Military Textiles & Camouflage Technologies\*



# "Protect our protectors"



## **PROTECT OUR PROTECTORS**

Flame Resistant Materials
Extreme Cold & Wet Weather Fabrics
Next generation clothing Systems
DURAFIL® fabric and other nylon products for Tactical Vest & backbags
Ballistic and protective fabrics

#### **Textile Innovation through Technology**

Tepar Military is a proud supplier of mil-spec fabrics for our armed forces who so bravely serve. Today's military products are produced from such fibers as nylon / cotton, Cordura, Durafil, texturized nylon and Polyester, Twaron<sup>™</sup>, Nomex<sup>™</sup>, and Kevlar<sup>™</sup>. The many end uses for the products we produce include insoles for boots, protective cases, and shells for tactical vests, combat clothing, uniforms and camouflage fabrics.

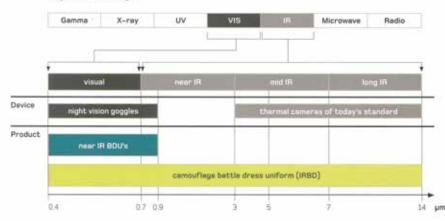
We create these products with many protective finishes such as oil and water repellency, acid printing, temperate printing, fire retardant and PU coatings, to name a few. At Tepar, we are very accustomed to building products to custom specifications for use in demanding and complex end-use applications.

Tepar Military is dedicated to innovation and technology and would like to work with you, to provide the best ballistic Protective and military fabrics possible for your application.,



#### NEW GENERATION BATTLE DRESS

- Reduction of thermal signature by special construction and innovative coating
- Reduction of apparent surface temperature up to 10°C compared with standard battle dress
- Lightweight uniform indistinguishable from standard battle dress
- Soft feel and touch similar to cotton fabric
- Antibacterial, moisture absorbing, flame resistant lining material may be choosen according to climatic condiditons



Thermal imagers (camera, viewers) have become cheaper, widely available and down sized to be fitted on personal weapons. Therefore camouflage for soldiers must include thermal infrared imagers as well as visual and near infrared imagers.

TEPAR has developed a lightweight suit with special construction and innovative coating that dramatically reduced the soldiers' thermal signature but indistinguishable from stand

#### Signature range



## TWO-DIMENSIONAL MULTISPECTRAL CAMOUFLAGE NET - MSCN

innovative multilayer coated fabric

- patented coating reduces the signature in multispectral range
- extremely lightweight, very low packing volume
- reversible to be used in two distinctly different geographical regions
- shielding efficiency more than 75%
- temperature increase less than 2°C (low solar loading) no distinctive signature

The multispectral camouflage nets are based on technical textiles fabrics. Patented coating results in a reduction in signature in multispectral ranges (radar and thermal infrared regions). The camouflage net may be printed according to the application requirements to provide visual camouflage effect.

The camouflage net has a total weight of 170 g/m<sup>2</sup> making it the lightest and the most advanced camouflage net available in the market. This lightweight camouflage net is designed particularly for soldiers' personnel protection. It can also be used for the protection of objects at a short notice.

As the front and back sides of the camouflage net may be printed in different color as well as different designs, the same camouflage net may be used in different climatic conditions, different geographic regions as well as different times of the year.



## THREE-DIMENSIONAL MULTISPECTRAI CAMOUFLAGE NET - MSCN

multilayer coated technical textile fabric, shielding efficiency up to 87% temperature increase less than 2<sup>0</sup>C (low solar loading) reduced detection range no distinctive signature

The fabric is cut according to the customer specifications and attached onto a non-snagging carrier net. Camouflage efficiency is based on combined characteristics of the fabric and cutting pattern.

Visual camouflage effectiveness is achieved by the three-dimensional appearance created through choice of color and pattern. As the front and back sides of the camouflage net may be printed in different color as well as different designs, the same camouflage net may be used in different climatic conditions, different geographic regions as well as different times of the year.

Camouflage effectiveness against thermal infrared is achieved through diffuse reflection. Together with the three-dimensional cutting pattern, the diffuse reflection characteristics of the thermal infrared disrupt the infrared signature of the camouflaged objects.

Camouflage function in the radar range (2-10 GHz) is based on the diffuse reflection of the incoming waves on the metallic sub-layer of the camouflage net.



## MULTISPECTRAL MOBILE CAMOUFLAGE COVER - MMCC

- reliable mobile camouflage solution for high value objects
- reduction of radar waves 10-20 dB
- reduction of thermal signature by heat convection
- flexible and environmentally durable
- specifically adaptable to any moving object

#### **KEEP THEM MOVING**

In addition to static multispectral camouflage nets, TEPAR has an innovative camouflage solution for high value mobile objects. Including thermal infrared and wide band radar range (2-100 GHz), camouflage effectiveness in all relevant ranges is inevitably required. Application of a thermal camouflage cover reduces the required power of air conditioning by a factor of 4 to 10 for desert environment (NATO Classification All).

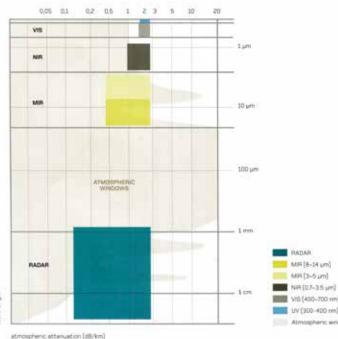
Using a radar absorbing material as insulating material, a mobile tank can be effectively protected against intelligent ammunition equipped with mmW-seeker head. Since special attention has been paid to the usage and durability, the camouflage does not hinder the easy manoeuvrability, effective use of weapons and easy access to accessories, handles, etc.



#### SIGNATURE

In the four spectral ranges (VIS, NIR, MIR and Radar), the characteristic signature consists of different measured variables:

- in the visual range (VIS), the shape and the color of the object,
- in the near infrared range (NIR), the spectral reflectivity and the shape,
- in the thermal infrared range (MIR), the arrangement of warm or hot parts of the object,
- in the radar range, the characteristic spatial or angular distribution of the reflected radar signal.



Efficient camouflage means blurring the characteristic contours of an object so that it cannot be distinguished from its surroundings. This prime camouflage principle is successfully implemented by the TEPAR camouflage solutions in all relevant spectral ranges (VIS, NIR, MIR and Radar).

Generally, the characteristic signature of an object may be defined as a set of data that enables the recognition and/or identification of that object. For example, it should be possible to distinguish an ordinary vehicle from an armoured car by using its signature. The signature should also present information with regard to the type of a vehicle or an armoured car.

Our highest goal is the protection of human life. Our camouflage solutions are designed to protect against all modern types of surveilliance operating in all relevant spectral ranges. All solutions are specifically produced according to the customer requirements and adopted to local backgrounds.

TEPAR Camouflage Solutions is an innovative company in the heart of İstanbul serving the globe. Tepar design, develop and manufacture all static and mobile camouflage solutions

#### Tepar Tekstil Sanayi ve Ticaret A.Ş.

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