

**KAYAROPES.COM** 

**2014/**ENG

OFF-ROAD ROPES







## **KAYA COMPANIES**;

A LEADER IN ITS FIELD TODAY, THE KAYA GROUP BEGAN BUSINESS IN THE 1980'S AS KAYA CONSTRUCTION. NOW PREPARING TO CELEBRATE ITS 30TH YEAR OF OPERATION, THE KAYA GROUP CONCENTRATES ITS KNOWLEDGE AND EXPERIENCE IN FOUR MAIN AREAS OF ACTIVITY: TECHNICAL ROPES, INDUSTRIAL WORK SAFETY AND WORK AT HEIGHT, WORK HEALTH AND SAFETY TRAINING AND CONSULTING SERVICES. FULLY AWARE OF THE DIMENSION OF SOCIAL RESPONSIBILITY ATTACHED TO THE SECTOR, THE **COMPANY OBTAINS NATIONAL AND INTERNATIONAL** CERTIFICATES FOR ALL PRODUCTS IT DEVELOPS AND MANUFACTURES. THROUGH PROVIDING EDUCATION AND CONSULTATION SERVICES CONCERNING THE CORRECT USE OF ITS PRODUCTS, THE KAYA GROUP HAS GAINED THE KNOWLEDGE, EXPERIENCE AND LEVEL OF COMPETENCE THAT HAVE GIVEN THE COMPANY THE CONFIDENCE AND RESOURCES TO BE ABLE TO MAKE NEW ADVANCES FROM A SOUND BASE. WITH ITS 30 YEARS OF EXPERIENCE, THE KAYA GROUP IS THE LARGEST ORGANIZATION IN THE SECTOR. IN 2010, WITH NEW PRODUCTS, SERVICES AND INVESTMENTS, THE COMPANY IS FIRMLY ON THE PATH TOWARDS BECOMING AN IMPORTANT BRAND IN THE INTERNATIONAL MARKET.

## **OUR VISION;**

TO MAKE KAYA THE UNDISPUTED WORLD'S STRONGEST, MOST PRESTIGIOUS AND TRUSTED BRAND IN ITS SECTOR.

## **MISSION STATEMENT;**

OUR MISSION IS TO CONDUCT RESEARCH AND DEVELOPMENT BASED ON ACCURATE ANALYSIS OF NEEDS IN THE SECTOR AND THEREBY DEVELOP NEW PRODUCTS; TO EMPLOY MODERN MACHINERY AND A COMPETENT WORKFORCE IN THE MANUFACTURE OF WORLD-CLASS, HIGH QUALITY GOODS; TO PROVIDE TRAINING AND CONSULTING SERVICES TO CREATE KNOWLEDGEABLE WORKERS AND MANAGERS AND HELP ESTABLISH A CULTURE OF WORK SAFETY IN TURKEY; AND TO PROVIDE COMPLETE SOLUTIONS VIA OUR INTEGRATED SERVICES.

## **COMPANY PHILOSOPHY;**

BASED ON THE VALUE WE PLACE ON HUMAN LIFE, OUR GOAL IS TO DESIGN PRODUCTS THAT WILL SAFEGUARD HUMAN LIFE ON THE JOB, TO MANUFACTURE SUCH PRODUCTS, AND TO RAISE AWARENESS ABOUT WORK SAFETY BY TRAINING WORKERS AND MANAGERS AND PROVIDING CONSULTATION SERVICES IN THIS REGARD.



A LEADER IN ITS FIELD TODAY, BUSINESS, AND PREPARING TO CELEBRATE ITS 30TH YEAR OF OPERATION, THE KAYA GROUP CONCENTRATES ITS KNOWLEDGE AND EXPERIENCE IN FOUR MAIN AREAS OF ACTIVITY: TECHNICAL ROPES, INDUSTRIAL WORK SAFETY AND WORK AT HEIGHT, OCCUPATIONAL HEALTH AND SAFETY TRAINING AND CONSULTING SERVICES.

## KAYAROPES

KAYA ROPES MANUFACTURES ALL KINDS OF ROPES FOR EVERY FIELD WHERE THE SAFETY OF HUMAN LIFE AND PROPERTY IS OF PRIME CONCERN: WITH TECHNICAL SPECIFICATIONS SUITABLE FOR THE SITE AND CONDITIONS, STANDARD ROPES OR ROPES MADE FOR A SPECIFIC FIELD, WITH INTERNATIONAL QUALITY CERTIFICATION, AND HAVING A WIDE RANGE OF CONSTRUCTION TYPE AND RAW MATERIALS. KAYA ROPES USES THE MOST ADVANCED MATERIALS AND MANUFACTURING TECHNOLOGY IN PRODUCTION OF ITS TECHNICAL ROPES. THE COMPANY IS A LEADER IN ADVANCES IN ITS FIELD IN TURKEY AND HAS BECOME A RECOGNIZED AND SOUGHT-AFTER BRAND ON THE INTERNATIONAL SCENE. WITH ONE OF THE MOST DEVELOPED MACHINE PARKS IN THE WORLD, KAYA ROPES SERVES CUSTOMERS IN MANY DIFFERENT SECTORS INCLUDING SHIPPING, YACHTING, THE MILITARY, MOUNTAINEERING, INDUSTRIAL SAFETY, FISHING, ENERGY AND MINING. A LARGE SHARE OF KAYA ROPES' PRODUCT RANGE CONSISTS OF ROPES FOR MOUNTAINEERING AND OTHER NATURE SPORTS, RESCUE WORK, CIVIL DEFENCE, FISHING, OCCUPATIONAL SAFETY, MILITARY OPERATIONS AND ROPES FOR SPECIAL PURPOSES.

**KAYAROPES.COM** 

## KAYASAFETY

KAYA OCCUPATIONAL SAFETY CARRIES OUT R&D AND DESIGNS AND MANUFACTURES EQUIPMENT AND SYSTEMS- ESPECIALLY SAFETY HARNESSES AND THEIR ATTACHMENTS- TO PREVENT FALLS AND FACILITATE JOBS FOR THOSE WORKING AT HEIGHTS IN THE INDUSTRIAL, SERVICE AND DEFENCE SECTORS. THE COMPANY PRODUCES WORK AND PERSONAL SAFETY EQUIPMENT, LIFTING EQUIPMENT, CIVIL DEFENCE AND RESCUE EQUIPMENT AND ALSO EQUIPMENT AND ACCESSORIES FOR SPORTING ACTIVITIES (MOUNTAIN CLIMBING, PARAGLIDING, JUMPING, SAILING). KAYA COMPANIES HAS A EUROPEAN UNION 89/686/EEC (DIRECTIVE ON PERSONAL PROTECTIVE EQUIPMENT) **OUALITY SYSTEM CERTIFICATE. ACCORDING TO THE NECESSITIES** OF THE PRODUCTS IT MANUFACTURES, THE COMPANY HAS OBTAINED PRODUCT DESIGN REGISTRATION CERTIFICATES, PRODUCT CE CERTIFICATES, APPROVAL OF TYPE CERTIFICATES, CONFORMITY TO NATO STANDARDS CERTIFICATION, ATEX PRODUCT CERTIFICATES, TSE CERTIFICATE OF CONFORMITY TO TURKISH STANDARDS AND UIAA (INTERNATIONAL MOUNTAINEERING AND CLIMBING FEDERATION) CERTIFICATES. ALL THE PRODUCTS MANUFACTURED BY KAYA SAFETY ARE ALSO UNDER KAYA COMPANIES' GUARANTEE WITH THE "FINANCIAL LIABILITY INSURANCE POLICY".

### **KAYASAFETY.COM**



## KAYATRAINING

KAYA TRAINING PROVIDES THEORETICAL EDUCATION AND PRACTICAL TRAINING AT EVERY LEVEL IN AREAS SUCH AS OCCUPATIONAL HEALTH AND SAFETY- WITH SPECIAL EMPHASIS ON WORKING AT HEIGHT, RISK ASSESSMENT, OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT, FIRST AID, BASIC SEARCH AND RESCUE, EMERGENCY SITUATIONS, FIRE PROTECTION, SAFE DRIVING TECHNIQUES AND MOUNTAIN CLIMBING.

OUR TRAINING DEPARTMENT IS ACTIVE NOT ONLY IN TURKEY BUT ALSO OVERSEAS, HAVING EXTENDED ITS ACTIVITIES TO NEIGHBOURING COUNTRIES IN ANSWER TO ARISING NEEDS AND CONDITIONS.

IN ORDER TO GET INTERNATIONAL APPROVAL FOR CERTIFICATES AWARDED, THE NECESSARY PHYSICAL INFRASTRUCTURE AND DOCUMENTATION HAS BEEN COMPLETED ACCORDING TO THE 17024 SYSTEM OF EMPLOYEE CERTIFICATION ACCREDITATION, AND ACCREDITATION APPROVAL PROCESS IS CONTINUING.

## **KAYA CONSULTING**

KAYA CONSULTING, INTEGRATED ITS 30 YEARS OF EXPERIENCE AND KNOWLEDGE WITH SECTOR LEADERS OF THE COUNTRY AND PROVIDES THEM CONSULTANCY SERVICES INCLUDING ALL ADVISORY FACILITIES TO THE PROJECT MANAGEMENT ABOUT PROJECT HSE MANAGEMENT FOR; RECRUITING HSE STAFF, PREPARATION OF PROJECT HSE PLAN AND INSTRUCTIONS, PREPARATION OF RISK ANALYSES, PREPARATION OF TRAINING PLAN AND CONDUCTION OF TRAININGS.

BESIDES OF ITS CONSULTANCY SERVICES, BY HIS INTERNATIONALLY EXPERIENCED TECHNICAL ADVISORY STAFF, KAYA CONSULTING ADVISES VALUABLE SOLUTIONS FOR ESTABLISHMENT AND MANAGEMENT OF AN EFFECTIVE HSE MANAGEMENT SYSTEM DURING THE CONSTRUCTION AND MAINTENANCE PROCESS OF MAINLY PLAZA BUILDINGS, INDUSTRIAL FACILITIES AND HIGH-TECH COMPLEXES, ACCORDING TO THE SIZE AND THE SCOPE OF THE PROJECT AND ALSO PROVIDES ALL THE NECESSARY REPORTS.

**KAYATRAINING.COM** 

**KAYACONSULTING.COM** 



## **QUALITY POLICY;**

IN ORDER TO ENSURE SUSTAINED PRODUCT AND SERVICE QUALITY AND COSTOMER SATISFACTION, KAYA HAS CREATED AND IMPLEMENTED A WRITTEN INTEGRATED MANAGEMENT SYSTEM ISO 14001, OHSAS18001 AND ISO 9001 **STANDARDS** 

WITHIN THIS FRAMEWORK, KAYA HAS COMMITTED TO:

- •IDENTIFYING GOALS THAT ARE CONSISTENT WITH THE PURPOSE OF OUR
- SUPPLYING THE SUPPORT, RESOURCES AND MANAGEMENT CONTRIBUTION REQUIRED TO REACH THE DETERMINED **GOALS**
- PRIORITIZING CUSTOMER NEEDS AND **EXPECTATIONS**
- CLOSELY FOLLOWING WORLDWIDE DEVELOPMENTS IN ITS FIELD
- CONTINUOUSLY IMPROVING COSTS AND THE QUALITY OF GOODS AND SERVICES
- EDUCATIONS EMPLOYEES IN ORDER TO ESTABLISH IN THEM AN AWARENNES OF TOTAL QUALITY

- IN ADDITION TO EDUCATING EMPLOYEES, WORKING TOWARDS DEVELOPING AWARENESS OF TOTAL QUALITY AMONG SUPPLIERS AND SUBCONTRACTORS
- •BY FORMING A QUALITY CONTROL DEPARTMENT, ENSURING THE QUALITY CONTROL SYSTEM IS APPLIED IN THE BEST POSSIBLE WAY
- ENCOURAGING EMPLOYEES TO DEVELOP PROJECTS THAT WILL INCREASE QUALITY, AND GIVING THEM THE NECESSARY SUPPORT IN THIS REGARD
- ENSURING CONTINUOUS IMPROVEMENT AND DEVELOPMENT BY MEANS OF CORRECTIVE AND PREVENTIVE ACTIVITIES

OUR PRIORITY IS QUALITY IN EVERY SENSE OF THE WORD. FOR US QUALITY IS: WHILE MEETING OUR CUSTOMERS' EXPECTA-TIONS, ALSO FULFILLING THE REQUIRE-MENTS TO MEET INTERNATIONAL QUALITY STANDARDS FOR OUR AREAS OF OPERATION.

KAYA'S MANUFACTURING QUALITY IS OF INTERNATIONALLY ACCEPTED STANDARD, HAVING OBTAINED THE 89/686/EEC QUALITY CERTIFICATE. AS WELL AS PRODUCT CE CERTIFICATES, PRODUCT QUALITY HAS BEEN CERTIFIED IN MANY RESPECTS, HAVING OBTAINED DESIGN REGISTRATION CERTIFICATES, TYPE APPROVAL CERTIFICATES, TSE (TURKISH STANDARDS INSTITUTION) CERTIFICATES, NATO CERTIFICATES OF CONFORMITY AND UIAA (INTERNATIONAL MOUNTAINEERING AND CLIMBING FEDERATION) CERTIFICATES. IN CONNECTION WITH OUR QUALITY POLICY, A VITAL PRIORITY FOR THE KAYA TEAM IS TO ENSURE THE CONTINUITY OF THE REPUTATION FOR "RELIABILITY" THAT WE HAVE EARNED BY SUPPLYING HIGH QUALITY PRODUCTS AND SERVICES TO DOMESTIC AND FOREIGN MARKETS. OUR CLIENTS HAVE OUR ASSURANCE THAT

THEIR EXPECTATIONS WILL ALWAYS BE

### **KAYA BRANDS**



SAFETY

TRAINING CONSULTING DEFENCE CONSTRUCTION



## **HEALTH AND SAFETY POLICY;**

FOR ALL ITS OPERATIONS, BASED ON THE PRINCIPLE OF FUNDAMENTAL HUMAN RIGHTS, AND WITH THE AIM OF PROVIDING A HEALTHY AND SAFE WORK ENVIRONMENT TO PROTECT THE PHYSICAL AND SOCIAL WELL-BEING OF ITS EMPLOYEES, UNDER THE CONCEPT OF "WORK, SAFETY, AND LIFE" ADOPTED AS COMPANY POLICY, KAYA HAS SET UP AND IMPLEMENT SYSTEM WHICH MEETS THE STANDARDS REQUIRED BY THE OHSAS 18001. ALL RISKS WHICH POSE A THREAT TO HEALTH AND SAFETY ARE MANAGED UNDER THIS SYSTEM. UNDER THE CONCEPT OF "WORK, SAFETY, LIFE", KAYA UNDERTAKES TO:

- CONTINUOUSLY IMPROVE AND DEVELOP WORK HEALTH AND SAFETY PERFORMANCE
   ARIDE BY LEGAL PROLUBEMENTS IN ALL
- •ABIDE BY LEGAL REQUIREMENTS IN ALL ITS ACTIVITIES
- MAKE WORK HEALTH AND SAFETY PERFORMANCE VISIBLE BY REPORTING

ALL ACCIDENTS

- TO TAKE PROACTIVE AND REACTIVE MEASURES ON ALL PROJECTS IN ORDER TO ATTAIN THE GOAL OF ZERO SIGNIFICANT ACCIDENTS
- TO MAKE OUR EMPLOYEES AWARE OF POTENTIAL DANGERS AND PROVIDE THEM WITH THE NECESSARY TRAINING
- TO PROVIDE EMPLOYEES WITH THE REQUIRED PERSONAL PROTECTIVE EQUIPMENT AND TRAIN THEM IN ITS USE
- TO EXCHANCE INFORMATION WITH, AND SUPPORT ALL KINDS OF COOPERATION WITH NEIGHBOURING FACILITIES, LOCAL GOVERNMENT AND OTHER AUTHORITIES CONCERNG THE SUBJECT OF WORK HEALTH AND SAFETY

AWARE THAT A HIGH LEVEL OF QUALITY IS ATTAINED THROUGH EMPLOYEES WHO ARE DEPENDABLE AND WILLING TO FURTHER THE AIM OF QUALITY, KAYA PLAYS CLOSE ATTENTION TO ITS STAFFS' PHYSICAL AND MENTAL HEALTH AND TO CREATING A WORKING ENVIRONMENT THAT WILL FOSTER THESE. THE COMPANY TAKES HEALTH AND SAFETY REQUIREMENTS INTO CONSIDERATION IN NEW INVESTMENTS AND ACTIVITIES, NEVER COMPROMISING EMPLOYEE HEALTH AND SAFETY IN ORDER TO SAVE TIME OR MONEY.

KAYA REQUIRES ITS SUPPLIERS AND PARTNERS TO ACT IN ACCORDANCE WITH THIS MANAGEMENT SYSTEM, AND MAKES EVERY EFFORT TO WORK WITH CONTRACTORS WHO SHARE THIS ATTITUDE

ONE OF OUR MOST IMPORTANT GOALS IS TO ESTABLISH AN ACTIVE "WORK HEALTH AND SAFETY CULTURE" THAT EMPLOYEES AMBRACE VOLUNTARILY.



















RAIN ROPES WEST ROPES LION

ROPES

TURK ROPES



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### **ROPE CONSTRUCTIONS**

### **LAID ROPES**



3 STRAND



6 STRAND

### **PLAITED ROPE**



8 STRAND (SQUARE)

### 12 STRAND BRAIDED ROPES



12 STRAND



12 STRAND (ROUND)

### **DOUBLE BRAIDED ROPES**



DOUBLE BRAIDED (16 - 20 -24 - 32 - 36 - 40 - 48)

### **SOLID BRAIDED ROPE**



SOLID BRAIDED

### PARALLEL STRAND ROPE



PARALLEL STRAND ROPES

### KERNMANTEL ROPE



KERNMANTEL



## PRODUCT NAMES

ART. NO	ROPE NAMES	CORE	INNER COVER
035	DYNE K® WINCHLINE	UHMWPE (DYNEEMA®) FIBER	-
135	DYNE K® LS WINCHLINE	UHMWPE (DYNEEMA®) FIBER	
235	DYNE K® LS PRO WINCHLINE	UHMWPE (DYNEEMA®) FIBER	-
208	LUPA® VIPERA	HIGH TENACITY POLYAMIDE FIBER	-
016	LUPA® SQUARE	HIGH TENACITY POLYAMIDE FIBER	-
216	LUPA® ROUND	HIGH TENACITY POLYAMIDE FIBER	-
305	DYNE K® SHACKLE	UHMWPE (DYNEEMA®) FIBER	-
537	LUPA® COVER	HIGH TENACITY POLYAMIDE FIBER	-
527	LUPES® COVER	HIGH TENACITY POLYESTER FIBER	-
105	DYNE® COVER	UHMWPE (DYNEEMA®) FIBER	-
335	DYNE K® EXTENSION	UHMWPE (DYNEEMA®) FIBER	-



				PRODUCT NAMES
COVER	CONSTRUCTION	PAGE	ART. NO	ROPES NAMES
UHMWPE (DYNEEMA®) FIBER	12 STRAND	16	035	DYNE K® WINCHLINE
UHMWPE (DYNEEMA®) FIBER	12 STRAND	18	135	DYNE K® LS WINCHLINE
UHMWPE (DYNEEMA®) FIBER	DOUBLE BRAID	19	235	DYNE K® LS PRO WINCHLINE
HIGH TENACITY POLYAMIDE FIBER	DOUBLE BRAID	22	208	LUPA® VIPERA
HIGH TENACITY POLYAMIDE FIBER	8 STRAND	23	016	LUPA® SQUARE
HIGH TENACITY POLYAMIDE FIBER	12 STRAND	24	216	LUPA® ROUND
UHMWPE (DYNEEMA®) FIBER	12 STRAND	26	305	DYNE K® SHACKLE
HIGH TENACITY POLYAMIDE FIBER	BRAID	26	537	LUPA® COVER
HIGH TENACITY POLYESTER FIBER	BRAID	27	527	LUPES® COVER
UHMWPE (DYNEEMA®) FIBER	BRAID	27	105	DYNE® COVER
UHMWPE (DYNEEMA®) FIBER	12 STRAND	30	335	DYNE K® EXTENSION







## **DYNE K® WINCHLINE**







APPLICATIONS
WINCHLINE
ATV WINCHLINE

SPECIFICATIONS				
MATERIAL	COATED UHMWPE (DYNEMA® SK 75) FIBER			
SPECIFIC GRAVITY	0,97 KG/DM <sup>3</sup>			
CONSTRUCTION	12 STAND BRAIDED			
UV RESISTANCE	EXCELLENT			
CHEMICAL RESISTANCE	EXCELLENT			
MELTING POINT	147°C			
CRITICAL TEMPERATURE	65°C			
WORKING STRETCH	<1%			
FIBER WATER ABSORPTION	NONE			
WET ABRASION	EXCELLENT			
DRY ABRASION	EXCELLENT			
STANDARD	ISO 10325			
LENGTH	25 M OR 30 M IN BAG			
OTHER COLOURS ON REQUEST				

OTHER	COLOURS	ON REQUEST

ART.NO	DIA	WEIGHT	B.LOAD		
ART.NO	(Ø)	(kg/25m)**	(kg/30m)**	(kgf)*	
035 006	6	1,35	1,50	3.500	
035 008	8	1,80	2,00	6.000	
035 010	10	2,40	2,70	9.200	
035 012	12	3,16	3,60	13.200	
*SPLICED BREAK LOAD (ALL TESTS ARE IN ACCORDANCE WITH ISO 2307)					

















### **BENEFITS / FEATURES**

LIGHT WEIGHT DURABLE VERY LOW STRETCH VERY HIGH STRENGTH 2,4 METER POLYESTER COVER HIGHLY DURABLE THERMO-PLASTIC AQUEOUS PU COATED STEEL TUBE THIMBLE+ POWDER COATED HOOK (HUBERT WALTERMANN)





## DYNE K ®LS WINCHLINE







APPLICATIONS
WINCHLINE
ATV WINCHLINE

SPECIFICATIONS	
MATERIAL	COATED UHMWPE (DYNEMA® SK 75) FIBER
SPECIFIC GRAVITY	0,97 KG/DM <sup>3</sup>
CONSTRUCTION	12 STAND BRAIDED
UV RESISTANCE	EXCELLENT
CHEMICAL RESISTANCE	EXCELLENT
MELTING POINT	147°C
CRITICAL TEMPERATURE	65°C
WORKING STRETCH	<1%
FIBER WATER ABSORPTION	NONE
WET ABRASION	EXCELLENT
DRY ABRASION	EXCELLENT
STANDARD	ISO 10325
LENGTH	25 M OR 30 M IN BAG
OTHER COLOURS ON REQUES	ST Control of the Con

ART.NO	DIA	WEIGHT	B.LOAD		
AKT.NO	(Ø)	(kg/25m)**	(kg/30m)**	(kgf)*	
135 006	6	1,50	1,65	4.000	
135 008	8	2,00	2,25	7.000	
135 010	10	2,65	3,00	10.500	
135 012	12	3,75	4,15	15.000	
*SPLICED BREAK LOAD (ALL TESTS ARE IN ACCORDANCE WITH ISO 2307)					
** THIMBLE & HOOK INCLUDED IN THE WEIGHT					



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LIGHT WEIGHT DURABLE VERY LOW STRETCH VERY HIGH STRENGTH 2,4 METER POLYESTER COVER HIGHLY DURABLE THERMO-PLASTIC AQUEOUS PU COATED STEEL TUBE THIMBLE+ POWDER COATED HOOK (HUBERT WALTERMANN)















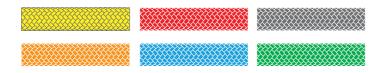


## **DYNE K® LS PRO WINCHLINE**

APPLICATIONS
WINCHLINE

SPECIFICATIONS		
MATERIAL	COVER: COATED UHMWPE (DYNEEMA® SK 75) CORE: COATED UHMWPE (DYNEEMA® SK 75)	
SPECIFIC GRAVITY	0,97 KG/DM <sup>3</sup>	
CONSTRUCTION	DOUBLE BRAIDED	
UV RESISTANCE	EXCELLENT	
CHEMICAL RESISTANCE	EXCELLENT	
MELTING POINT	147°C	
CRITICAL TEMPERATURE	65°C	
WORKING STRETCH	<1%	
FIBER WATER ABSORPTION	NONE	
WET ABRASION	EXCELLENT	
DRY ABRASION	EXCELLENT	
STANDARD	ISO 10325	
LENGTH	25 M OR 30 M IN BAG	
OTHER COLOURS ON REQUEST		

ART.NO	DIA	WEIGHT		B.LOAD
ART.NO	(Ø)	(kg/25m)**	(kg/30m)**	(kgf)*
235 008	8	1,70	2,00	6.000
235 010	10	2,38	2,70	9.200
235 012	12	3,10	3,50	13.200
*SPLICED BREAK LOAD (ALL TESTS ARE IN ACCORDANCE WITH ISO 2307)				
** THIMBLE & HOOK INCLUDED IN THE WEIGHT				









### **BENEFITS / FEATURES**

VERY HIGH STRENGTH EXTREMELY LOW STRETCH LAST LONGER THAN ANY STEEL ROPE MINIMIZED CONSTRUCTION STRETCH HIGHLY DURABLE THERMO-PLASTIC AQUEOUS PU COATED STEEL TUBE THIMBLE+ POWDER COATED HOOK (HUBERT WALTERMANN)







DYNE K® LS PRO WINCHLINE





## **LUPA® VIPERA**







# **APPLICATIONS** KINETIC ENERGY RECOVERY ROPE (KERR)

SPECIFICATIONS		
MATERIAL	100% HT POLYAMIDE FIBER	
TYPE	-	
SPECIFIC GRAVITY	1,14 KG/DM <sup>3</sup>	
CONSTRUCTION	DOUBLE BRAID	
UV RESISTANCE	VERY GOOD	
CHEMICAL RESISTANCE	GOOD	
MELTING POINT	218°C	
CRITICAL TEMPERATURE	130°C	
ELONGATION AT BREAK	APPROX.%30-35	
FIBER WATER ABSORPTION	APPROX. %3-4	
WET ABRASION	FAIR	
DRY ABRASION	EXCELLENT	
COLOUR	BLACK - WHITE - NAVY BLUE	
STANDARD	ISO 10554	
LENGTH	4,5 M - 6M OR 9 M	
OTHER COLOURS ON REQUEST		

ART.NO	DIA	WEIGHT	B.LOAD	LENGTH
AKT.NO	(Ø)	(kg/100m)	(kgf)*	(m)
208 012	12	8,96	3.230	4,5
208 018	18	20,20	7.100	6-9
208 024	24	35,80	13.400	6-9
208 030	30	56,00	20.300	9
208 036	36	80,60	28.700	9
*UNSPLICED BREAK LOAD (ALL TESTS ARE IN ACCORDANCE WITH ISO 2307)				



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### **GUIDELINES & RECOMMENDATIONS**

12 MM ROPES FOR LIGHT WEIGHT VEHICLES, SUBARU (ALL WHEEL DRIVE) 18 MM ROPES FOR LAND ROVER (FREELANDER), TOYOTA RAV4, LOWER WEIGHT PICK UP

24 MM ROPES FOR JEEP (ALL MODELS), LAND ROVER DEFENDER - DISCOVERY - RANGE ROVER, TOYOTA, HUMMER H1-H2-H3, SPORTSMOBILE, HEAVY EXPEDITION VEHICLES

30 MM ROPES FOR MRAP (MILITARY), HEAVY MOTORHOMES, BUSES, COACHES 36 MM ROPES FOR FULL SIZE SEMI TRACKS





### **APPLICATIONS**

### KINETIC ENERGY RECOVERY ROPE (KERR)

SPECIFICATIONS		
MATERIAL	100% HT POLYAMIDE FIBER	
TYPE	L	
SPECIFIC GRAVITY	1,14 KG/DM³	
CONSTRUCTION	8 STRAND PLAITED (4X2)	
UV RESISTANCE	VERY GOOD	
CHEMICAL RESISTANCE	GOOD	
MELTING POINT	218°C	
CRITICAL TEMPERATURE	130°C	
ELONGATION AT BREAK	APPROX.%30-35	
FIBER WATER ABSORPTION	APPROX. %3-4	
WET ABRASION	FAIR	
DRY ABRASION	EXCELLENT	
COLOUR	BLACK - WHITE - NAVY BLUE	
STANDARD	EN ISO 1140	
LENGTH	4,5 M - 6M OR 9 M	
OTHER COLOURS ON REQUEST		

ART.NO	DIA	WEIGHT	B.LOAD	LENGTH
AITT.NO	(Ø)	(kg/100m)	(kgf)*	(m)
016 012	12	8,88	3.000	4,5
016 018	18	20,00	6.875	6-9
016 024	24	35,50	12.000	6-9
016 030	30	55,50	19.000	9
016 036	36	80,00	27.500	9
*UNSPLICED BREAK LOAD (ALL TESTS ARE IN ACCORDANCE WITH ISO 2307)				













### **GUIDELINES & RECOMMENDATIONS**

 $12~\rm MM$  ROPES FOR LIGHT WEIGHT VEHICLES, SUBARU (ALL WHEEL DRIVE)  $18~\rm MM$  ROPES FOR LAND ROVER (FREELANDER), TOYOTA RAV4, LOWER WEIGHT PICK UP

**24 MM** ROPES FOR JEEP (ALL MODELS), LAND ROVER DEFENDER - DISCOVERY - RANGE ROVER, TOYOTA, HUMMER H1-H2-H3, SPORTSMOBILE, HEAVY EXPEDITION VEHICLES

 ${\bf 30~MM}$  ROPES FOR MRAP (MILITARY), HEAVY MOTORHOMES, BUSES, COACHES  ${\bf 36~MM}$  ROPES FOR FULL SIZE SEMI TRACKS







### BENEFITS / FEATURES

HIGH STRENGTH
EXCELLENT SHOCK ABSORPTION
HIGH STRETCH
DURABLE
SOFT HAND
DOES NOT KINK
EASY TO SPLICE

## **LUPA® ROUND**







# **APPLICATIONS** KINETIC ENERGY RECOVERY ROPE (KERR)

SPECIFICATIONS		
MATERIAL	100% HT POLYAMIDE FIBER	
TYPE	Т	
SPECIFIC GRAVITY	1,14 KG/DM <sup>3</sup>	
CONSTRUCTION	12 STRAND BRAIDED	
UV RESISTANCE	VERY GOOD	
CHEMICAL RESISTANCE	GOOD	
MELTING POINT	218°C	
CRITICAL TEMPERATURE	130°C	
ELONGATION AT BREAK	APPROX.%30-35	
FIBER WATER ABSORPTION	APPROX. %3-4	
WET ABRASION	FAIR	
DRY ABRASION	EXCELLENT	
COLOUR	BLACK - WHITE - NAVY BLUE	
STANDARD	-	
LENGTH	4,5 M - 6M OR 9 M	
OTHER COLOURS ON REQUEST		

	OTHER	COLO	URS ON	I REQ	<b>UEST</b>
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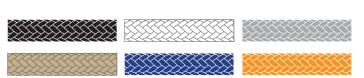
ART.NO	DIA	WEIGHT	B.LOAD	LENGTH
ANT.NO	(Ø)	(kg/100m)	(kgf)*	(m)
216 012	12	8,88	3.000	4,5
216 018	18	20,00	6.875	6-9
216 024	24	35,50	12.000	6-9
216 030	30	55,50	19.000	9
216 036	36	80,00	27.500	9
*LINSPLICED BREAK LOAD (ALL TESTS ARE IN ACCORDANCE WITH ISO 2307)				



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- CO (5		
		-

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DEL	VELL	13/	ГЕН	TI UI	763

HIGH STRENGTH
EXCELLENT SHOCK ABSORPTION
HIGH STRETCH
DURABLE
SOFT HAND
DOES NOT KINK
EASY TO SPICE



### **GUIDELINES & RECOMMENDATIONS**

12 MM ROPES FOR LIGHT WEIGHT VEHICLES, SUBARU (ALL WHEEL DRIVE) 18 MM ROPES FOR LAND ROVER (FREELANDER), TOYOTA RAV4, LOWER WEIGHT

**24 MM** ROPES FOR JEEP (ALL MODELS), LAND ROVER DEFENDER - DISCOVERY - RANGE ROVER, TOYOTA, HUMMER H1-H2-H3, SPORTSMOBILE, HEAVY EXPEDITION

30 MM ROPES FOR MRAP (MILITARY), HEAVY MOTORHOMES, BUSES, COACHES **36 MM** ROPES FOR FULL SIZE SEMI TRACKS



## DYNE K® SHACKLE









BENEFITS / FEATURES
SHACKLES ARE LOADED TO 1/2 OF ITS BREAKING STRENGTH
BUOYANT
VERY LOW STRETCH
LIGHT SHACKLES ARE MADE OF DYNEEMA® WITHOUT METAL PARTS

## APPLICATIONS WINCH SHACKLE

SPECIFICATIONS		
MATERIAL	COATED UHMWPE (DYNEEMA® SK 75) FIBER	
SPECIFIC GRAVITY	0,97 KG/DM <sup>3</sup>	
CONSTRUCTION	12 STRAND BRAIDED	
UV RESISTANCE	EXCELLENT	
CHEMICAL RESISTANCE	EXCELLENT	
MELTING POINT	147°C	
CRITICAL TEMPERATURE	65°C	
WORKING STRETCH	<1%	
WET ABRASION	EXCELLENT	
DRY ABRASION	EXCELLENT	
STANDARD	ISO 10325	
LENGTH	Ø4MM 8 CM - Ø6MM 9 CM - Ø8MM 10,5 CM	
OTHER COLOURS ON REQUEST		

ART.NO	DIA	SWL	B.LOAD	LENGTH
AIT.NO	(Ø)	(kgf)*	(kgf)*	(cm)
305 004	4	475	950	8,0
305 006	6	825	1.650	9,0
305 008	8	1.750	3.500	10,5
305 010	10	3.000	6.000	11,5
305 012	12	4.600	9.200	12,5
*SPLICED BREAK LOAD (ALL TESTS ARE IN ACCORDANCE WITH ISO 2307)				

## LUPA® COVER









BENEFITS / FEATURES
GOOD KNOT RETENTION
SUPPLE SURFACE
SUGGESTED USE FOR FENDERS
EXCELLENT SHOCK ABSORPTION
EASY HANDLING

## APPLICATIONS SPECIAL COVER

SPECIFICATIONS		
MATERIAL	100% HT POLYAMIDE FIBER	
SPECIFIC GRAVITY	1,14 KG/DM <sup>3</sup>	
CONSTRUCTION	24-32 PLAITED	
UV RESISTANCE	VERY GOOD	
CHEMICAL RESISTANCE	GOOD	
MELTING POINT	218°C	
CRITICAL TEMPERATURE	130°C	
WORKING STRETCH	<20%	
WET ABRASION	FAIR	
DRY ABRASION	EXCELLENT	
STANDARD	-	
LENGTH	100-200 M ORANGE SPOOL	
OTHER COLOURS ON REQUEST		

OTHER COLOURS ON REQUEST

ART.NO	DIA	WEIGHT	B.LOAD
ARTINO	(Ø)	(kg/100 m)	(kgf)*
537 008	8	1,95	485
537 010	10	3,15	880
537 012	12	4,50	1.135
537 014	14	6,10	1.625
537 016	16	7,95	2.450
*UNSPLICED BREAK LOAD (ALL TESTS ARE IN ACCORDANCE WITH ISO 2307)			

### **APPLICATIONS** SPECIAL COVER

SPECIFICATIONS		
MATERIAL	100% HT POLYESTER FIBER	
SPECIFIC GRAVITY	1,38 KG/DM <sup>3</sup>	
CONSTRUCTION	24-32 PLAITED	
UV RESISTANCE	EXCELLENT	
CHEMICAL RESISTANCE	GOOD	
MELTING POINT	256°C	
CRITICAL TEMPERATURE	170°C	
WORKING STRETCH	<13%	
WET ABRASION	EXCELLENT	
DRY ABRASION	VERY GOOD	
STANDARD	-	
LENGTH	100-200 M ORANGE SPOOL	
OTHER COLOURS ON REQUEST		

ART.NO	DIA	WEIGHT	B.LOAD	
71111110	(Ø)	(kg/100m)	(kgf)*	
527 008	8	2,50	500	
527 010	10	4,00	900	
527 012	12	5,75	1.150	
527 014	14	7,80	1.630	
527 016	16	10,20	2.450	
*UNSPLICED B	REAK LOAD			



LUPES® COVER



BENEFITS / FEATURES
GOOD KNOT RETENTION
SUPPLE SURFACE
SUGGESTED USE FOR FENDERS
EXCELLENT ABRASION RESISTANCE
EASY HANDLING

## **Dyneema**®

## DYNE® COVER

### **APPLICATIONS** SPECIAL COVER

SPECIFICATIONS	
MATERIAL	100% UHMWPE (DYNEEMA® SK 75) FIBER
SPECIFIC GRAVITY	0,97 KG/DM <sup>3</sup>
CONSTRUCTION	24-32 PLAITED
UV RESISTANCE	EXCELLENT
CHEMICAL RESISTANCE	EXCELLENT
MELTING POINT	147°C
CRITICAL TEMPERATURE	65°C
WORKING STRETCH	<3%
WET ABRASION	EXCELLENT
DRY ABRASION	EXCELLENT
STANDARD	-
LENGTH	100-200 M ORANGE SPOOL
OTHER COLOURS ON REQUES	Т

ART.NO	DIA	WEIGHT	B.LOAD
	(Ø)	(kg/100 m)	(kgf)*
105 008	8	2,00	-
105 010	10	3,00	-
105 012	12	4,30	-
105 014	14	5,80	-
*UNSPLICED B	REAK LOAD		





BENEFITS / FEATURES
IDEAL FOR PROTECTION AGAINST ABRASION
SUPERIOR PERFORMANCE
EASY HANDLING
BUOYANT

LUPES® COVER-DYNE® COVER





## **DYNE K® EXTENSION**







APPLICATIONS
WINCHLINE EXTENSION

SPECIFICATIONS	
MATERIAL	COATED UHMWPE (DYNEEMA® SK 75) FIBER
SPECIFIC GRAVITY	0,97 KG/DM <sup>3</sup>
CONSTRUCTION	12 STRAND BRAIDED
UV RESISTANCE	EXCELLENT
CHEMICAL RESISTANCE	EXCELLENT
MELTING POINT	147°C
CRITICAL TEMPERATURE	65°C
WORKING STRETCH	<1%
FIBER WATER ABSORPTION	NONE
WET ABRASION	EXCELLENT
DRY ABRASION	EXCELLENT
STANDARD	ISO 10325
LENGTH	15M
OTHER COLOURS ON REQUES	ST .

ART.NO	DIA	WEIGHT	B.LOAD
	(Ø)	~(kg/15m)**	(kgf)*
335 008	8	1,20	7.000
335 010	10	1,50	10.500
335 012	12	2,00	15.000
335 014	14	2,50	19.000
*SPLICED BRE	AK LOAD (ALL T	ESTS ARE IN ACCORDAN	ICE WITH ISO 2307)















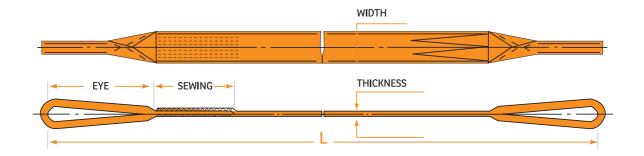
### **BENEFITS / FEATURES**

HIGHER BREAKING STRENGTH
DOES NOT KINK
BUOYANT
EXTREMELY LOW STRETCH
2,4 METER POLYESTER COVER
EASY TO SPLICE
STAINLESS





## **BAND WEBBING SLING**





SPECIFICATIONS						
MATERIAL	100% HT POLYESTER WEBBING					
STANDARD	EN 1492-1+A1					
SAFETY FACTOR	7:1					
BENEFITS / FEATURES						
HIGH QUALITY PRODUCT WITH	THE 7:1 SAFETY FACTOR					
PRODUCE FROM THE HIGH STR	PRODUCE FROM THE HIGH STRENGTH POLYESTER WEBBING					
VARIOUS SIZES AVAILABLE FOR	R EVERY APPLICATION					
SLINGS ARE NOT SLIPPERY						
HIGH RESISTANCE TO CHEMICA	AL AND OIL CONTAMINATION					
CUSTOM MADE SLINGS FOR SPEC SPECIFICATIONS	IFIC APPLICATIONS CAN BE MADE TO CUSTOMER					

			Î	6	U					
		WITH (mm)	working LOAD (kg 100 %)	WORKING LOAD (kg 80 %)	WORKING LOAD (kg 200 %)	ANGLE (0-45°) WORKING LOAD (kg)	ANGLE (45-60°) WORKING LOAD (kg)	BREAKING LOAD (kg)	WORKING LOAD	LENGTH (m)
VIO	LET	30-50	1000	800	2000	1400	1000	7000	1000	1-10
GRI	EEN	70	2000	1600	4000	2800	2000	14000	2000	2-10
YEL	LOW	90	3000	2400	6000	4200	3000	21000	3000	2-10
GRI	EY	120	4000	3200	8000	5600	4000	28000	4000	4-10
REI	)	150	5000	4000	10000	7000	5000	35000	5000	4-10
BRO	NWC	180	6000	4800	12000	8400	6000	42000	6000	4-10
BLU	JE	250	8000	6400	16000	11200	8000	56000	8000	5-10
OR	ANGE	300	10000	8000	20000	14000	10000	70000	10000	5-10

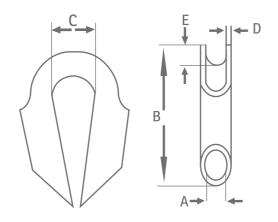
VARIOUS COLOUR ARE AVAILABLE

OUR BAND WEBBING SLINGS ARE SOLD WITH HOOK BRAND HOOK® IS THE REGISTERED MARK OF KAYA GROUP





## **TUBE THIMBLE WITHOUT GUSSET**



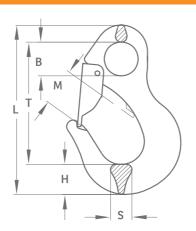


ART NO	ROPE SIZE	Α	В	С	D	E	WEIGHT
	MM	MM	MM	MM	MM	MM	KG
TM-1.10	8-10	11,60	96	22	3,60	5	0,23
TM-1.13	12-14	13,70	96	23	4	5	0,24

## **EYE HOOK TYPE SOB**





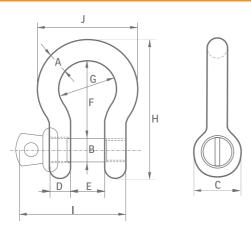




ART NO	SIZE	WORKING LOAD	В	Н	L	М	S	T	WEIGHT
		KG	MM	MM	MM	MM	MM	MM	KG
LH-1.6.8	6-8	1.120	21	20	110	20	17	78	0,30
LH-1.7.8	7 <b>-</b> 8	1.500	23	21	120	23	18	86	0,40
LH-1.8.8	8-8	2.000	27	22	130	25	19	94	0,50
LH-1.10.8	10-8	3.150	32	29	163	32	22	116	0,90
LH-1.13.8	13-8	5.300	37	35	198	40	28	141	1,60
LH-1.16.8	16-8	8.000	51	38	226	42	29	165	2,40
LH-1.18.8	18-8	10.000	57	50	281	60	40	202	4,40



## **GREEN PIN STANDARD SHACKLES**





SPECIFICATIONS	
MATERIAL	BOW AND PIN HIGH TENSILE STEEL, GRADE 6,QUENCHED AND TEMPERED
SAFETY FACTOR	MBL AQUALS 6 x WLL
STANDARD	EN 13889 AND MEETS PERFORMANCE REQUIREMENTS OF US FED. SPEC. RR-C-271 TYPE IVA CLASS 2, GRADE A
FIBER WATER ABSORPTION	HOT DIPPED GALVANIZED
TEMPERATURE RANGE	-20°C UP TO +200°C
CERTIFICATION	AT NO EXTRA CHARGES THIS PRODUCT CAN BE SUPPLIED WITH A WORKS CERTIFICATE, CERTIFICATE OF BASIC RAW MATERIAL, MANUFACTURER TEST CERTIFICATE AND/OR EC DECLARATION OF COMFORMITY

ART NO	WORKING LOAD	Α	В	С	D	E	F	G	Н	1	J	WEIGHT
	KG	MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	KG
SC-7-9-1	750	9	10	20	9	13,50	32	22	56	46,50	40	0,10
SC-7-10-1	1.000	10	11	22,50	10	17	36,50	26	63,50	54	46	0,14
SC-7-11-1	1.500	11	13	26,50	11	19	43	29	74	59,50	51	0,19
SC-7-13.5-1	2.000	13,50	16	34	13	22	51	32	89	73	58	0,36
SC-7-16-1	3.250	16	19	40	16	27	64	43	110	89	75	0,63
SC-7-19-1	4.750	19	22	46	19	31	76	51	129	103	89	1,01
SC-7-22-1	6.500	22	25	52	22	36	83	58	144	119	102	1,50







OVERVIEW PROPERTIES						
FIBERS	POLYAMIDE 6 & 6.6 (PA)	POLYESTER (PES)	MULTIFILAMENT (PP)	POLYPROPYLENE (HIGH TENACITY) (HTPP)		
BRAND NAME	NYLON ® PERLON® ENKALON®	DIOLEN® TREVERIA® DACRON®	HOSTALEN® SOFTLENE® LEOLENE®	LEOLENE® AROVA® BETELON®		
TENACITY OF YARN (CN/DTEX)	7-9	7-9	APP.6	APP.8		
SPECIFIC GRAVITY (KG/DM³)	1,14	1,38	0,91	0,91		
REDUCTION IN TENACITY WHEN WET (%)	10-15	0	0	0		
WATER ABSORPTION (%)	1-7	0,5-2	0	0		
KNOT STABILITY (%)	60-65	55-60	55-65	55-65		
UV RESISTANCE	VERY GOOD	EXCELLENT	GOOD ONLY WHEN TREAT	GOOD ONLY WHEN TREAT		
BREAKING STRETCH (%)	14-28	10-18	14-17	15-16		
CREEP	SLIGHT CREEP UNDER LOAD	HARDLY MEASURABLE	CREEPS AT HIGH LOADS	CREEPS AT HIGH LOADS		
RESISTANCE TO ABRASION	EXCELLENT	EXCELLENT	FAIR	FAIR		
WASHING TEMPERATURE (°C)	50-60	50-60	30	30		
RESISTANCE TO ACIDS (%)	GOOD	GOOD	VERY GOOD	VERY GOOD		
RESISTANCE TO PETROLEUM BASED PRODUCTS	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT		
RESISTANCE TO SOLVENTS	FORMIC ACID & ACETIC ACID AT HIGH TEMPERATURE	PHENOLS, CRESOLS ZINC CHLORIDE	MINIMAL REACTION	MINIMAL REACTION		
RESISTANCE TO ALKALI	GOOD RESISTANT AGANIST WEAK SOLUTIONS	GOOD AT ROOM TEMPERATURE	GOOD RESISTANT AGANIST WEAK SOLUTIONS	GOOD RESISTANT AGANIST WEAK SOLUTIONS		
INSULATING PROPERTIES	VERY GOOD	VERY GOOD	EXCELLENT	EXCELLENT		
HIGHEST TEMPARATURE (°C)	130	170	80	80		
MELTING POINT (°C)	218	256	165	165		

CHEMICAL RESISTANCE								
	TEST (	RESIDUAL STRENGTH						
CHEMICALS	CONCENTRATION	TEMPERATURE	EXPOSURE	TYPE OF FIBRE				
	CHEMICAL TO WATER %	DEG °C	HOURS	POLYAMIDE	POLYESTER	POLYPROPYLENE	ARAMID	НМРЕ
ACIDS								
HYDROCHLORIC	34%	20°C	100	0%	70%	100%	95%	100%
NITRIC	66%	20°C	100	0%	100%	100%	95%	95%
SULPHURIC	96%	20°C	100	0%	100%	100%	40%	90%
FORMIC	90%	20°C	100	0%	95%	100%	90%	100%
ACETIC	100%	20°C	10	85%	95%	100%	100%	100%
ALKALIS								
CAUSTIC SODA	40%	20°C	100	50%	0%	90%	90%	100%
CAUSTIC SODA	20%	70°C	150	100%	0%	100%	85%	90%
CAUSTIC POTASH	40%	20°C	100	90%	0%	90%	90%	100%
SOLVENTS								
TRICHLOROETHYLENE	100%	30°C	150	100%	95%	80%	100%	100%
CARBON TETRACHLORIDE	100%	20°C	150	100%	100%	100%	98%	100%
BENZENE	100%	70°C	150	100%	100%	100%	98%	95%
METACRESOL	100%	100°C	40	0%	0%	100%	80%	100%
OXIDISING AGENTS								
HYDROGEN PEROXIDE	10%	20°C	100	0%	100%	90%	95%	100%
THIS TABLE SHOWS THE F	RESIDUAL STRENGTHS	OF SYNTHETIC F	IBRES AFTER	CHEMICAL E	XPOSURE UN	IDER SPECIFIC CON	IDITIONS.	

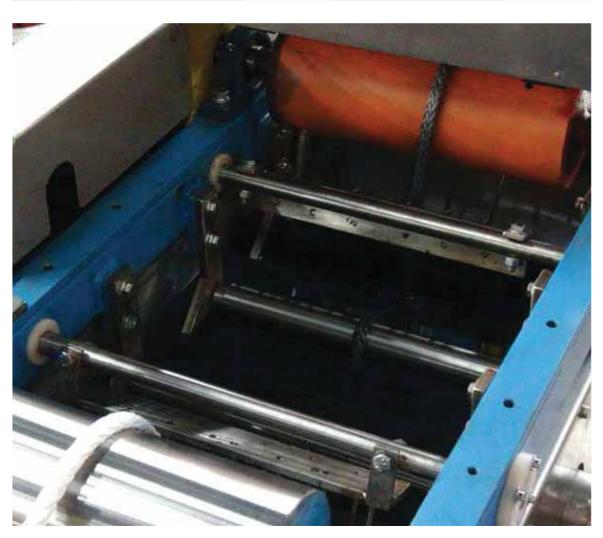
				OVER'	VIEW PROPERTIES
POLYETHYLENE (PE)	HIGH MODULUS POLYETHYLENE (UHMWPE)	ARAMID	LIQUID CRYSTAL POLYMER (LCP)	POLYBENZOXAZOLE (PBO)	FIBER
LUPOLEN® WETALEN®	DYNEEMA® SPECTRA®	TWARON® TECHNORA® KEVLAR® HERACRON®	VECTRAN®	ZYLON®	BRAND NAME
APP.4,5	35	20-25	20	37	TENACITY OF YARN (CN/DTEX)
0,95	0,97	1,44	1,41	1,52	SPECIFIC GRAVITY (KG/DM³)
0	0	0	0	0	REDUCTION IN TENACITY WHEN WET (%)
0	0	2-5	1	0,6	WATER ABSORPTION (%)
50-60	35-50	30-35	30-50	35-55	KNOT STABILITY (%)
GOOD	EXCELLENT	POOR	POOR	POOR	UV RESISTANCE
10-19	3,8	3,4	3,3	2,8	BREAKING STRETCH (%)
CREEPS AT HIGH LOADS	CREEPS AT HIGH LOADS	HARDLY MEASURABLE	IMMEASURABLE	IMMEASURABLE	CREEP
FAIR	VERY GOOD	UNSATISFACTORY	GOOD	UNSATISFACTORY	RESISTANCE TO ABRASION
30	30	80-90	60	50	WASHING TEMPERATURE (°C)
EXCELLENT	EXCELLENT	PARTIALLY GOOD RESISTANCE	EXCELLENT	GOOD	RESISTANCE TO ACIDS (%)
EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	RESISTANCE TO PETROLEUM BASED PRODUCTS
MINIMAL REACTION	MINIMAL REACTION	MINIMAL REACTION	MINIMAL REACTION	MINIMAL REACTION	RESISTANCE TO SOLVENTS
EXCELLENT	EXCELLENT	PARTIALLY GOOD	VERY GOOD	VERY GOOD	RESISTANCE TO ALKALI
EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	INSULATING PROPERTIES
70	70	350	200	500	HIGHEST TEMPARATURE (°C)
140	147	500 DECOMPOSES	300	650 DECOMPOSES	MELTING POINT (°C)

### TYPICAL CHARASTERISTIC OF MATERIALS

TYPICAL CHARASTERISTIC OF MATERIALS							
MATERIALS	SPECIFIC GRAVITY	SPECIFIC MODULUS N/TEX	SPECIFIC STRENGTH N/TEX	DYNAMIC COEFFICIENT OF FRICTION AGAINST METAL	MELTING POINT °C	OTHER CHARACTERISTIC	
POLYESTER	1,38	10	0,84	0,12 - 0,15	256	EXCELLENT WET INTERNAL ABRASION RESISTANCE	
POLYAMIDE	1,14	4	0,84	0,10 - 0,12	218	10-15% WET STRENGTH LOSS. FAIR WET INTERNAL ABRASION RESISTANCE	
POLYPROPYLENE	0,91	8	0,73	0,15 -0,22	165	LOW STRENGTH. FLOAT ON WATER	
POLYPROPYLENE/ POLYETHYLENE (MIXED POLYOLEFIN)	0,92-0,94	9	0,84	0,10 - 0,15	140	BETTER ABRASION RESISTANCE THAN POLYPROPYLENE. FLOAT ON WATER	
POLYESTER/POLYOLEFIN DUAL FIBRES	0,99-1,14	10	0,80	0,10 - 0,15	256 - 140	VERY GOOD WET/DRY ABRASION RESISTANCE.	
POLYAMIDE MONO AND FIBRE MIXTURE	0,98-1,14	4	0,84	0,10 - 0,12	165 - 218	GOOD ABRASION RESISTANCE FOR USE ON WINCHES	
POLYESTER/POLYPROPYLENE MELT MIXTURE	0,99	8	0,80	0,12 - 0,15	173	STRONGER THAN POLYPROPYLENE. FLOAT ON WATER	
ARAMID	1,44	49	2,03	0,15	500	POTENTIAL AXIAL COMPRESSION FATIGUE PROBLEMS, BUT THESECA BE OVERCOME. LONG TENSION-TENSION FATIGUE LIFE	
LCP (LIQUID CRYSTAL POLYMER)	1,40	60	2,40	0,13	300	HIGH STRENGTH AND LOW STRETCH. LONG TERM DURABILITY TO FATIGUE	
UHMWPE (HIGH MODULUS POLYETHYLENE)	0,97	110	3,50	0,07	147	LOW MELTING POINT. FLOAT ON WATER. LONG TENSION-TENSION FATIGUE LIFE	
STEEL WIRE	7,85	26	0,18	0,23	1600	CORRODES. HEAVY. MODERATE TENSION-TENSION FATIGUE LIFE.	



CONVERSION TABLE						
TO CONVERT		MULTIPLY BY	TO CONVERT	MULTIPLY BY		
	POUNDS TO GRAMS	453592	GRAMS TO POUNDS	0,002205		
	POUNDS TO KILOGRAMS	0,4536	KILOGRAMS TO POUNDS	2,20462		
WEIGHT	TONS TO KILOGRAMS	1016,05	KILOGRAMS TO TONS	0,0009842		
	POUNDS TO OUNCHES	16	OUNCHES TO POUNDS	0,0625		
	POUNDS / 100 FEET TO GRAMS / METERS	14,8816394	GRAMS / METERS TO POUNDS / 100 FEET	67,0969		
STRENGTH	KILOGRAMS TO KILONEWTONS	0,0098	KILONEWTONS TO KILOGRAMS	101.972		
STRENGTH	TONS TO NEWTONS	9810	NEWTONS TO TONS	0,000102		
LENGTH	INCHES TO MILIMETRES	25,40	MILIMETERS TO INCHES	0,03937		
	FEET TO METRES	0,3048	METRES TO FEET	3,208		
	FEET TO INCHES	12	INCHES TO FEET	0,833		
	YARDS TO METRES	1,0936	METRES TO YARDS	1,0936		
	YARDS TO FEET	3	FEET TO YARDS	0,3333		
	MILES TO KILOMETRES	1,6093	KILOMETRES TO MILES	0,6214		
	CIRC. INCHES TO DIAMETRE MILIMETERS	8	DIAMETRE MILIMETERS TO CIRC. INCHES	0,125		
AREA	SQUARE FEET TO SQUARE METRES	0,0929	SQUARE METRES TO SQUARE FEET	10,7639		
TILL	SQUARE YARDS TO SQUARE METRE	0,8361	SQUARE METRES TO SQUARE YARDS	1,1960		
VOLUME	GALLONS TO LITRES	4546	LITRES TO GALLONS	0,22		
	DENIER	WT. IN G/9000 M	TEX TO DTEX	10		
TEX-SYSTEM	TEX	WT. IN G/1000 M	DEN TO TEX	0,1111		
	DTEX	WT. IN G/10.000 M	CN/DTEX	GR/DEN		



STANDARDS							
STANDARDS OF ROPES							
EN ISO 9554	FIBRE ROPES - GENERAL SPECIFICATIONS						
EN ISO 1968	FIBRE ROPES AND CORDAGE - VOCABULARY						
EN ISO 2307	FIBRE ROPES - DETERMINATION OF CERTAIN PHYSICAL AND MECHANICAL PROPERTIES						
EN ISO 1140	FIBRE ROPES - POLYAMIDE - 3, - 4 AND - 8 STRAND ROPES						
EN ISO 1141	FIBRE ROPES - POLYESTER - 3, - 4 AND - 8 STRAND ROPES						
EN ISO 1346	FIBER ROPES - POLYPROPYLENE - 3, - 4 AND - 8 STRAND ROPES						
EN ISO 1181	FIBRE ROPES - MANILA AND SISAL - 3,- 4 AND - 8 STRAND ROPES						
ISO 10547	POLYESTER FIBRE ROPES - DOUBLE BRAID CONSTRUCTION						
ISO 10554	POLYAMIDE FIBRE ROPES - DOUBLE BRAID CONSTRUCTION						
ISO 10572	MIXED POLYOLEFIN FIBRE ROPES						
ISO 10325	FIBRES ROPES - HIGH MODULUS POLYETHYLENE - 8 STRAND BRAIDED ROPES, 12 STRAND BRAIDED ROPES AND COVERED ROPES						
ISO 10556	FIBRES ROPES OF POLYESTER/POLYOLEFIN DUAL FIBRES						
EN 1891	PERSONEL PROTECTIVE EQUIPMENT FOR THE PREVENTION OF FALLS FROM A HEIGHT - LOW STRETCH KERNMANTEL ROPES						
EN 892	MOUNTAINEERING EQUIPMENT - DYNAMIC MOUNTAINEERING ROPES - SAFETY REQUIREMENTS AND TEST METHODS						
EN 564	MOUNTAINEERING EQUIPMENT - ACCESSORY CORD - SAFETY REQUIREMENTS AND TEST METHODS						
STANDARDS OF ROPES							
MIL-DTL 24050E	POLYAMIDE FIBRE ROPES - DOUBLE BRAID CONSTRUCTION						
STANDARDS OF SLINGS							
EN 1492-1+A1	TEXTILE SLINGS - SAFETY - PART 1: FLAT WOVEN WEBBING SLINGS, MADE OF MAN - MADE FIBERS FOR GENERAL PURPOSE USE						
EN 1492-2+A1	TEXTILE SLINGS - SAFETY - PART 2 : ROUNDSLINGS, MADE OF MAN - MADE FIBERS FOR GENERAL PURPOSE USE						

### **QUALITY - TEST**

KAYA IS HAVING CERTIFICATED ALL PPE PRODUCTS BY TÜV SÜD – GERMANY AND HAS CE QUALITY ASSURANCE SYSTEM CERTIFICATE ISSUED BY THE SAME NOTIFIED BODY ACCORDING TO ARTICLE 11, B, NO. 1(C) OF COUNCIL DIRECTIVE 89/686/EEC FOR PERSONAL PROTECTIVE EQUIPMENT.

BY THIS CERTIFICATE WHICH REQUIRES PERIODICAL SURVEILLANCE THE NOTIFIED BODY CERTIFIES THAT THE HOLDER OF THIS CERTIFICATE MAINTAINS QUALITY SYSTEM, WHICH ENSURES THAT THE PPE MANUFACTURED CONFORMS TO APPROVED MODEL.

FOR THE PRODUCTS WHICH ARE NOT PPE KAYA HAVE TYPE APPROVAL AND INSPECTION CERTIFICATES FROM GERMANISCHER LLOYD.

KAYA ALSO HAVE AN INTEGRATED MANAGEMENT SYSTEM CERTIFICATE ISSUED BY TÜV THÜRNGEN ACCORDING TO ISO 9001:2008 FOR QUALITY MANAGEMENT, ISO 14001:2004 FOR ENVIRONMENTAL MANAGEMENT AND BS OHSAS 18001:2007 FOR OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT.

KAYA TESTS ITS PRODUCTS IN ITS IN-HOUSE LABORATORY.

ALL KAYA PRODUCTS ARE INSURED AGAINST PRODUCTION DEFECTS BY "PRODUCT LIABILITY INSURANCE"















KAYA YAPI İÇ MİM. TAS. İNŞ. DEN. TAAH. SAN. VE TİC. LTD. ŞTİ.

# MANAGEMENT & PRODUCTION CENTER

YÖNETİM VE ÜRETİM MERKEZİ

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