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CAMOUFLAGE SPECIALISTS:

EXPERIENCE AND INNOVATION COUNT

BCB International Ltd are a long-established British manufacturer and supplier of military survival and protective equipment.

Our range of face paint and camouflage systems have been standard issue to generations of British and NATO forces to help them stay concealed from the enemy in all environments.

The company supplies a range of Multi-Spectral Camouflage (MSC) systems and signature management suits which are the result of extensive research and development work with the latest fabrics, materials, and coatings, as well as multiple field trials.

Adversaries use a variety of sensors to detect and target your troops, their equipment and installations.

BCB International have been supplying camouflage paint, nets and systems to the UK MoD and international market for over 35 years.

We will design, adapt, make and deliver the best quality camouflage aids and systems on time, to spec. and fit for purpose.





THE ART OF CAMOUFLAGE

REDUCING SHAPE - SHINE - SHADOW - SILHOUETTE

One of the imperatives of current military doctrine is to conserve friendly strength for decisive action.

Camouflage and concealment helps prevent an enemy from detecting or identifying friendly troops, equipment, activities, or installations, it degrades the effectiveness of enemy reconnaissance, surveillance, and target-acquisition capabilities.

Skilled observers and sophisticated sensors can be defeated by obscuring tell-tale signatures of units on the battlefield. Preventing detection impairs enemy efforts to assess friendly operational patterns, functions, and capabilities.

US Army ATTP 3-34.39 (FM 20-3) / MCRP 3-17.6A - Camouflage, Concealment and Decoys.





"Camouflage and concealment helps prevent an enemy from detecting or identifying friendly troops, equipment, activities, or installations.

It degrades the effectiveness of enemy reconnaissance, surveillance, and targetacquisition capabilities."





THE SCIENCE OF CONCEALMENT

At BCB, we understand the pace of technological change. Innovation is in our DNA and we carefully monitor the emerging threat of technology.

With the rapid advances in remote-piloted air vehicles and sensor technology, and their increasing affordability, our adversaries can observe covertly.

As critical platforms become more sophisticated and potent, the requirement to protect them from an ever more capable and lethal enemy increases.

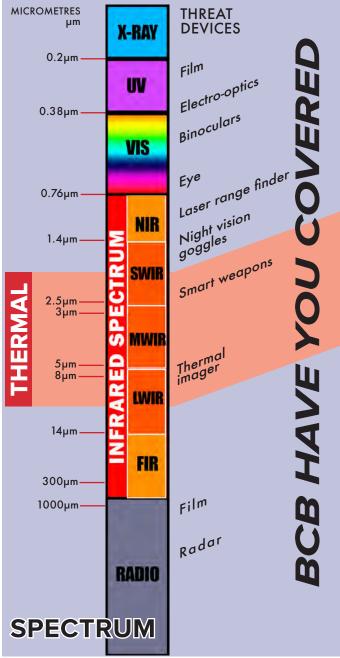
BCB's camouflage and concealment systems provide a smart, cost-effective solution to protect your most valuable assets; your people, platforms, camps and vehicles.



Gain the tactical advantage

"Thermal processes (conduction, convection, radiation) at the scene, target and propagation media have a very important role in the target thermal IR signature formation.

Knowledge about, and control of, thermal processes (thermal management), could have a key influence in the EO/IR countermeasures and camouflage methods."





CAMOUFLAGE INNOVATORS

Our MS systems will conceal people and assets across the infrared spectrum.

Driven by the development of modern detection equipment and technology by adversaries, BCB are constantly evolving our products to offer a range of systems, designed to meet specific needs - because no single product will solve every requirement in the field.

Each system has characteristics of value to its purpose and this guide aims to present a tailored, valuable solution to your camouflage needs.

CORE FABRICS:

Mk 7

Mk 7 3-D nets are in service with armed forces around the world. Manufactured in the UK, they are light, robust, cost-effective and easily deployed to provide excellent Visual and NIR concealment.

Our MSC systems are effective in the Visual, Thermal, Infrared and local Radio spectrum.

Mk8 PHANTOM

Our Mk8 MS systems were developed over several years in conjunction with a local university, specialist material manufacturer and the MoD to give a wider range of protection across the spectrum.

Mk 8 also gives excellent emissivity reduction (ER).

Both Mk 7 in-service nets, and Mk 8 nets, are fully compatible with each other, in terms of their physical, operational and training functions.

Natural 3D

Our latest innovation, Natural 3D MSC is an innovative fabric providing excellent multispectral concealment. It has a 3D creased surface, printed in an irregular pattern that blends with natural environments.

As well as providing excellent in-to-out visibility, it is lightweight and non-snag for even greater versatilty in the field.





ABOUT MULTI-SPECTRAL

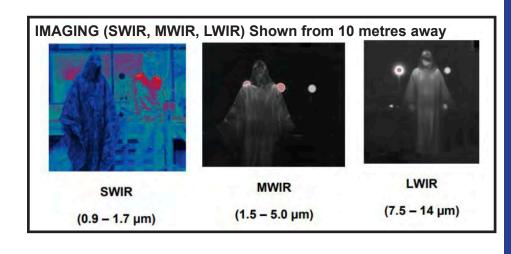
Our multi-spectral camouflage(MSC) systems can change battlefield dynamics by blocking or degrading the effectiveness of the enemy's activities.

Our multi-spectral systems and concealment suits protect both equipment and the wearer in the visual, infrared and thermal spectrums.

TESTED PROPERTIES of our Multi-spectral Camouflage (MSC)

- Anti-Radar Properties
 Radar Cross Section
- Anti-Thermal Properties
- Thermal Radiation
- Solar Radiation
- Low Weight
- High Temperature Resistance (+79°C ±2°C)
- Low Temperature Resistance (-45°C)
- · Bursting Strength High tear resistance
- Low Flammability
- Resistance to Petroleum Oils
- Low Water Absorbency
- Decontamination Efficiency

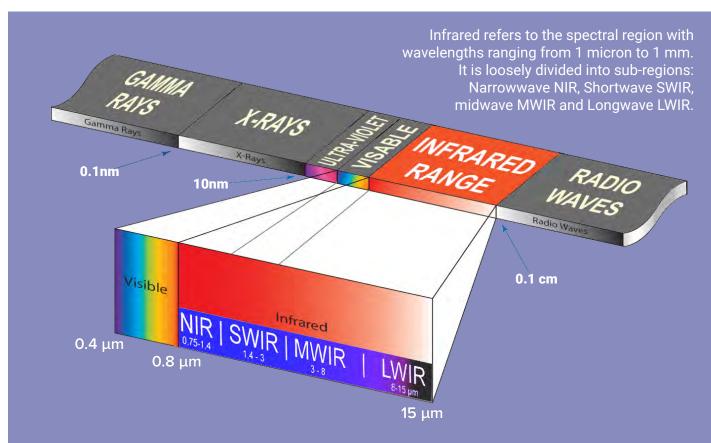
- · Colour Fastness to Washing
- · Colour Fastness to Wet Rubbing
- · Colour Fastness to Dry Rubbing
- Colour Fastness to Artificial Light
- Specular Brightness
- Salt Fog Resistance
- · Humidity Resistance
- · Allergic and Carcinogenic Dyestuff Feature
- · Antibacterial Feature
- Electrostatic Properties
- Low Emissivity
- Reversible



"In making tactical dispositions, the highest pitch you can attain is to conceal them; conceal your dispositions, and you will be safe from the prying of the subtlest spies, from the machinations of the wisest brains"



MULTI-SPECTRAL CAMOUFLAGE (MSC)



Temperature measurements conducted with thermal cameras rely on the electromagnetic radiation, or energy, continuously emitted by bodies, thanks to their thermal content, and surface temperature: to sense the infrared radiation emitted.

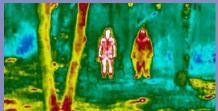
Humans 'glow' in the mid infrared and are most prominant at about 10 microns wavelength.

The energy flow also depends on the surface emissivity and the wavelength range of the radiations emitted.

This is why our camouflage fabrics have low emissivity, as well as anti-thermal properties .

Infrared spectrophotometry is the analysis of infrared light interacting with a molecule, measuring absorption, emission, or reflection.







MULTI-SPECTRAL CAMOUFLAGE (MSC) SOLUTIONS FOR THE MULTI-DOMAIN FORCE







As no one camouflage will cover every domain and platform, our full range of passive, absorbing visual multi-spectral materials, can be adapted for you.

Our MSC materials can be used separately or combined, depending on your needs and environment.



VISUAL Camouflage (VIS): 380nm-760nm

NEAR INFRA RED (NIR) : 760nm - 1200nm

THERMAL Protection (TIR): 3-5µm and 8-12µm

RADAR Protection : 2-100 GHz

SOLUTION		FEATURE/ BEST FOR	Works in SPECTRAL RANGE
NATURAL 3D		Lightweight	NIR
	4. 《全人的系统》	3D Visual (VIS)	SWIR
		Non-snag	MWIR
	医关系 美国	Non Glossy	LWIR
MK8 PHANTOM			NIR
		Visual (VIS)	SWIR
		3D Emissivity Reduction (ER)	MWIR
			LWIR
2D	A CONTRACTOR OF THE PARTY OF TH	Reversable	NIR
	The way the	Platform & Vehicles	SWIR
	The state of the s	Non-snag	MWIR
	CAN THE STATE OF T	Strong	LWIR



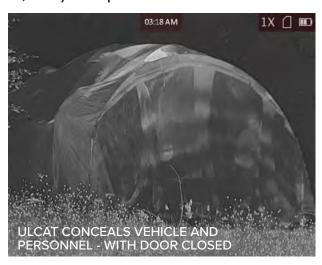
WE HAVE GOT YOU COVERED

Camouflage



In addition to the above, we also have other specialist materials (e.g., Rocky, for vehicle engine covers, etc) for specialist use.





WHITE HOT IR



FROM DESERT TO SNOW. WE WILL CONCEAL YOU.



WOODLAND

ARCTIC



DESERT

MULTI-TERRAIN





MULTI-SPECTRAL (MSC) 2-D SYSTEM

Provides: VIS-SWIR-MWIR-LWIR Protection



Our NATO Issue, Infrared-reflective camouflage system remains pliable, even in extreme temperature ranges.

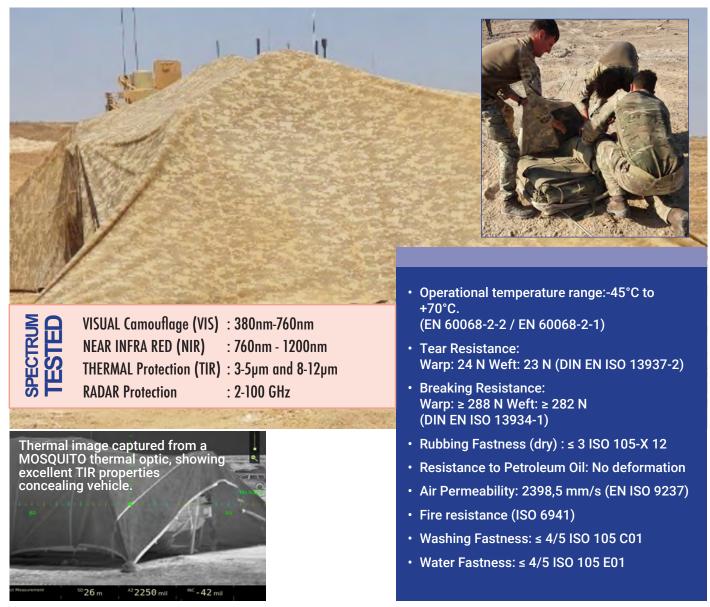
MSC 2-D is lightweight, non snag and quiet.

Available in a range of sizes, these systems are proven in the Field and are highly efficient in keeping valuable assets concealed.

Once erected, the meshed design of the net allows the crew to see through the net and thus retain situational awareness.

Furthermore the crew are able to operate the vehicle weapon system freely.

The BCB MSC system can be ordered in the sizes and colours to suit your specific needs.



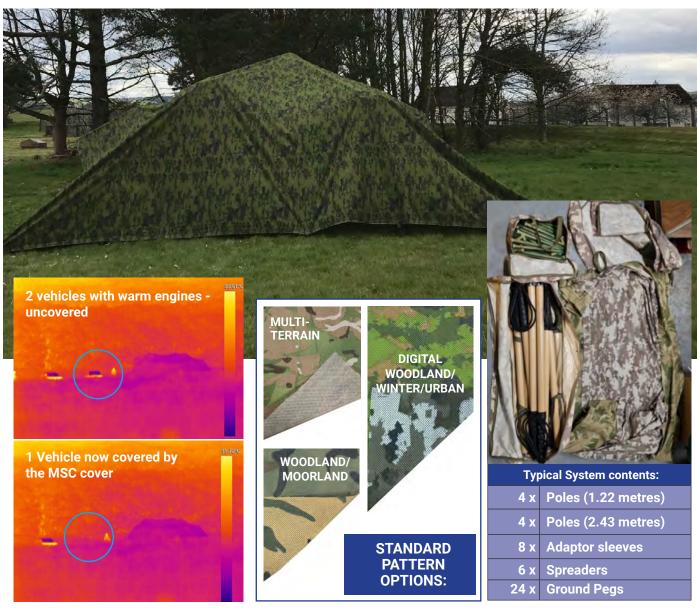


MSC 2D

MSC will conceal a range of assets/platforms: tanks, armoured vehicles, weapon systems, mobile command centers; from detection and surveillance sensors

- · Disruptive/digital pattern blends with natural background
- · Excellent visibility from inside-to-out, look-out panels possible
- · Improved crew-shading
- Reduced snagging
- · Low storage and easy deployment
- · Edges finished in 'Dutch lacing' allowing easy panel connection/deconnection
- · Double-sided, reversible camouflage pattern to suit two differing environments
- · Trialled extensively by British Army units and procurred for recent operations







ULCAT: ULTRA LIGHTWEIGHT CAMO TUNNEL

Provides: VIS-SWIR-MWIR-LWIR Protection

For rapid vehicle concealment and deployment

The vehicle tunnel is made from specialised 3D material which is lightweight and snag free. It conceals in the Visual, Infrared and Thermal spectrums.

The standard tunnel length, when closed is 13.5 metres. Allows rapid vehicle concealment and exit, with great visibility from inside-to-out. Fitted with opening ends which tie back for easy entry and exit. The ULCAT can easily accommodate an armoured vehicle with space for a







THERMAL TESTING RESULTS

- with vehicle and personnel inside



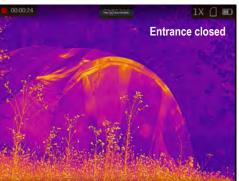


Spectrophotometer 800-1200nm
• Light Green: 13%- 16%
• Dark Green: 11% -14%

• Brown: 8%- 11%

• Black: 5%- 8%



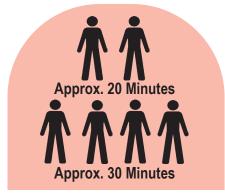


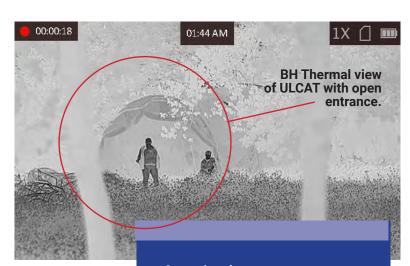
ULCAT concealing Vehicle and personnel when viewed through Fusion IR scope.



ULCAT

TIME / PERSONNEL TO ERECT TUNNEL?





ULCAT System pack contents:

	1 x	Crinkle netting	
	46 x	1.2m Poles	
	12 x	Ground Stakes	
	8 x	4.5m Telescopic Spreaders	
	25 x	Ground Spikes	
	1 x	Repair Kit	

Set up time:

Approx 20-30 minutes (crew of 2-4 people)

Dimensions of ULCAT (deployed)

13.4metres (Length) inc. door canopies x 4metres (Width) x 3.5metres (Height)

Weight of camouflage Net:

Complete system weight (inc. spreader poles, pegs, stakes etc):

Approx. 140kg

- Operational temperature: Range - 45°C to +70°C.
- (EN 60068-2-2 / EN 60068-2-1)
- Fire resistance (ISO 6941)
- Wash Fastness: ≤ 4/5 ISO 105 C01
- Water Fastness: ≤ 4/5 ISO 105 E01
- Rubbing Fastness: ≤ 3 ISO 105-X 12
- Air Permeability (EN ISO 9237)

Resistance to:

- Oil
- Tearing (DIN EN ISO 13937-2)
- Breaking (DIN EN ISO 13934-1)

Erecting the ULCAT- basic stages





MK8 3D MOBILE VEHICLE CAMOUFLAGE

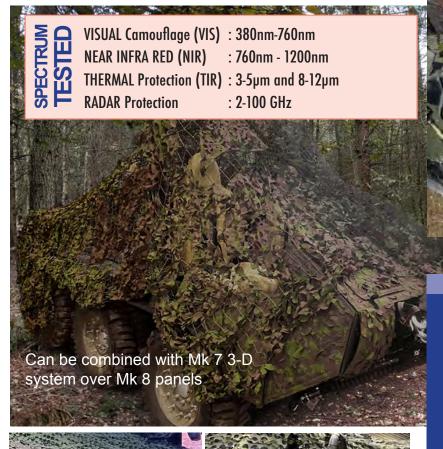
Provides: VIS NIR SWIR MWIR LWIR RAD Protection

MS Mobile Camo is tailored to specific vehicles as applique panels which attach via instant hook and loop fixings to each part of the vehicle, over engines and around exhausts, aerials, etc.

The system prevents the detection of moving assets such as armoured vehicles, tanks and weapons systems by all reconnaissance and surveillance sensors, currently known.



Custom-made panels to fit contours of vehicle



- Provides highly enhanced protection in the VIS, TIR, NIR & Radar spectrums
- Fire resistant
- Modular structure
- Solar load reduction
- · Easy installation and collection
- · Customised to each vehicle
- · Different textured finishes possible
- Available in different camo patterns to suit different environments



MSC MORTAR HIDE

Provides: VIS SWIR MWIR LWIR UV Protection

For 1-3 personnel, mortar and ammunition.

The Mortar Hide is available in bespoke sizes. It is a rapid, easily erected, double-layer protection system that is lightweight and compact for carrying.

1. Mortar Hide framework set up



2. Thermal tent cover added

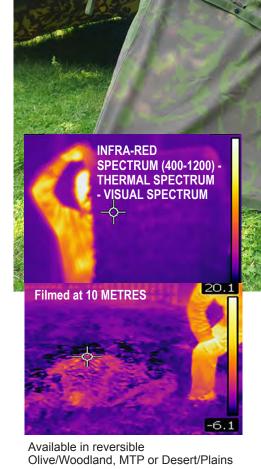


3. Thermal outer netting added



4. In the field with vegetation added





WEIGHTS:

• 3 x 3m

- 3 x 3metre IR and Thermal mortar tent cover - 2kg
- 5 x 5metre IR and thermal outer net - 4.5kg
- Tent poles 4kg
- Ground stakes 4kg



DECEPTION DECOYS AND DUMMY TARGETS

Provides: VIS TIR RAD Protection

DECOYS - A proven training and tactical deception tool to gain the tactical advantage.

- · They mimic the platform you want to protect
- They provide a similar, relevant signature to the real platform
- · Low signature, multi-spectral appearance
- Inflatable Military replica structures.
- · Designed and produced in highly realistic form.
- · Full-scale, accurate, replicas.







- Operated by 2 soldiers and easily installed
- · Foldable into a small trailer for transport
- Remains inflated for a day before replenishing
- Self inflating pump available to keep inflated for long periods



CNDS: COMBAT NET DEFENCE SYSTEM

Provides: VIS NIR TIR UV Protection

Ballistic protective camouflage cover against drone or loitering munitions; Direct & Indirect.

Made from special Dyneema twisted UHMPE yarn.

A lightweight practical solution for maximum protection Outer covering offers Infrared, thermal and Visual camouflage.

The net is specially constructed from a high tenacity aramid material to deflect or capture loitering munitions, Drones or air-dropped ordanance.

Includes a thermal 3D camouflage covering for visual (VIS), infrared (NIR) and thermal (TIR) concealment.

Can be manufactured to any configuration required, like fitting over a trench, a specific platform or vehicle. Can also be joined together to make larger nets.







CNDS: Combat Net Defence System

Thermal camouflage 3D cover

- Double knotted to prevent slippage Coating for durability and strength
- Weighs almost 70% less than PE twisted
- 50% diameter reduction than regular PE Twisted
- · Does NOT deteriorate when wet
- Long life
- High strength to weight ratio
- Flexible configuration
- · Flexible size

SIZE REF	Approx DIAMETER mm	RUNNAGE (M/Kg)	Breaking strength (kgf)	KNOT breaking strength (kgf)
6	1.0	2640	79	80

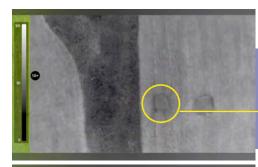
DEFENCE TEST SUMMARY by former serving officer:

"The attack profile was good - exactly the style we are using for drones

I think this actually may stop Lancet loitering munitions.

This system will saves lives and prolong equipment survivability, because, firstly it's giving cover to the guys on the ground and secondly, the CNDS is deflecting the blast, especially for shape charge munitions.

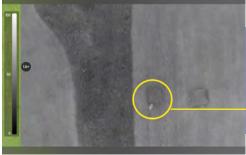
Counter the threat before it gets close."



Aerial Thermal (White Hot) view of 2 x CNDS

Level Shelter (left) Lean-to Hide (Right)

MAN & EQUIPMENT hidden under



Both shelter and Hide passed field tests for trapping Drones and small munitions

MAN revealed exiting shelter on left.



CAMBRELLA MK8 MSC

Provides: VIS NIR TIR Protection

The Cambrella MK8 MSC is an easily and rapidly deployed camouflage cover with the addition of a skirt of extra material which conceals the user from above, and 360° at ground level.

Conceals an individual on the move, and can be staked down as a sniper hide or observation post and can also conceal vehicle turrets.

Made from Mk8 material, it protects in the Visual, Infrared and Thermal spectrums.

Diameter: 1.8 metre (open)
Height: 1.08 metre
Weight: 2.19 Kilos



Thermal images (at 10 metres) of Cambrella concealing a soldier





ROCKY THERMAL COVER

Provides: VIS SWIR MWIR LWIR Protection

The Rocky is a pliable, natural-looking cover to match the style of the surrounding terrain. It remains in position and will not snag or lose shape when in use.

Malleable structure allows it to be moulded into rock-like shapes.

Double-sided to match different terrains.



2 x ROCKY IN

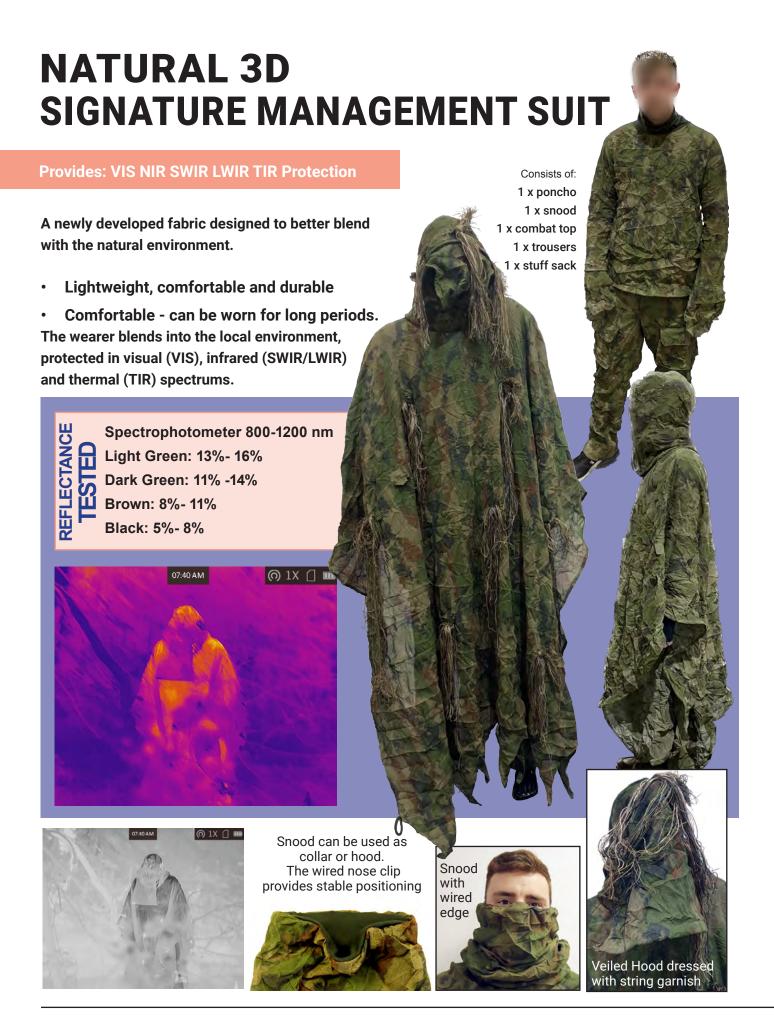


- Double-sided for 2 different terrains
- Malleable Structure allows user to mould it to rock-like angles
- Completely camouflages the human form
- Quiet
- · Observation holes can be cut
- · Size: 3 x 2metres, or as requested
- · Double sided: 2 terrains
- · Different colour/pattern options
- Lightweight, 400g/m2
- Low water absorbtion capacity
- Antibacterial











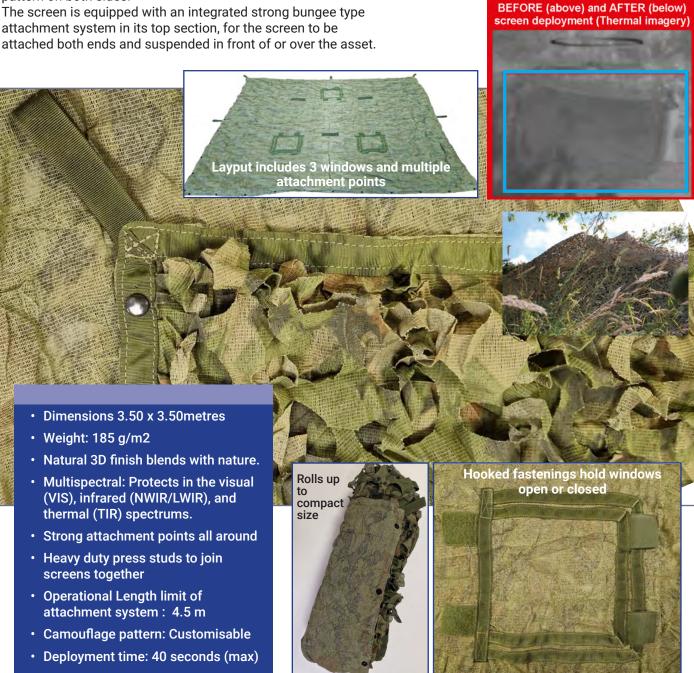
NATURAL 3D RAPID DEPLOYMENT CAMO SCREEN

Provides: VIS SWIR LWIR TIR Protection

Designed as a thermal signature management skirt to conceal the hot spots on vehicles (engine, wheels, windscreens etc.)

The Rapid Deployment Camo Screen is made from a lightweight single piece of rectangular shaped multi-spectral fabric with a camouflage pattern on both sides.

The screen is equipped with an integrated strong bungee type





CAMOUFLAGE CREAM

JUNGLE



Provides: VIS NIR SPF Protection

STICKS, COMPACTS OR TUBES

WOODLAND

NIR reflective formula

· Long lasting colours

High Sun Protection Factor

· Unaffected by rain or sweat

Easily removed with soap

Available in

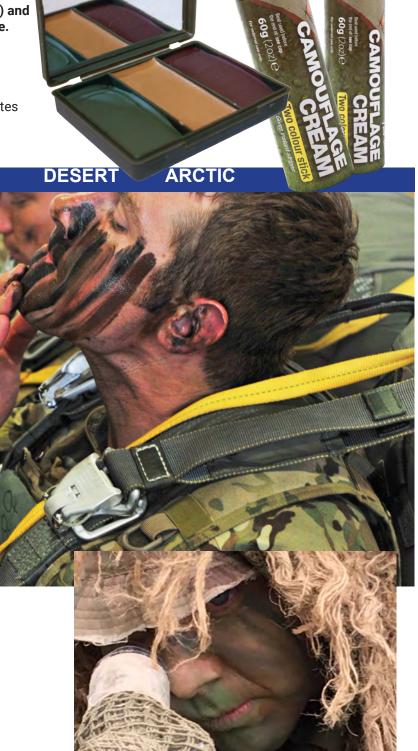
• British quality - battle-tested

· Non-toxic, safe for long term use

This more gentle and softer version of our camo cream is "non-irritant", Infrared Reflective (IRR) and is available for issue to armed forces worldwide.

Supplied in a strong ABS plastic case, Integral acrylic mirror in the lid.

Woodland, Jungle, Desert or Arctic colour pallettes available in stick or compact form.





Camouflage Conceal Deceive

"In making tactical dispositions, the highest pitch you can attain is to conceal them: conceal you dispositions, and you will be safe from the prying of the sublest spies, from the machinations of the wisest brains"

Sun Tzu, THE ART OF WAR







BCB INTERNATIONAL LTD

Phone: +44 (0)29 20 433 700 Email: info@bcbin.com Web: www.bcbin.com

Head Office:
Howell House,
Lamby Industrial Park,
Wentloog Avenue,
Cardiff, CF3 2EX
UK