



*The Name That Assures...*





## About:

Today Kohinoor Wire and Steel Industries Pvt. Ltd. is a pioneer manufacturer of wire products in Nepal. Our philosophy for customer servicing is persistent commitment to quality, focus on R&D supported by well equipped manufacturing facilities and deep understanding of customer needs.

Coupled with our focus on customer, we also believe in creating value for all environment that fosters enterprise within and outside our stakeholders in an the organization.

Based on our above philosophy, we are proud to state our mission and values as under:-

## Mission

Our aim is to build great companies and in so doing, benefit a wide variety of stakeholders, including founding executives, investors, customers, suppliers and employees.

## Vision

- The Company is the model of transparency, professionalism, prudence and innovation.
- The Company will strictly follow the rules and the laws of the land.
- The Company is managed by young, innovative, highly skilled and highly educated professionals.
- The Company is giving more priorities to women, managers and professionals.

## Our Core Values

### Innovation

- We encourage innovation by exchanging cultural knowledge and wide variety of employee experiences.
- We constantly seek better ways of doing things by upgrading our operations and platforms.
- We fund and stream line innovative ideas.

### Alliances

- We enter into global alliances to adapt their expertise into our local and regional operations.
- We team up with partners, while maintaining our inherent societal norms and traditions.

### Integrity

- We observe accuracy, completeness and confidentiality in all client information and data we process.
- We foster our business by maintaining best practices and high professional ethics.

### Team Value

- We work together towards a common vision.
- We operate in a friendly environment where we give and receive advice to reach the organizational goals.

### Social Responsibility

- We strive to implement our corporate social responsibility (CSR) program to pay back to the community we operate in.

## Positioning Statement

Kohinoor Wire and Steel Industries, seeks to be responsible player in the society. This corporate social philosophy is the overriding factor in all of its dealings with associate companies and enterprises. Kohinoor is involved with those business visionaries and makers that have confronted troubles in their operations and their slant toward corporate social obligation. Kohinoor looks to be their backing by helping them in their restoration and rebuilding, or opening new pursuits if important, furthermore giving venture.

Kohinoor intends to assemble an independent, socially and monetarily created society. Morals have been a main impetus behind the organization as it develops in the following years. Kohinoor has faith in helping individuals accomplish their goals.

## Social Philosophy

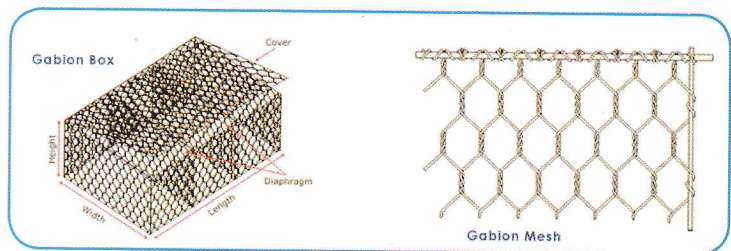
Kohinoor is looking forward to take part in activities to deal with the social organizations, with an intention to give support and services to the underprivileged. Kohinoor looks to change the observation that training to all are not a benefit but rather a privilege. All associate companies of Kohinoor has signed a social code of conduct which provides education to children, providing lawful wages, and health insurance to all its employees and their children. Kohinoor gives priorities to women investors, managers and professionals in business and economy seeking equality and empowerment.

## Our Products Gabion Boxes

Gabion Boxes are steel wire cages designed to contain stones available at the site to abate destructive forces of erosion. As per NS 163 & 169-2045.

Double-twisted wire mesh, is a no raveling mesh made by twisting continuous pairs of wires through three one-half turns (commonly called double twisted) to form hexagonal - shaped openings which are then interconnected to adjacent wires to form hexagonal openings.

Double twisted wire mesh contains of variable size, uniformly partitioned into internal cells, interconnected with other similar units and filled with the stone at the project site to form flexible, monolithic structures such as retaining walls, sea walls, channel linings, revetments, and wires for erosion control projects.

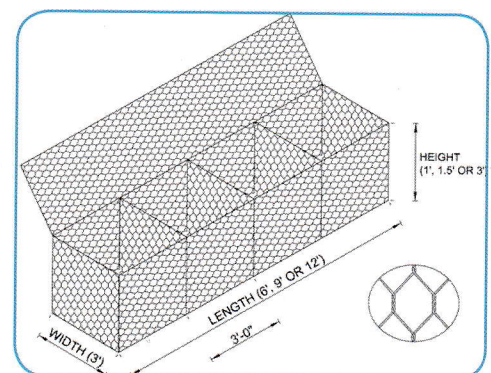


## Advantages of gabion boxes

Gabions have a number of advantages over other types of construction materials, particularly for installations on unstable foundations.

### Strength

The gabion boxes and mattresses made of hexagonal double twisted wire mesh provide adequate strength to the structure to withstand forces generated by retained earth and flowing water.



## Flexibility

The flexibility of the double twisted hexagonal mesh helps in withstanding differential settlement without fracturing the structure particularly when a structure is installed on unstable and uneven ground or in an area where scours from waves or current can undermine etc.

## Permeability

The permeable nature of the gabion eliminates build up of hydrostatic pressure behind the retaining structure and also uplifts caused by turbulent flows. Hence the thickness of the required structure is significantly reduced.

## Durability

Gabion structures are heavy monolithic gravity units able to withstand earth's thrust. It's efficiency increases instead of decreasing with age since further consolidation takes place as silt and soil collect on the voids and vegetation establishes itself.

## Economy

The gabion boxes and mattresses are more cost effective and efficient structures compared to any other rigid structures for similar function.

- Gabion can be installed on a reasonably plain surface, does not require heavy foundation preparations.
- Does not require skilled labour due to its simple construction and assembly at site.
- Does not require any permanent drainage system
- Ease of handling of large elements results in substantial increase in speed of construction, accelerating completion dates.

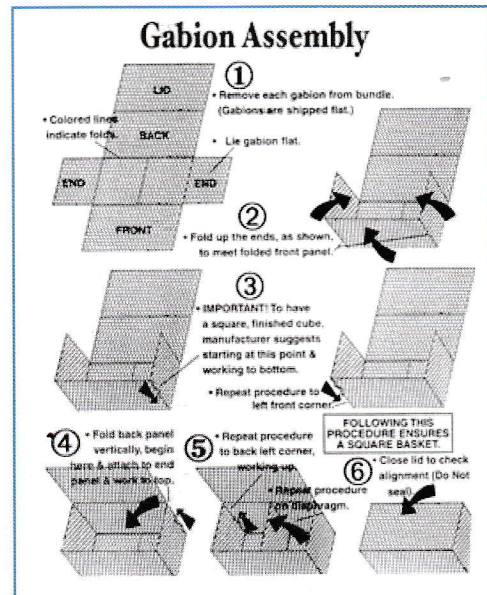
## Ecology

Gabion structures permit the growth of vegetation and maintain the existing environment.

## Why Kohinoor Gabions?

Gabion structures permit the growth of vegetation and maintain the existing environment.

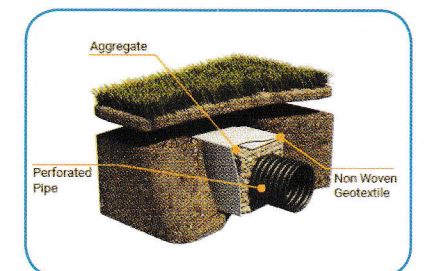
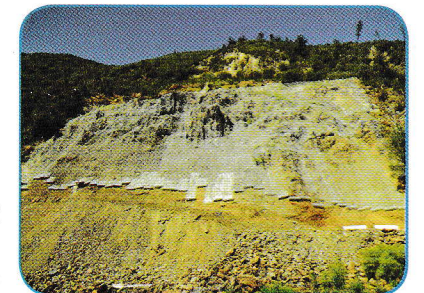
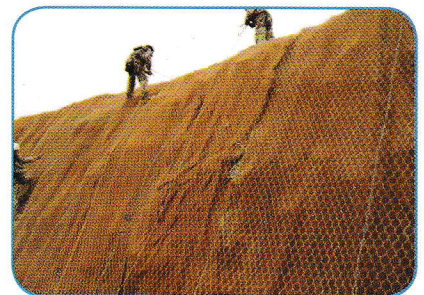
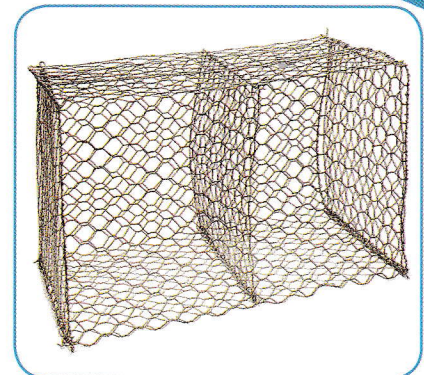
- High Quality Product by the specialist in the wire industry since many decades.
- Wide range of Box sizes to meet the exact requirement.
- Early delivery
- Less freight anywhere in country as factory is located centrally in our country.
- Procure best raw material in the country.
- Use all indigenous material.



Specification		
Nepal Standard	NS	163&169-2045
British Standard	BS	1052
American Standard	ASTM	A641, A975, B117, D412, D1242 & D1499
Indian Standard	IS	4826

Mass of Zinc & Tensile Strength						
Diameter of Wire in mm	2.2	2.4	2.7	3	3.4	3.9
Tolerance of Wire Diameter (+-mm)	0.06	0.06	0.08	0.08	0.1	0.1
Minimum Mass of Zinc Coating(gm/m <sup>2</sup> )	240	260	260	275	275	290
Maximum Tensile Strength	350-550 N/mm <sup>2</sup>	350-550 N/mm <sup>2</sup>	350-550 N/mm <sup>2</sup>	350-550 N/mm <sup>2</sup>	350-550 N/mm <sup>2</sup>	350-550 N/mm <sup>2</sup>

Type and Sizes of Kohinoor Machine Made Gabions						
S.N	Mess Type	Type of Zinc Coating	Wire Diameter (mm)			Box Size
			Mess	Selvage	Lacing	
1	10X12 Hexagonal	Heavy Coated	3	3.9	2.4	Length =1m to5m Breath = 1m to 3m Height = 0.3 to 2m
2	10X12 Hexagonal	Heavy Coated	2.7	3.4	2.2	Length =1m to5m Breath = 1m to 3m Height = 0.3 to 2m
3	10X12 Hexagonal	Heavy/Medium Coated	10SWG	8SWG	12SWG	Length =1m to5m Breath = 1m to 3m Height= 0.3m to 2m



## Rock Fall Netting

Kohinoor High-Resistance Rock Fall Netting is ideally suited for difficult solutions to rock face problems, since the double-twist, hexagonal-woven mesh do not unravel when some wires break. This is achieved by joining together rolls of mesh fabric with lacing wire and using it as a blanket to cover slopes obstructing rock falls. Fractured stones are trapped and confined against the slope should isolated wires fatigue from prolonged stress. This solution can also help in establishing and protect infrastructure.

Additionally, this double-twisted hexagonal type of netting has the high mechanical resistance required to prevent the danger of sudden rock shock loads and dissipate rock fall energy created from loose fractured rock.

The widening of existing roads and the opening of new roads and highways must accommodate modern transportation demands. For this reason we are faced with the problems of protecting the roadside from rockslides in a safe and efficient manner.

Mesh Size available: 100mm X 120mm

## Geotextile

Geotextile is made of a planer, porous, polymeric textile material that may be non-woven Geotextile, knitted Geotextile or woven Geotextile and has applications to be used in contact with soil, rock, and other geotechnical material in different civil engineering applications. The



main function is to provide good separation, filtrations, protection, drainage and reinforcement thereby increasing the life of structure.

## **Applications**

The Geotextiles are widely used in many civil engineering and industrial applications. Some of Our products are used in various applications:

### **Geotextile-Roads**

Geotextiles provide three main functions to the roads:

#### **Separation**

Woven Geotextile and non-woven Geotextiles provide long-term separation of the aggregate base from the subgrade soil. By separating these two materials, the Geotextile maintains the original thickness of the roadway aggregate. This is the most important Geotextile function for roads, particularly where the road is being constructed on weak subgrade soils.

#### **Filtration and Drainage**

Geotextile allows the ground water to pass into the subsurface drain without eroding the soil and helping the ground from deterioration making the life of the roads very long.

#### **Stabilization**

Higher strength PP and polyester woven geotextiles provide strength to the roads thus making it increment in the effective bearing capacity of low strength sub-grade soils and increase the life of the roads.

### **Geotextile-Railways**

In Railway tracks the use of high strength woven geotextiles increases the periods between track maintenance. They are placed between the existing formation and the ballast layer to prevent the sub-grade from pumping in to the ballast layer, thereby maintaining structural integrity.

### **Geotextile-Erosion Control**

Geotextiles prevent the erosion of soil on the slopes and hilly areas. Nonwoven Geotextile will give effective drainage for water flow and on other side it will prevent the soil particle from washing out.

### **Geotextile-Paved / Unpaved/ Repaved surfaces**

Geotextiles prevent the erosion of soil on the slopes and hilly areas. Nonwoven Geotextile will give effective drainage for water flow and on other side it will prevent the soil particle from washing out. In unpaved roads Deploying geotextiles over soft sub--grades helps to reduce construction and the maintenance cost of access and haul road by spreading the applied load over wider area, reducing the rut depth and preventing aggregate contaminations.

### **Geotextile-Airport Runways**

High tensile Geotextile woven fabrics are used in runways for reinforcement. Non woven Geotextiles are used for drainage blankets and for filtration purpose. Geotextile-Retain Soil Wall Woven high strength Geotextile can be used to construct reinforced soil retaining wall.

### **Geotextile-Embankment**

Woven high strength Geotextile placed on soft ground, allows stable embankment to be constructed safely, rapidly and economically.



## Geotextile-Water Proofing

Non-woven Geotextile can be used as a barrier and insulation. It helps in water proofing of Dams, Canals, Basements, Malls, Gardens, Terraces, storage ponds car parks and many more.

## Geotextile-Landfill and Waste Management

Woven high strength Geotextile is placed on top of or adjacent to a close Landfill helping integrity of a new liner system. Non woven Geotextile can filter soil and waste by allowing water and leachate to pass

## Geotextile-Ground Development

Geotextiles are used in all types of sports field, golf courses, reservoirs tunnels, petro-stations, Industrial Buildings etc.

## Geotextile-Landscaping

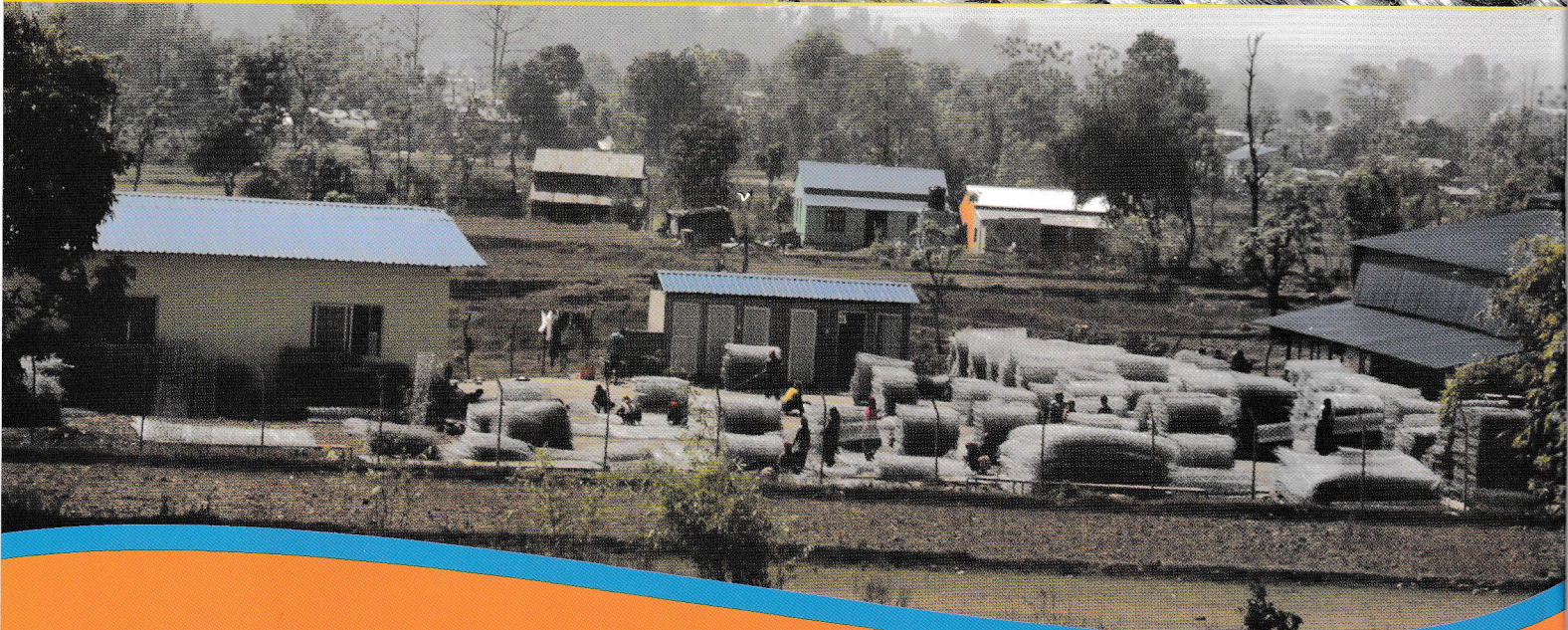
Nonwoven Geotextile Fabric offers excellent water and air permeability and conforms easily to the ground for quick installation. They offer the most popular range of landscape fabric and are available in a variety of constructions. These include needle punched or heat bonded Polypropylene Geotextile Fabrics, Spun Bonded Polyester Geotextile, coated and laminated Nonwoven Geotextile etc.

## Geotextile-Agriculture

Black woven PP fabrics are used under the ground for weed control. It is highly used in agriculture and horticulture industry.

Specification									
Technical Date Sheet									
GRADE	TEST METHOD	UNIT	GT-111	GT-421	GT-520	GT-201	GT-P30	GT-401	GT-501
MASS	ASTM D5261/EN 9864	gm/m <sup>2</sup>	125	150	200	260	300	400	510
THICKNESS	ASTM D5199/EN9863	mm	1.2	1.4	1.7	2.0	2.1	2.5	2.8
WID WITH TENSILE STRENGTH(MD)	ASTM D4595/EN10319	KN/m <sup>2</sup>	3.5	4.0	6.5	9.5	10.5	14.0	16.0
WID WITH TENSILE STRENGTH(CD)	ASTM D4595/EN210319	KN/m <sup>2</sup>	4.0	4.5	8.5	12.5	13.0	16.5	19.0
WID WITH TENSILE STRENGTH(ND)(CD)	ASTM D4595/EN10319	%	50/50	50/50	50/50	50/50	50/50	50/50	50/50
GRAB TENSILE STRENGTH (MD)	ASTM D4632/EN13934	N	200	250	400	550	620	800	1000
GRAB TENSILE STRENGTH (CD)	ASTM D54632/EN13934	N	220	260	450	680	730	900	1100
TRAPEZOIDAL TEARING STRENGTH (MD )	ASTM D4533/EN9073	N	110	130	210	280	300	400	430
TRAPEZOIDAL TEARING STRENGTH (CD)	ASTM D4533EN/9073	N	130	150	250	350	380	450	480
MULLEN BURST STRENGTH	ASTM D3786/...	PSI	105	125	180	240	250	340	380
CBR PUNCTURE STRENGTH	ASTM D6241/EN 12236	N	700	825	1350	188	1900	2400	2900
UV RESISTANCE	ASTM G 154/EN 12224	500 HOURS	≥50%	≥50%	≥50%	≥50%	≥50%	≥50%	≥50%
APPARENT OPENING SIZE (AOS)	ASTM D4751/EN 12956	μ	250	250	212	150	125	125	9
PERMITIVITY	ASTM D4491/...	s <sup>-1</sup>	0.3	0.3	0.28	0.25	0.25	0.20	0.20
FLOWNRATE (5CMHEAD)	ASTM D4491/EN 11058	L/S/M <sup>2</sup>	15.5	15.5	14.0	12.5	12.5	10.0	10.0
PERMEABILITY	ASTM D4491/EN 11058	Cm/s	0.036	0.036	0.047	0.050	0.052	0.050	0.056

**Note:** The above Values are derived in compliance with ASTM D4439 and ASTM D4354. Kohinoor non wovens solely reserves full right to alter /modify the above-reported values without having any obligation to any agency using the above information in any from whatsoever. Given values are TYPICAL (average) values. while the information is presented as a true and accurate representation of the products to the best of our knowledge no expressed or implied warranties are made and Kohinoor non wovens assumes no responsibility or liability with regard to the use of this information. The values are average roll values in which all the properties are having -10% tolerance except elongation, permittivity, flow rate, permeability & AOS which are +/-30% tolerance values ("≥" symbol represents greater than and equal to. Minus tolerance is not applicable to these values.)



**Head Office:**

S2-Second Floor, Star Mall, Putalisadak, Kathmandu, Nepal

**Factory:**

Devchuli-5, Nawalparasi, Nepal

Tel : +977

9802097266/9851162379

Email: [info@kohinoorwires.com.np](mailto:info@kohinoorwires.com.np)