



GREEN CHEM TECH

HEAD OFFICE

#1532-3, Songjeong-Dong, Gangseo-Gu, Busan, Korea

TEL. +82-51-832-1616~8 / +82-70-8805-1615, 1619

FAX. +82-51-832-1619

HOMEPAGE. www.greenfchem.com

E-MAIL. psw0762@naver.com
gfc@greenfchem.com

VIETNAM OFFICE

79, Tan Lap 1Street, Hiep Phu Ward, 9 District, HCM City

TEL. +84-3-896-5351

FAX. +84-3-736-0102

E-MAIL. green1702@naver.com
gfc@greenfchem.com





GREEN CHEM TECH

www.greenfchem.com

GREEN CHEM-TECH





Metal
working

SURFACTANTS GREEN CHEMTECH Co.Ltd

Textiles

Industrial
cleaning

Plastics

“We manufactured products
based on **Truth and Honesty**”

Greetings

GREEN CHEMTECH COMPANY was founded in 2001 to develop surfactants markets and individual customer needs.

Our products are used as processing aids, chemical intermediates, and in the manufacturing of a wide variety of finished goods.

We serve formulations in most major industrial markets-including Textiles, Metal workings, Industrial cleanings, Plastics, Leaders and etc.

As a service-oriented supplier, we have always focused on product development and cooperative research with our customers. We emphasize sales and marketing support backed by technical services, product development and total quality management.

We would very much like to keep our lines of communication open and running.

We will welcome any subsequent offers or ideas you might have.

Thanks.

President *PARK Gyoung Hee*



Product lists

In addition to our standard product line,
we are developing specialty surfactants meeting requirement from special clients.

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A. Textile Auxiliaries 염색조제

Use	Product name	Characteristics
Desizing agents (호발제) 	GREEN1001	OXIDIZING AGENT <ul style="list-style-type: none"> • White powder, Anionic • Be used in desizing for PVA, Synthetic sizes, and Acryl • Bath : 2-5g/L, Continuous : 1-2g/L
	GREEN1002	α-AMYLASE DERIVATIVE <ul style="list-style-type: none"> • Yellowish brown liquid, Nonionic • Be used in desizing for Starches(High temperature condition) • Bath : 5-10g/L, Continuous : 3-6g/L
	GREEN1003	SCOURING AND DESIZING AGENT <ul style="list-style-type: none"> • Light yellowish brown liquid, Nonionic • Be used in desizing for starches(High temperature condition) • Bath : 5-10g/L, Continuous : 3-6g/L
Sequestering agents (금속이온봉쇄제) 	GREEN1101	SPECIAL ORGANIC DERIVATIVE <ul style="list-style-type: none"> • Light yellowish liquid, Nonionic • Be used for bleaching, prevention of pinhole, continuous scouring • 2-4g/L
	GREEN1102	SPECIAL ORGANIC & INORGANIC DERIVATIVE <ul style="list-style-type: none"> • Light yellowish liquid, Anionic • Has excellent effectiveness in chelating even small amounts, especially in bleaching • 2-4g/L
	GREEN1103	SPECIAL ORGANIC & INORGANIC DERIVATIVE <ul style="list-style-type: none"> • Light yellowish liquid, Anionic • Be suitable in bleaching, soaping and has multi purpose function • 1-2g/L
H₂O₂ Stabilizers (H ₂ O ₂ 안정제) 	GREEN1201	NON-SILICATE TYPE <ul style="list-style-type: none"> • Light yellowish liquid, Weakly Anionic(special high polymer derivative) • Has an effect of preventing the pinhole in continuous bleaching • 1-3g/L
	GREEN1202	SPECIAL POLY CARBONIC MIXTURE <ul style="list-style-type: none"> • Light yellowish liquid, Weakly Anionic • Imparts various function in bleaching, especially increase the whiteness and neutralize the residue of H₂O₂ • 0.5-2g/L

Use	Product name	Characteristics
Oiling agents (오일링제) 	GREEN1301	FOR ACRYL YAR-100 <ul style="list-style-type: none"> • Special blended surfactants • yellowish trans. liquid, Anionic / Nonionic • Be used as oiling agent for making Acrylic yarns • 0.3-1.0%
	GREEN1302	FOR ACRYL YARN-200 <ul style="list-style-type: none"> • Special blended surfactants • yellowish trans. liquid, Anionic / Nonionic • Be used as oiling agent for making Acrylic yarn • 0.3-1.0%
Penetrating agents for Alkalic treatment (알칼리 침투제)	GREEN1401	WETTING AGENT FOR MERCERIZING & CAUSTIC TREATMENT <ul style="list-style-type: none"> • Special Anionic surfactant • Light-yellowish liq. Anionic, pH(1%)6.0-8.0, Imparts excellent wetting in 15-30% caustic solution, and low-foaming.
Scouring & Soaping agents (정련 쇼핑제) 	GREEN1501	SCOURING AGENT(POE ALKYL ETHER TYPE.) <ul style="list-style-type: none"> • Colorless liquid, Nonionic • Be used as scouring & soaping agent with good touch 0.3-0.6g/L
	GREEN1502	SCOURING AGENT(POE ALKYL ETHER TYPE / ANIONIC) <ul style="list-style-type: none"> • Light yellowish liquid, Nonionic / Anionic • Has a excellent degreasing effect in scouring & bleaching • 0.5-1g/L
	GREEN1603	SCOURING AGENT(SPECIAL NON / ANIONIC) <ul style="list-style-type: none"> • Yellowish liquid, Nonionic / Anionic • Be used as scouring in continuous with low-foaming and alkalic-resistant • 1-2g/L
	GREEN1604	SCOURING AGENT(POE ALKYL ETHER MIXTURE) <ul style="list-style-type: none"> • Yellowish liquid, Nonionic • Be used as scouring and soaping agent for Wool, with good whiteness, • 1-3g/L



Use	Product name	Characteristics
Scouring & Soaping agents (정련 쇼핑제) 	GREEN1605	SOAPING AGENT(SPECIAL HIGH POLYMER) <ul style="list-style-type: none"> • Light-yellowish liquid, Anionic • Be used as soaping agent for reactive dyeing of C, T/C. with good anti-redeposition effect. • 0.5-1.5g/L
	GREEN1606	SOAPING AGENT(SPECIAL HIGHPOLYMER) <ul style="list-style-type: none"> • Light-yellowish liquid, Anionic • Be used as soaping agent for reactive dyes in printing of PET. with good soaping and non-foaming • 1-2g/L
	GREEN1607	SOAPING AGENT(SPECIAL ANIONIC DERIVATIVE) <ul style="list-style-type: none"> • Light-yellowish, Special Anionic • Be used as soaping agent with H₂O₂ stability, Chelating, Preventing the white ground and redeposition, and Non-foaming. • 0.5-2.0g/L
Carriers (캐리어)	GREEN1601	METHYLNAPHTHALENE BASED <ul style="list-style-type: none"> • Light brownish liquid, Anionic • 2-4g/L
Deforming agents (소포제) 	GREEN1701	WATER SOLUBLE SILICON ANTIFOAMING AGENT <ul style="list-style-type: none"> • White emulsion, Nonionic • Be used in textile and other industries • 0.1-0.3%
	GREEN1702	WATER SOLUBLE SILICON ANTIFOAMING AGENT FOR HIGH TEMPERATURE <ul style="list-style-type: none"> • White emulsion, Nonionic • Be used in scouring, dyeing • 0.2-0.5%
	GREEN1703	ANTIFOAMING AGENT FOR HIGH-TEMPERATURE <ul style="list-style-type: none"> • White emulsion, Nonionic • Be used in textile, paper, chemical, industries, and others • 0.1-0.3%

Use	Product name	Characteristics
Levelling & Dispersing agents (균염/분산제) 	GREEN2001	DISPERSING AGENT FOR PET. RAPID DYEING <ul style="list-style-type: none"> • Alkylester(EO)n(PO)n • Light-yellowish clear liquid, Anionic / Nonionic, Has a excellent levelling property even small amounts, and ultra low-foaming • 0.1-0.3g/L
	GREEN2002	DISPERSING AGENT FOR PET. RAPID DYEING <ul style="list-style-type: none"> • Alkylester(EO)n(PO)n • Light-yellowish liquid, Anionic / Nonionic, Has a good levelling and fastness in dyeing. • 0.5-1.5g/L
	GREEN2003	DISPERSING AGENT FOR PET. <ul style="list-style-type: none"> • Light-yellowish clear liquid • Anionic Has a good levelling property and heat-resistance • 0.5-1.0g/L
	GREEN2004	FATTYAMINE DERIVATIVE FOR ACRYL <ul style="list-style-type: none"> • Yellowish trans liquid, Cationic
	GREEN2005	NITROGEN COMPOUND FOR ACRYL <ul style="list-style-type: none"> • Light brown liquid, Cationic
	GREEN2006	QUATERNARY AMMONIUM SALT FOR ACRYL <ul style="list-style-type: none"> • Light brown trans liquid • Be used as retarding agent for Acrylic dyeing • Light : 1.0-1.5%, Medium : 0.5-1.0%, Deep : 0.1-0.5%
	GREEN2007	LEVELLING AGENT FOR WOOL & ACRYL <ul style="list-style-type: none"> • Alkylamine derivative, Light brown trans liquid, Has a excellent suspending property. • 0.5-2.0% o.w.f.
	GREEN2008	LEVELLING AGENT FOR SILK & WOOL ACID DYEING <ul style="list-style-type: none"> • POE Alkyl amine, Light brown liquid, Imparts a good levelling and migrating effect. • 1-2% o.w.f.
	GREEN2009	LEVELLING AGENT FOR REACTIVE DYEING <ul style="list-style-type: none"> • Special Anionic surfactant • Light brown trans liquid, Has a good color yield • 1-2g/L
Softening agents (섬유유연제) 	GREEN2101	FATTY AMINE <ul style="list-style-type: none"> • Light yellowish flake, Cationic • 2-3% o.w.f.(A, W, N, S)
	GREEN2102	POLYETHYLENE WAX EMULSION <ul style="list-style-type: none"> • Light brown emulsion, Nonionic • 1-3g/L(C, V, R, P)
	GREEN2103	FATTY AMINE <ul style="list-style-type: none"> • Light-yellowish flake, Cationic • 1-3g/L(A, C, V, R)
	GREEN2104	AMINOSILICONE DERIVATIVE(MODIFIED EMULSION) <ul style="list-style-type: none"> • Trans emulsion, Weakly cationic • Padding : 0.1-0.5(o.w.f.), Dipping : 0.5-3.0% o.w.f.(C, V, R, P)
	GREEN2105	AMINOSILICONE DERIVATIVE(MODIFIED EMULSION) <ul style="list-style-type: none"> • Trans emulsion, Weakly cationic • Padding : 0.1-1.0g/L(o.w.f.), Dipping : 1-5% o.w.f.(C, V, R, P)

Use	Product name	Characteristics
Dyebath softeners (욕중유연제)	GREEN2201	ALKYL ESTER SPECIAL DERIVATIVE • Yellowish flake, Nonionic • 0.5-1.5g/L(C, N, P, R, V, W)
	GREEN2202	ALKYL ESTER SPECIAL DERIVATIVE • White emulsion, Nonionic • 1-2g/L(C, N, P, V, W)
Dye fixing agents (염료고착제)	GREEN2301	COLOR FASTNESS IMPROVING AGENT FOR ACID DYEING • Special resin • Brown trans liquid, Anionic • 2-4% o.w.f.
	GREEN2302	FIXING AGENT FOR DIRECT & REACTIVE DYEING • Poly amine type resin • Light yellowish liquid, Cationic • 1-2% o.w.f.
Antistatic agents (대전방지제)	GREEN2401	ALKYL PHOSPHATE FOR ACRYL & SYNTHETIC • Light yellowish liquid, Anionic • Be suitable in carding or drawing as anti-static agent Active matter 100%
	GREEN2402	ALKYL PHOPHATE FOR ACRYL & SYNTHETIC • Light yellowish liquid, Anionic • Be suitable in carding or drawing as anti-static agent • Active matter 30%
	GREEN2403	ALKYL AMINE • Light-yellowish liquid, Amphoteric, • Imparts a good anti-static with soft touch, be compatible with anion and cation • 1.0-2.0% o.w.f.(W, N, S), Active matter 55-60%
Water repellent (발수제)	GREEN2501	REACTIVE MODIFIED SILICONE • White emulsion, weak cation, cellulose • 2.0-5.0% o.w.f.
	GREEN2502	FATTY ACID METAL SALT • White emulsion, weak cation, All fibers • 2.0-5.0% o.w.f.
	GREEN2503	FLUORINE RESIN EMULSION • •White emulsion, nonionic, All fibers • 2.0-5.0% o.w.f.


Use	Product name	Characteristics
Color shade deeper (심색제) 	GREEN2601	SPECIAL MODIFIED SILICONE MIXER It can be applicable to polyester & cotton & it can presents good softness, This is bluish black type.
	GREEN2602	SPECIAL RESIN & SILICONE TYPE It can be applicable to polyester & cotton & rayon & it can presents good softness. This is bluish black type.
	GREEN2603	SPECIAL RESIN & URETHANE TYPE It can presents good softness. Color shade deeping property is excellent.
Frame retardants (난연가공제) 	GREEN2701	FABRIC FLAME RETARDANTS SERIES. As flame retardants for natural fibers & synthetic fibers & there is no color change whit heats. It is good counter product against rhodia, anti blaze product.
	GREEN2702	FABRIC FLAME RETARDANTS SERIES. It can presents good durability and good flame retardant effects for polyester fabrics. This is product type is organo-phosphonate ester compound type.
	GREEN2703	FABRIC FLAME RETARDANTS SERIES. It can presents temporary & semi-permanent flame retardant property to various fabrics. It can be applicable to fabrics of furniture & cotton & construction interior & automobile interior usages. This is product type is nitrogen containing phosphonic acid salt type.
Other auxiliaries (기타조제) 	GREEN2801	SODIUM META NITRO BENZENE SURFACTANT <ul style="list-style-type: none"> • Yellowish liquid, Anionic, cellulose • 2-3%(print), 10-20g/L(pad)
	GREEN2802	SPECIAL ANIONIC SURFACTANT <ul style="list-style-type: none"> • White emulsion, Anionic, cellulose • 2.0-6.0 o.w.f.
	GREEN2803	SPECIAL ANIONIC SURFACTANT <ul style="list-style-type: none"> • Yellowish liquid, cationic, textile machine • 10-50g/L
	GREEN2804	SUIPHUR COMPOUND IN AQUEOUS ALKALINE MEDIUM <ul style="list-style-type: none"> • Colourless liquid, Anionic, cellulose • 1.0-4.0g/L

B. Spinning & Spinning oils 방사 · 방적유제


Use	Product name	Characteristics
Spinning for Polypropylene (폴리프로필렌용) 	GREEN3001	PP & NY-FILAMENTS • Clear liquid, pH(11%) 6.0-7.0 • 1-3% o.p.u.
	GREEN3002	PP-FILAMENTS & PP BCF CARPET YARNS • Yellowish liquid, pH(11%) 6.0-7.0 • 1-3% o.p.u.
	GREEN3003	PP-FILAMENT & NY-FILAMENT FISHING NETS • Yellowish liquid, pH(11%) 6.5-7.5 • Applying temperature : 80°C • 0.8-1.0% o.p.u.
	GREEN3004	PP-FILAMENT YARNS • Yellowish liquid, pH(11%) 6.7-7.7 • 0.8-1.0% o.p.u.
Spinning for Polyester (폴리에스테르용) 	GREEN3101	POYESTER FILAMENT POY-DTY • Yellowish liquid, pH(11%) 6.5-7.5, Water content max. 10% • 0.4-0.6% o.p.u.
	GREEN3102	POLYESTER FILAMENT POY-DTY • Yellowish liquid, pH(11%) 6.5-7.5, Water content max. 15% • 0.4-0.6% o.p.u.
	GREEN3103	LUBRICANT FOR PET. SPON DRAW YARNS(S.D.Y) • Yellowish liquid, pH(11%) 6.5-7.5, Water content max. 10% • 0.7-1.0% o.p.u.(Appearance in dilution ; emulsion)
	GREEN3104	LUBRICANT FOR PET. SPON DRAW YARNS(S.D.Y) • Yellowish liquid, pH(11%) 6.5-7.5, Water content max. 15% • 0.4-0.6% o.p.u.(Appearance in dilution ; emulsion)
	GREEN3105	OILING AGENT FOR PET WOVEN GOODS. PE. OXFORD WEFT. • Yellowish liquid, pH(11%) 6.5-7.5, Water content max. 8% • 0.7-1.0% o.p.u.
	GREEN3106	PET. POY DRAW WARMER, PET UDY. DT • Yellowish liquid, pH(11%) 7.0-8.0, Water content max. 7% • 0.7-1.0% o.p.u.
	GREEN3107	CONING OIL • This is a oiling agent for weaving and knitting of Hosiery • Yellowish liquid, pH(11%) 6.5-7.5, Water content max. 1% • 0.7-1.5% o.p.u.
Spinning for Nylon (나일론용)	GREEN3201	YARN OIL FOR NY FISHING NETS • Yellowish liquid, pH(11%) 6.5-7.5, Water content max. 10% • 0.9-1.2% o.p.u.
	GREEN3202	OILING AGENT FOR COMBINED USE OF NY POY-DTY, FR NIP • Yellowish liquid, pH(11%) 6.5-7.5, Water content max. 10% • 0.5-1.0% o.p.u.


Use	Product name	Characteristics
Woolen oils (방모유) 	GREEN3301	WOVEN YARN, HOSIERY YARN, WOOLLEN SPINNING • Nonionic • Superior lubricity & handling quality of wool.
	GREEN3302	WOVEN YARN, SHETLAND SYNTHETIC FIBER-BLENDING • Nonionic • Superior softness in rubbing process as well as diminishing breakage of fiber in carding process.
	GREEN3303	LAMBS, ANGOLA, HOSIERY • Nonionic / Anionic • Superior flatness quality between fiber and metal and prevention of Nep.
Worsted oils (소모유) 	GREEN3401	WORSTED CARDING PROCESS OIL(FINE / SUPER FINE WOOL) • Nonionic / Anionic • Good flatness and diminishing breakage of fibers.
	GREEN3402	DRAWING OIL(HIGH SPEED SPINNING & SUPER WASH) • Nonionic / Anionic • Flatness of spinning process, good continuing property and anti-static.
	GREEN3403	CARDING & DRAWING OIL(SYNTHETIC, WOOL, GENERAL) • Nonionic / Anionic • Excellent anti-static, flatness & softness, Good fiber permeation & adhesion
Coning oils (코닝오일) 	GREEN3501	FOR POLYESTER & NYLON • Nonionic • Flatness and handling quality, good heat resisting quality
	GREEN3502	FOR POLYESTER & COTTON • Nonionic • Good flatness, handling, scouring quality
	GREEN3503	POLYESTER NEEDLE OIL • Nonionic • Good flatness, handling quality
	GREEN3504	GOOD NEEDLE LUBRICATION • Nonionic • Good flatness, handling, heat resisting quality
After oils (애프터오일)	GREEN3601	FOR SYNTHETIC FILAMENT N.S.Y(DRAW WAPER) • Nonionic / Anionic • Excellent flatness, handling, Prevention of nep & Good anti-static only a small amount
	GREEN3602	FOR NYLON FILAMENT N.S.Y. WARPING OIL(SOLUTION TYPE) • Nonionic / Anionic • Excellent anti-static & heat resting, and anti-nep.
Ring and Needle oils (링 및 니들오일)	GREEN3701	FOR SPONNING, SEWING, WARP KNITTING MACHINE • Viscosity 22%±2.0 • Excellent lubricancy, rust prevention, anti-wear proctectivity, superior washing
	GREEN3702	FOR SPONNING, SEWING, WARP KNITTING MACHINE • Viscosity 30%±2.0 • Excellent lubricancy, rust prevention, anti-wear proctectivity, superior washing
	GREEN3703	FOR SPONNING, SEWING, WARP KNITTING MACHINE • Viscosity 46%±2.0 • Excellent lubricancy, rust prevention, anti-wear proctectivity, superior washing

C. Special new items 특수신규제품


Use	Product name	Characteristics
Non-dusting oils (염료용 비산방지제)	GREEN4001	SYNTHETIC & N-PARAFFINE • Trans liquid, nonion • Can be use in all dye
	GREEN4002	SYNTHETIC & N-PARAFFINE • Trans liquid, nonion • Can be use in all dye
	GREEN4003	SPECIAL BLENDED • Trans liquid, nonion • Can be use in all dye
Binders (바인더) 	GREEN4101	HARD TYPE • Acrylmonomer, White emulsion, Anion / Nonionic
	GREEN4102	SOFT TYPE • Acrylmonomer, Sky emulsion, Nonionic
	GREEN4103	SOFT TYPE ANTI-BA (terial & soft type) • Acrylmonomer, sky emulsion, nonionic
	GREEN4104	ANTI-BACTERIAL, SOFT, AND ANTI-FLAMING • Acrylmonomer, Sky emulsion, Nonionic
Releasing agent for Die casting (high-conc.) (다이캐스팅용이형제 고농도)	GREEN4201	SYNTHETIC WAX EMULSION • White emulsion, Nonionic / Anionic
	GREEN4202	NON SILICONE TYPE • White emulsion, Nonionic / Anionic(bio)
	GREEN4203	NON WAX / NON SILICONE • White emulsion, Nonionic / Anionic

D. Auxiliaries for Leather 피혁용조제


Use	Product name	Characteristics
For Preparing (준비공정용) 	GREEN5001	FOR MICROBIOCIDE • Yellowish liquid, Cationtc
	GREEN5002	FOR SOAKING • Light yellowish liquid, Nonionic
	GREEN5003	FOR ENZYMATIC SOAKING • White liquid, Nonionic / Anionic
	GREEN5004	ANTI-FUNGI FOR PICKLING • Light colored powder, Nonionic
	GREEN5005	FOR TANNING • Light amber liquid, Cationic
For Fatliquor (가지공정용)	GREEN5101	FOR WHITE LEATHER • Brown clear liquid, Anionic
	GREEN5102	DYEING LEATHER • Brown clear liquid, Anionic
	GREEN5103	PHOSPHATE BASE FOR TANNING • Light yellowish liquid, Anionic


Use	Product name	Characteristics
For Fatliquor (가지방용)	GREEN5104	CATION BASE FOR TANNING • White viscose liquid, Cation
	GREEN5105	GARMENT LEATHER • White paste, Nonionic
For Dyeing (염색공정용) 	GREEN5201	CHELATING AGENT FOR DYEING • Light yellowish liquid, Anionic
	GREEN5202	PENETRATING AGENT • Colorless liquid, Anionic
	GREEN5203	PENETRATING & WETTING AGENT • Colorless liquid, nonionic / Anionic
	GREEN5204	LEVELLING AGENT • Brown clear liquid, Anionic
	GREEN5205	FIXING AGENT • Light yellowish liquid, cationic
For Finishing (마감공정용)	GREEN5301	FOR WATER-PROOFING • Light yellowish liquid, Cationic
	GREEN5302	FOR ANTI-STATIC • Light yellowish liquid, Dationin / nonionic
	GREEN5303	FOR SOFTENING • Yellowish paste, Cationic
	GREEN5304	FOR WATER-REPELLENT (WATER SOLUBLE) • Light-milky liquid, Cationic
	GREEN5305	FOR WATER-TEPELLENT (SOLUTION SOLUBLE) • Light-milky liquid, cationic

E. Raw materials for auxiliaries 각종 조제 및 원료

Use	Chemical names	Trade name	Appearance	Acid value	Soap value	Iodine value	Mois-ture(%)
Fatty acid esters (지방산 에스테르) 	Methyl oleate	EST-MO	yellowish liq.	max. 5.0	185-195	max. 9.5	max. 0.5
	Methyl laurate	EST-ML	clear liq.	max. 0.5	255-265	max. 1.0	
	Methyl palmitate	EST-MP			200-210	max. 2.0	
	n-Butyl oleate	EST-BO	yellowish liq.		max. 0.5	165-175	75-85
	n-Butyl stearate	EST-BS		170-180		max. 1.0	
	iso-Butyl oleate	EST-IBO		165-175		75-85	
	iso-Butyl stearate	EST-IBS		170-180		max. 1.0	
	iso-Octyl oleate	EST-IOO		140-150		65-75	
	iso-Octyl stearate	EST-IOS		145-155		max. 1.0	
	iso-Octyl palmitate	EST-IOP		145-155		max. 1.0	
Trimethylol propane trioleate	EST-TPT	max. 0.1	175-185	80-90			

E. Raw materials for auxiliaries 각종 조제 및 원료

Use	Chemical names	Trade name	Appearance	Acid value	Soap value	HLB value
Polyethylene glycol ethers (폴리에틸렌글리콜 에테르) 	PEG 200 monostearate	PEG-200MS	SOLID	5	120-129	8.1
	PEG 200 distearate	PEG-200DS		10	153-162	4.8
	PEG 400 monostearate	PEG-400MS		5	83-92	11.7
	PEG 400 distearate	PEG-400DS		10	115-124	8.5
	PEG 600 monostearate	PEG-600MS		5	61-70	13.5
	PEG 600 distearate	PEG-600DS		10	93-102	10.7
	PEG 200 monooleate	PEG-200MO	LIQUID	5	115-124	8.2
	PEG 200 dioleate	PEG-200DO		10	148-158	5.0
	PEG 400 monooleate	PEG-400MO		5	80-89	11.6
	PEG 400 dioleate	PEG-400DO		10	113-122	8.3
	PEG 600 monooleate	PEG-600MO		5	60-69	13.6
	PEG 600 dioleate	PEG-600DO		10	92-102	10.6

Use	Chemical names	Trade name	Applications	Appearance	pH(10%)	Iodine	Dosages(%)
Metal working additives (금속가공용 첨가제) 	Polyhydric alcohol fatty acid ester	DK-310	Emulsifier for cutting oil	Light brownish viscous liq.	9.5±0.2	N	8-12
	Fatty amide fatty acid ester	DK-320				N	
	Sulfated fatty acid	DK-330				N/A	
	Fatty acid alkanol amide	DK-410	Lubricant improving agent	Light brownish paste	10.5±0.2	N	4-10
	Lard amide	DK-420	Anti-rusting additive			N	
	Higher alcohol phosphate salt	DK-510	Cleaning agent	Light yellowish viscose liq.	9.5±0.2	A	5-10
	Fatty amide	DK-520	Anti-rusting additive			N	
	Fatty amide	DK-530	Anti-rusting agent(steel)			N	
	Poly phosphate salt organic acid salt	DK-540	Aluminium	Yellowish viscous liq.	9.0±0.2	N	2-5
Sulfated castor oil	DK-OIL	Anti-discoloration	A				
			Emulsifying & Dispersing agent		8.0±0.2	A	5-10



Use	Trade name	Active matters	Compositions	Remarks
Base materials for car wax & Car polishing (카왁스 및 광택제용)	CARNAUBA-50S	50%	carnauba wax & silicone emulsion	Liquid wax
	POLYMER-60S	60%	high copolymer, silicone emulsion	Leather & Tire polishing
	CARNAUBA-100E	30%	carnauba wax emulsion	-
	SILICONE-100E	60%	poly dimethyl siloxane	-
	QUATERO-80A	80%	quaternary ammonium salt	Auto cleaning car wash wax
	QUATERO-80B	80%	carnauba wax	Ultra water repellent wax

Use	Trade name	Appearances	Compositions	Amine value	pH	Usages
Amine ester synthetic Inbricants (아민에스테르 합성윤활유 아민가)	DK-BDA	Clear liquid	Boric acid/DEA	75±5.0	10.0±0.5	* Metal industries
	-BTA	Clear liquid	Boric acid/TEA	60±5.0	9.0±0.5	
	-TDA	Red-brown vis. liq.	Tartaric acid/DEA	80±5.0	10.0±0.5	* Cleaning
	-TTA	Red-brown vis. liq.	Tartaric acid/TEA	72±5.0	9.0±0.5	- Anti-rusting
	-BATA	Red-brown vis. liq.	Boric/Tartaric/TEA	70±5.0	9.5±0.5	- Anti-bacteria
	-CDE	Light-yellowish liq.	Cocofatty acid/DEA	95±5.0	9.5±0.5	- Cleaner - Emulsifiers



F. Detergents & Cleaners for Home & Automobile 주거 및 자동차용 세제

Use	Product name	Characteristics
Home necessities (가정용)	GREEN5001	NATURAL KITCHEN CLEANER WITH SKIN PROTECTING <ul style="list-style-type: none"> Natural moisturizing element is contained to protect hands soft and moist, and natural vegetable material is used for high rinsing ability and low pollution. Easily removes oil stain, Rinsing is easy, and water is saved.
	GREEN5002	STERILE & PASTEURIZATION, BLEACHING, STENCH REMOVER <ul style="list-style-type: none"> Sterilization and pasteurization, Stench remove, Makes white clothes whiter. Creates sanitary living space by Sterilization & Pasteurization.
	GREEN5003	HOUSEHOLD DRY CLEANING CLEANER <ul style="list-style-type: none"> Easily dry clean wool, silk, neat at home which used not to be easy to do at home. Natural lemon fragrance is added, Suitable for water washing clothing. Strong cleaning ability, Used only natural element for environment.
	GREEN5004	MULTI-PURPOSE CLEANING AGENT <ul style="list-style-type: none"> Low-pollution, innocuous product that can clean oil stain, smudges. Used natural material, It dissolves itself 5-10min. after spray, so there is no pollution. Superior effect by the spearheaded high-conc technology.
	GREEN5005	STRONG WINDOWS CLEANING AGENT <ul style="list-style-type: none"> Keeps windows clean, and prevents recontamination. Ultra strong cleaning agent that can wash out old smudges. Keeps the window clean, and prevents recontamination.



Use	Product name	Characteristics
Industrial washing cleaners (산업용) 	GREEN 5101	INDUSTRIAL HIGH-CONC. SPECIAL POWDER CLEANER • Contains pollution free zeolite and vegetable material from palm tree, to increase the cleaning power and to minimize the water pollution.
	GREEN 5102	(A)OXYGEN/(B)CHLORINE BLEACHING AGENT • Oxygen bleaching agent and chlorine bleaching agent that cleans minute stain which is hard to be cleaned with normal cleaner, and does bleaching and cleansing.
	GREEN 5103	HIGH-CONC ADDITION CLEANER • Neutral cleaner that improved the problems of alkalic cleaner in cleansing. • Completely removes the stain and guarantees no damage to the cloth. • Can be used regardless of cold water or light water.
	GREEN 5104	FABRIC SOFTENING AGENT • Static electricity free softening agent • Sweet vianca fragrance, The greatest satisfaction with low cost.
	GREEN 5105	WATER SOAP FOR WASHING • Rubbing or hitting of wash is not necessary • Bleaching makes the white clothes brighter, and colorful clothes more vivid.
Car managing products (차량관리용) 	GREEN 5201	GLASS CLEANER/LEATHER WAX • NEW STAR : Strong cleaning ability to wash out old smudges, No spot or stain remains and cleanness is remained • BODRANG : Protects the original color of all synthetic, natural leather, Maintains softness and gloss, Keeps the elasticity of tire and protects glaze.
	GREEN 5202	CAR-WAX • Protecting film(coating) on car coating surface is formed while cleaning even without water washing, for high glaze, One time use maintains the glaze for long. Refreshing fragrance.
	GREEN 5203	AROMATIC/MULTI-PURPOSE CLEANING, CLEANSING AGENT • AROMA : Natural fragrance of lemon, peppermint, poplar, rose, vianca, etc., Strench remove, air purification, forest walk effect for refreshing the air inside a car. • SELFCLEAN : Is a low pollution, innoxious product that cleans car engine room, inside the car and aluminium wheel.
	GREEN 5204	COOLING, ANTI-FREEZING SOLUTION-FOR ALL SEASONS • Cooling water to prevent overheating of car circulation system by adding special annex. Product of international standard to prevent corrosion of various metal radiator. • Sweet vianca fragrance, The greatest satisfaction with low cost.
	GREEN 5205	CAR FRONT WINDOW CLEANSING AGENT • High cleansing power, Extends the visibility to lessen the stress on eyes. • Windows cleansing agent inevitable for safe driving.
	GREEN 5201	HIGHLY CONCENTRATED ANTIFREEZE ADDITIVE • Can be used by diluting with 6% wt of ethyleneglycol. • Antifreeze formulated by this additive meets the FMVSS & ASTM.
	GREEN 5202	BRAKE FLUID(FMVSS DOT-3) • Is suitable for all kinds of vehicle and has excellent safety in using as low evaporation., and This brake fluid with oxidation inhibitor and rust preventives has excellent compatability with rubber and metal parts.
	GREEN 5203	BRAKE FLUID(FMVSS DOT-4) • Is suitable for all kinds of vehicle and has excellent safety in using as low evaporation., and This brake fluid with oxidation inhibitor and rust preventives has excellent compatability with rubber and metal parts.

G. Surface treatment agents for metal working 금속가공용 표면처리제

Use	Product name	Characteristics
Degreasing agents & Rust removers (탈지제/탈청제) 	GREEN6001	SUPER HIGH-SPEED DEGREASING AGENT FOR STEELS • Alcohol, Chelating agent, Nonionic surfactant, Alkanoamine • Light-yellowish liq., pH(10%)12.3, Has durable detergency for metal process oil, dust, fat & oil, finger-mark, etc., Non-corrosive.
	GREEN6002	POWERFUL DETERGENT FOR MINERAL OILS • Nonionic surfactant, Glycolic solvent, Buffer alkalic, Chelating agent • Light-bluish liq., pH(10%)12.2, Very shortly remove the mineral oil, Low-foaming, Good draining, High-biodegradable, Can be used in office stationary, building, automobile, tire, aluminum wheel.
	GREEN6003	NEUTRAL DETERGENT FOR FLOORS • Nonionic surfactant, Glycolic solvent, Chelating agent. Light-green liq., pH(10%)7.0-8.5, Low-foaming, High-biodegradable, Mineral oil is can be easily emulsified and dispersed on the floors.
	GREEN6004	DETERGENT FOR SPRAY AT HIGH TEMPERATURE CONDITION • Inorganic alkalic agent, Special chelating agent • Colorless liq., pH(10%)11.0, Excellent detergency for machine oil, Very stable in high temperature(70-80°C), Good anti-rusting effect.
	GREEN6005	2-PHASE WATER-SOLUBLE TYPE • Petroleum solvent, Nonionic surfactant, Special alcohol • Colorless liq., pH(1%) Neutral, Sp.gr. 0.960, Same detergency to solvent, Can be diluted with water, Low-foaming, High detergency for mineral oil, finger-mark and high viscous oil.
	GREEN6006	DEGREASING AGENT FOR ALUMINIUM • Phosphoric acid, Nonionic surfactant • Semi-trans liq., pH(1%)1.5, Sp.gr. 1.03, Easily removes the light scale and soil in aluminium & its alloys and gives shining surface without etching, Mild acid degree, Harmful solvent-free.
	GREEN6007	FOR METAL PROCESS OIL (Petroleum solvent emulsified type) • Petroleum solvent, Nonionic surfactant. • Colorless liq., Neutral, Sp.gr. 0.88, Flash point 52°C, Tolerance limit 500ppm, Completely clean the metal process oil at room temperature, After washing is needed.
	GREEN6008	FOR METAL PROCESS OIL (Aromatic solvent emulsified type) • Aromatic solvent, Alcohol, Nonionic surfactant • Colorless liq., Neutral, Sp.gr. 1.20, Flash point 50°C, Tolerance limit 300ppm. Completely clean the process oil at room temperature. Sulphur, Heavy metal and Chlorinate-free. After washing is needed.
Anti-rusting agents (방청제) 	GREEN6009	RUST REMOVER (Neutral type) • Organic sulfur chemical mixture • Colorless-light reddish liq., pH(7.5), Sp.gr. 1.10, High penetrating power, Very low corrosive to metal. Can be use in Steel, Copper, Aluminium, Resin, Rubber, and also has solvency of rust and calcium scale.
	GREEN6101	WATER SUBSTITUTE TYPE (Solvent based) • Special chelating agent, Petroleum solvent • Light-yellowish liq., pH(1%) Neutral, Sp.gr..0.82, Flash point40°C, Good draining property after alkalic or solvent degreasing, Form the thin film with water-proofing property and it can be easily removed by alkalic or solvent.
	GREEN6102	FORMING THE THIN FILM TYPE (Water-soluble type) • Anionic surfactant, Special oil, Solvent • Light-brown liq., Sp.gr. 0.83, Weakly alkalic, Gardner 5-7. Promptly change the water drop or film to the oil film, Low-toxic, No skin irritation, It can be easily removed with alkalic detergent.
	GREEN6103	NEUTRALIZING TYPE • Alkalic builder, Mild organic acid Light-yellowish liq., Sp.gr. 1.25, Strong alkalic, pH(1%)11.8. Has powerful neutralizing effect to the activated acidic surface. Low-foaming.
	GREEN6104	RAPID CURING TYPE (Resin based) • Alkyd acryl modified resin, Organic solvent • Light-brown liq., Sp.gr. 0.88, Neutral, Flash point 13°C Shortly forms shining colorless film at room temperature. Anti-rusting is guaranteed for 3 months.
	GREEN6105	ANTI-DISCOLORING AGENT FOR COPPER (Water soluble) • Water soluble alcohol, Special chemicals • Colorless-light yellowish liq., Weakly alkalic, Sp.gr. 0.94 • Forms the thin film with anti-rusting property, Not sticky, No affect in welding and electronic characteristic, Low-pollution, No skin irritation.

CAMOUFLAGE NETS

General information

Light spectrum

Reflexibility table

Types of camouflage nets

Color requirements

Visual

Near infrared

CAMOUFLAGE NETS



Infrared rays reflection effect

Radar scattering effect

Thermal

Supporting system

Smart tent

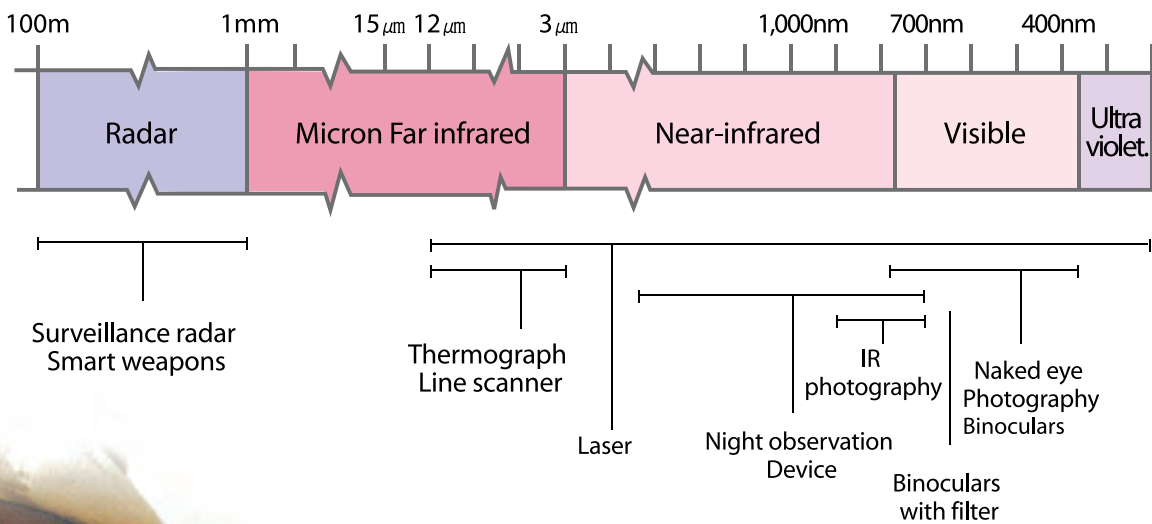
Chameleon



GENERAL INFORMATION

The purpose of camouflage is to protect your precious equipment and important military facilities from enemy's detection and attack. According to past conception of camouflage, it was enough to adapt the objects to their surroundings by protective color similar to that of the environments which is visible directly by naked eyes or detected through binoculars. Camouflage technique is indispensable to protect armored vehicles and your soldiers. In modern times, due to the remarkable progress of precision apparatuses which utilize invisible infrared rays, the precision detecting techniques have also kept on developing. Modern camouflage is more sophisticated than simple decoration whit natural vegetation, though it remains true that the major means of discovery of personnel and material is the human eye.

LIGHT SPECTRUM



REFLEXIBILITY TABLE

Reflexibility(%)

Wave length(nm)	680	700	750	800	850	900	950	1000	1050	1100	1150	1200
Sample color tones												
Chlorophyl	7	15	40	50	50	50	50	50	48	48	48	47
I-REX textile Dark green color	14	15	35	43	43	43	43	43	43	42	42	41
I-REX textile Light green color	8	13	40	51	51	51	51	51	49	49	48	47

TYPE OF CAMOUFLAGE NETS

A-Type : Protection from observation by naked eyes and infrared rays

B-Type : Protection from observation by naked eyes, infrared rays and radar screens

C-Type : Protection from observation by naked eyes, infrared rays, radar screen and thermal sensor.

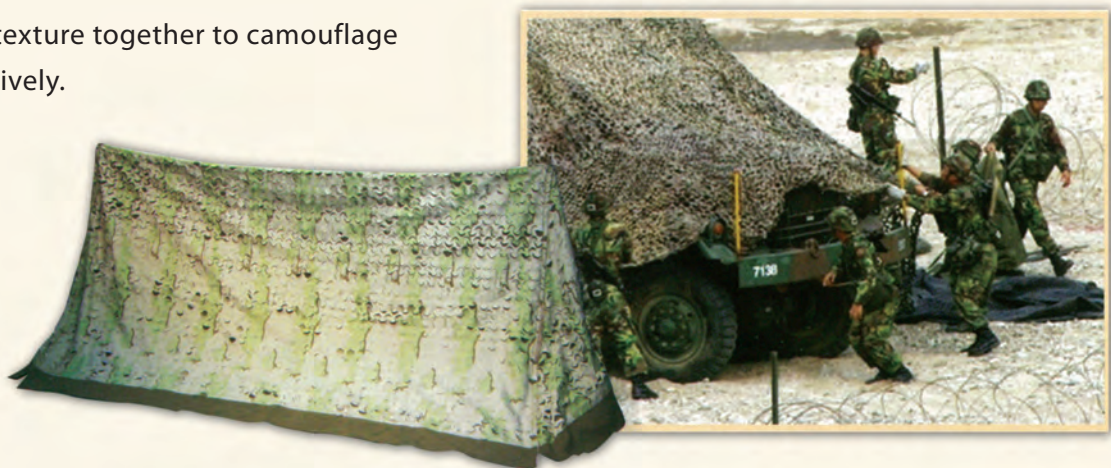
COLOR REQUIREMENTS

Color	Trichromatic Coefficients		
	X	y	Y
Woodland			
1. Light Green	0.362	0.395	0.094-0.108
2. Dark Green	0.343	0.390	0.070-0.085
3. Forest Green	0.330	0.355	0.058-0.072
4. Olive	0.363	0.377	0.097-0.113
5. Khaki	0.357	0.362	0.210-0.230
6. Brown	0.360	0.350	0.102-0.118
7. Tan	0.388	0.370	0.210-0.230
Desert			
1. Khaki	0.350	0.355	0.242-0.264
2. Tan	0.356	0.351	0.336-0.361
3. Straw	0.396	0.393	0.281-0.304
4. Russet	0.390	0.350	0.171-0.189
5. Light Brown	0.367	0.358	0.190-0.210

VISUAL

Each area of the world and each climatic condition have color patterns and textures that are natural for that area. While color is self-explanatory, texture defines the surface characteristics of something when looking at it. For example, surface textures may be smooth, rough, rocky, leafy, or many other possible combinations.

Use color and texture together to camouflage yourself effectively.





NEAR INFRA-RED

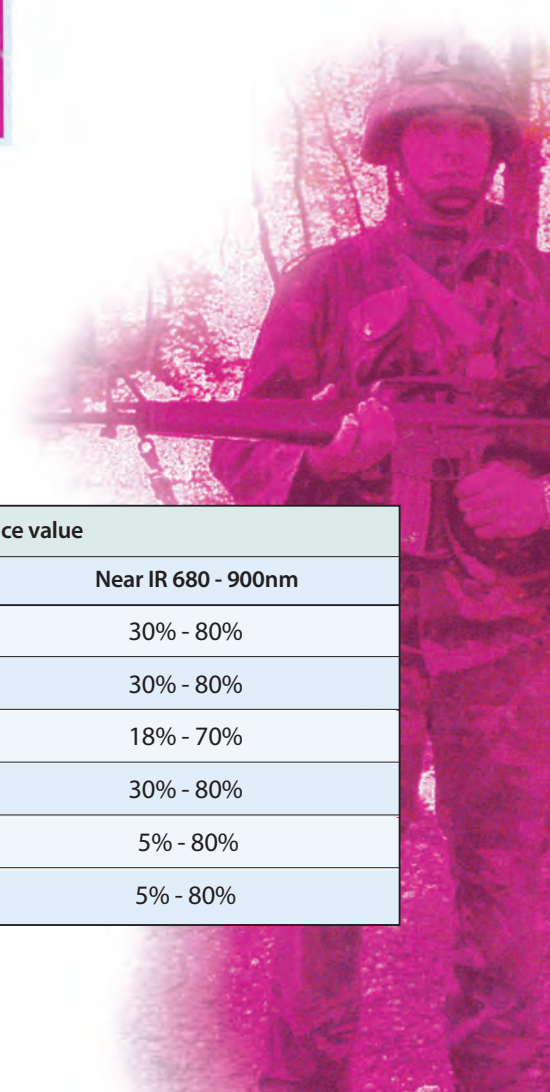
Night-vision and Near Infra-Red viewers have forced the designers of camouflage to include the NIR region of the spectrum in their considerations and Infra-Red reflecting coating has been known for several decades.

Nets are treated with special chemicals and pigments that match the near IR reflection properties of the requested surroundings.



Normal Color Film

Camouflage detective film
(color IR)

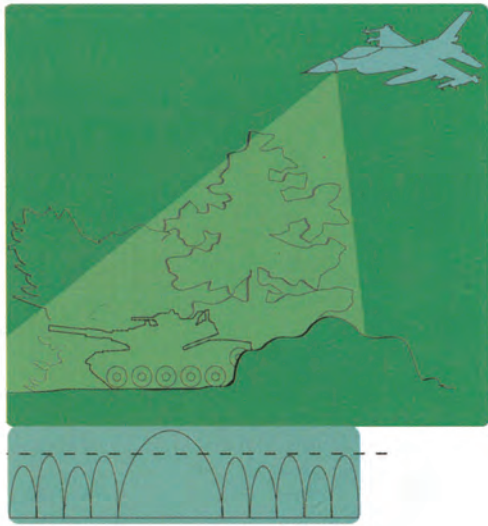


INFRA RED RAYS REFLECTION EFFECT

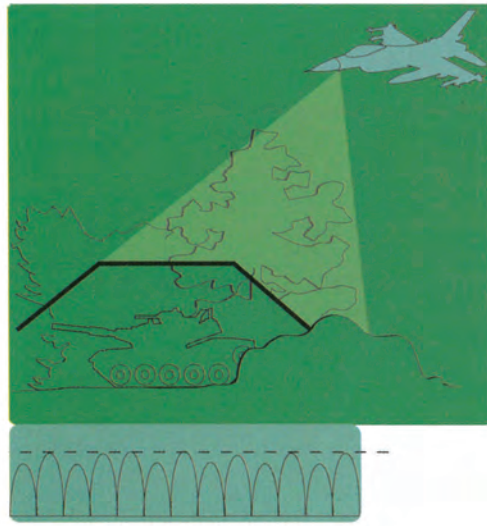
Color	Reflectance value	
	Visual 400 - 680nm	Near IR 680 - 900nm
Desert-A(Beige)	30% - 70%	30% - 80%
Desert-B(Beige)	30% - 70%	30% - 80%
Desert-C(Beige)	18% - 30%	18% - 70%
Desert-D(Beige)	30% - 70%	30% - 80%
Light Green	Max. 14%	5% - 80%
Dark Green	Max. 13%	5% - 80%

RADAR SCATTERING EFFECT

Most objects reflect radio waves much as they do light. Determination of the reflected wave direction and delay permits location of a target. Some radar techniques permit identification of the shape of the target, and most permit calculation of the target heading and velocity. Nets scatter and block the signals, reducing the image received by the radar.



The purpose of radar camouflage is to reduce radar reflections to the same level as the surrounding background.



The purpose of radar camouflage is to reduce radar reflections to the same level as the surrounding background.





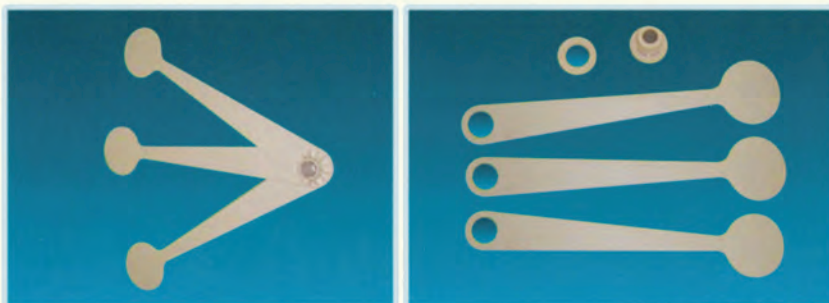
THERMAL

Many of these products rely on or include similar elements of thermal insulation and reflection to isolate the target from sources of heat that can either give away a target's position and identity to a thermal-imager equipped observer or produce uncomfortable or unsafe hot working conditions for personnel, stores and equipment.



SUPPORTING SYSTEM

Adapter & Spreader (Fiber-glass)



Fiber-glass Pole



SMART TENT



Smart Tent is your commodious mobile house as well as your shelter to save your life

FEATURES

1. Near Infrared signature reduction characteristics and radar scattering effect
2. Temperature - adjustable system
 - * Keeping warmth at low temperatures and blocking heat at high temperatures
 - * Designed and manufactured with the functions that respond actively to all circumstances after perceiving external temperatures as follow:
 - At outside temperatures between 10°C and 20°C, the control operation remains.
 - At outside temperatures over 30°C, lowering temperature inside of the tents by $10\pm 1^\circ\text{C}$
 - At outside temperatures below 5°C, increasing temperature inside of the tents by $7.5\pm 1^\circ\text{C}$
3. Moisture permeability : $50,009\sim 71,472/\text{m}^2/24\text{hrs}$
4. 100% Water Proof
5. 99.9% Anti - bacteria against S.aureus : Yellow Staphylococcus and K.Pneumoniae
6. Colorfastness to light : grade 4



CHAMELEON



Chameleon is designed to break up the human outline in all surrounding background environments for excellent concealment. It's customized for not only color patterns and surface textures but also thermal threat as per buyer's request.

This product adapts itself to the changing environmental temperature with automatic cooling and heating functions.

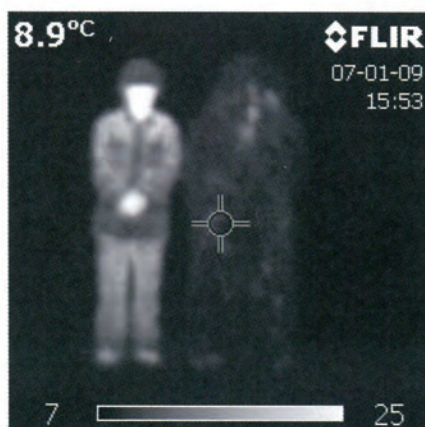
It consists of pants and jacket with optional mask and helmet cover. It's ultra light and weighs approximately 2.8kg.

The remarkable moisture permeability of the fabrics can discharge sweat outside.

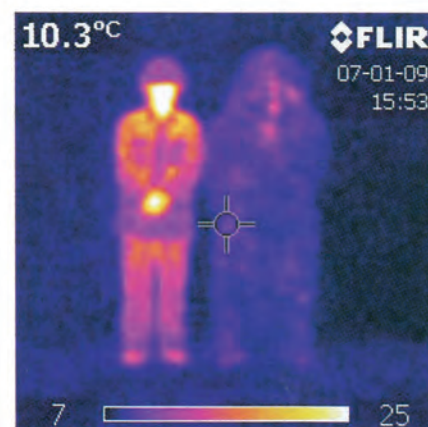
* The image of uncamouflaged soldier to the left and of camouflaged soldier with Chameleon to the right



● Normal Image



● Thermal image in black-and-white



● Thermal image in rainbow



KEEP YOUR SOLDIERS COOL AND WARM



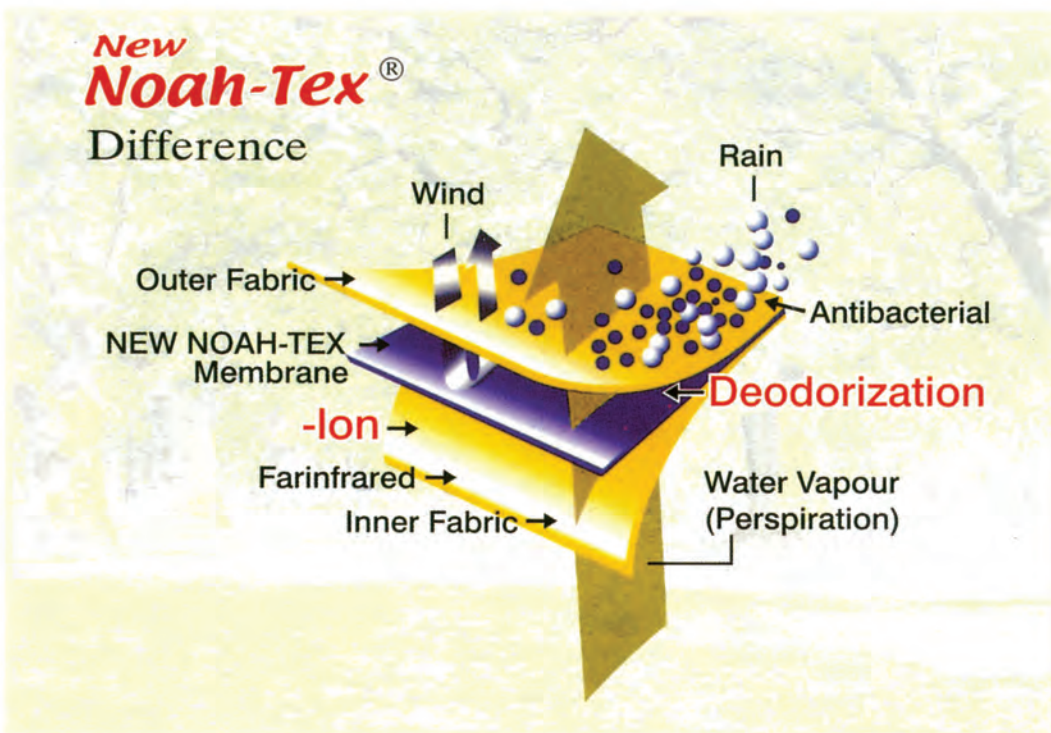
This extraordinary uniform is the only uniform to adjust itself to environmental temperatures. It provides your soldiers with the best possible comfort and refreshment.

It's customized for the design and color to meet your specific need.

Best uniform, Best Soldier
Smart Uniform helps your soldiers
to bring their duties to a successful conclusion.



Our smart uniform is made of **New Noah-Tex[®]** of which raw material is Tourmaline.



FEATURES

Anti-Bacteria / Waterproof and breathable fabrics /
Temperature adjustable functions /
Excellent moisture permeability





THE SPECIFICATION OF CAMOUFLAGE SYSTEM



Stopping



Operating

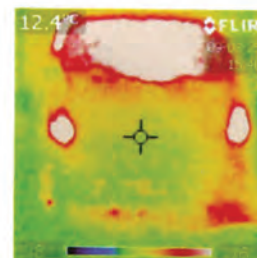
G.N Heat Control is designed to function that responds actively to all climatic conditions. When it's hot, your smart uniform absorbs your heat and returns it to you when it's cold.



As MD Green Camouflage is the mobile camouflage system, the windshield cover is attachable. In motion the windshield cover is removed.



Vehicle with Camouflage B-Type

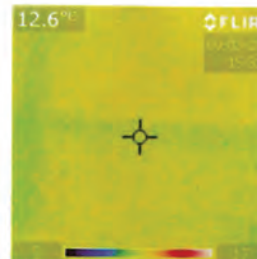


Thermal image

The vehicle with Camouflage B-Type is detected by Thermal Imager, so your enemy recognizes it.



Vehicle with MD Green Camouflage



Thermal image

The vehicle with MD Green Camouflage is not detected by Thermal Imager. You and your equipment will be safe against thermal sensor.