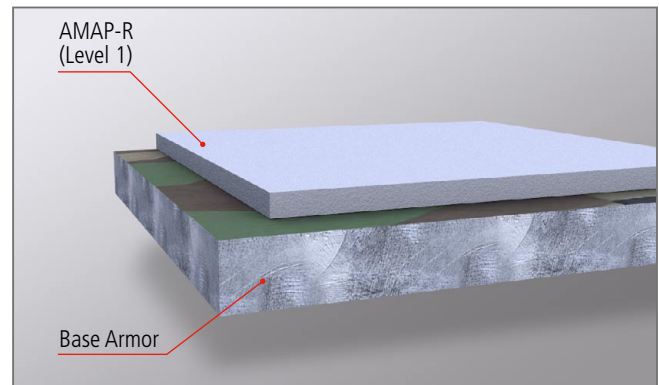
Conventional roof-protection against EFP threats has a major disadvantage: with an areal density of up to 450 kg/m² it is very heavy. This obviously reduces mobility, restricts mission capability and can only be used on heavy vehicles.

AMAP-R is a high-tech system which is based on the broad IBD technology and material know-how. Due to advanced materials and an intelligent structural design of bonded layers, extremely low areal densities were obtained. This solution allows even light and medium-weight vehicles to be equipped with a highly efficient roof protection.

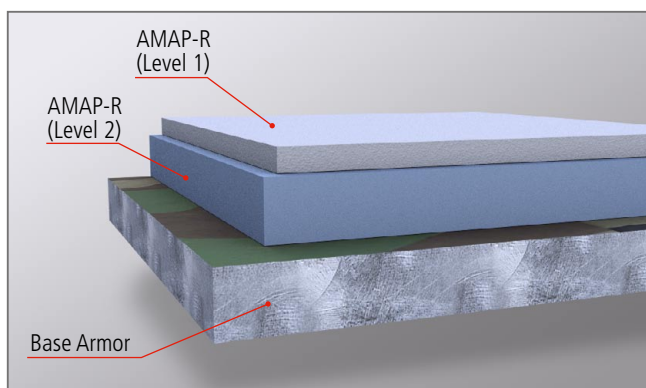
Like the complete AMAP-family, AMAP-R has been designed as a synergistic modular concept and can be adapted to different vehicles and threat scenarios.

The Ultralight Concept

IBD has succeeded in developing an ultralight bomblet roof protection system with an areal density of only 25 kg/m² (level 1). This opens up new tactical and operative opportunities as even light vehicles can now be protected against bomblet threats.



AMAP-R ultralight



AMAP-R ultralight plus EFP Protection

The EFP Concept

In order to protect vehicles reliably against bomblets and EFPs, the ultralight layer of AMAP-R is completed by a high-performance EFP-layer (level 2). This double-functional sandwich construction has an areal density of approx. 120 kg/m². In comparison to conventional protection solutions, this is an extremely low value and allows for a wide range of applications.

The Ultralight “Hard-Kill” Protection – AMAP-ADS

In order to provide reliable protection against dive-attack threats, AMAP-ADS is the recommended solution. Due to the enormously high penetration capability of such weapon systems, the required areal density of the armour would be excessive. AMAP-ADS provides efficient protection even against dive-attack threats – at weights of only 145 - 500 kg depending on vehicle type.



Sensors and Countermeasures of AMAP-ADS

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