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HS HYOSUNG ADVANCED MATERIALS

The Perfection For Human Safety And Comfort

Tire & Industrial Reinforcements

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HS HYOSUNG ADVANCED MATERIALS

Tire & Industrial Reinforcements



Creating Value Together

HS HYOSUNG's Leading Star, Value Tree

HS HYOSUNG's symbol, 'MASTERIA,' is an inspired fusion of 'MATERIA,' Latin for origin and tree (or forest), and 'ASTER,' the goddess of the stars. It further resonates with the multifaceted meanings of 'MASTER' and 'MATERIAL.' This emblem draws its inspiration from 'Hyosung' - the 'Leading Star' that guides us at the break of dawn - and the 'Value Tree,' which symbolizes a diverse array of values nurtured through tenacious vitality and enduring growth. MASTERIA reflects our vision to steer the world and our lives towards a more valuable and meaningful direction.

Discover New Safety, New Comfort

Global Market No.1

PET Tire cord
Seatbelt Yarns
Airbag Fabrics

The future of industry growing based on advanced materials

Based on its excellent technology that enabled Korea's first production of Nylon tire cords (a key material for tire reinforcements) in 1968, HS HYOSUNG ADVANCED MATERIALS has produced high-intensity industrial yarns, textiles and steel wire materials for various industries such as automobile, civil engineering and agriculture.

HS HYOSUNG ADVANCED MATERIALS develops the best materials for essential industries encompassing automobile, defense, construction and logistics and even covering sports and leisure to enhance the quality of our lives. Our materials help create a safe and comfortable life with the high performance and quality.
On top of that, we aim to protect the environment and pursue a clean future by developing eco-friendly materials and implementing sustainable manufacturing processes.

HS HYOSUNG ADVANCED MATERIALS would like to go one step further by promising a coexistence of stakeholders, local and global communities and a value-driven development for a safe and comfortable life.
This is the way we seek for to create values beyond customer expectations.

Tire reinforcement material used in more than 50% of passenger car tires worldwide



We maintain the No.1 position in terms of global market share with the integrated production and supply systems for tire reinforcements at the largest scale across the world.

Sustainable Technical Yarns with Versatile Uses



Utilizing the advanced technology with which the first airbag fabric in Korea was developed, the company produces and exports sustainable Technical yarns for versatile uses.

The World's First PET Automotive Carpet



Applauded for its best quality in Korea of commercial and automotive carpets, the company has succeeded to mass-produce the world's first polyester automotive carpet.

High-Performance New Material - TANSOME®



TANSOME® is a material used for automobiles increasingly becoming lighter. Recognized for its excellent strength and stability, it is now widely utilized in the eco-friendly energy industry.

Super Fiber ALKEX®



The Aramid yarn, developed with the company's own technology and commercialized successfully, is actively utilized for industrial uses including ballistic and automobiles.

The World's Largest Airbag Fabric Maker - GST



GST is the world's largest airbag producer with the biggest global market share and is also selected by globally renowned automakers such as Autoliv, ZF and Toyota.

Tire reinforcement materials with solid technology

HS HYOSUNG ADVANCED MATERIALS began its tire reinforcement material business in 1968 by producing Korea's first Nylon Tire cord. Since then, it has produced not only PET Tire cord as well as steel cord and bead wire, establishing itself as a global leader with both production and supply systems.

Its PET Tire cord remains the top spot in the global market share and is supplied to leading tire manufacturers worldwide.

After an open-ended dedication to tire reinforcement materials, HS HYOSUNG ADVANCED MATERIALS has become a top company with overwhelming competitiveness through its excellent technology and quality, which are recognized worldwide.



HS HYOSUNG Tire & Industrial Reinforcements Top6 Strength

Total Solutions
Development, production, and supply of textile and steel tire reinforcement materials

No. 1 in Global Market Share
One in two passenger car tires in the world uses HS HYOSUNG PET Tire cord

A Leader in Tire Cord
From research and development to production and supply of textile and steel Tire cord

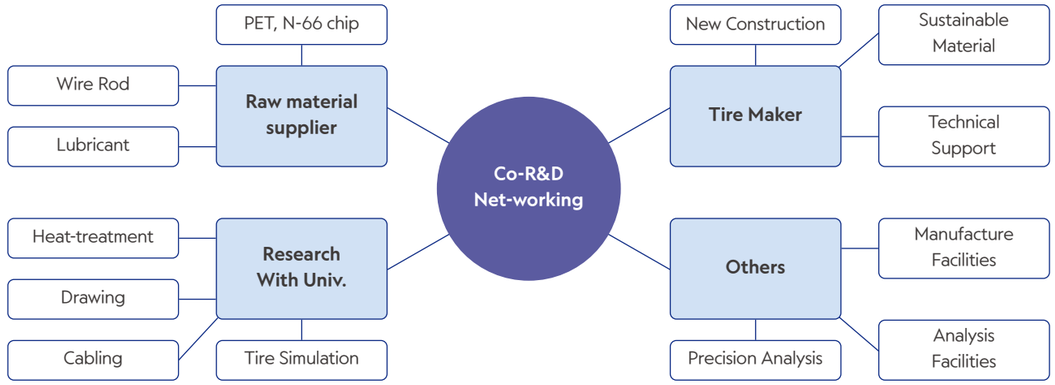
Global Production Solutions
Six factories in four countries worldwide to supply high-quality products at competitive prices

Globally Recognized Quality
ISO, IATF16949 quality certification, and Korea's first ISCC Plus certification

World-class Research Technology
Globally dominant R&D technology

Co-R&D Net-working

The Tire Reinforcement Material PU in HS HYOSUNG ADVANCED MATERIALS provides comprehensive support and customized solutions for customers' various needs.



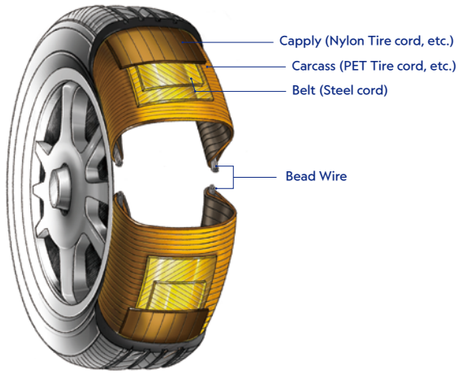
No. 1 in global market share

Textile tire reinforcement materials

Dominant and unchallenged technological prowess

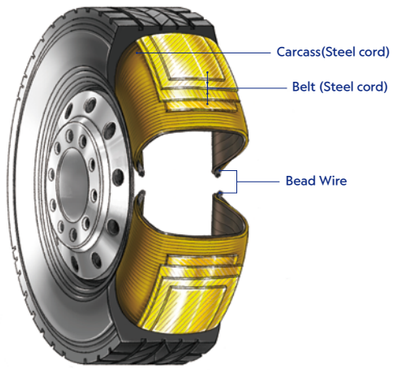
Steel tire reinforcement material

PCR & LTR Tire



Type		Materials
Carcass	Textile	PET, Lyocell
Belt	Steel	Steel cord
Capply	Textile	Nylon-66, Hybrid(Aramid+N-66), PET
Bead	Steel	Bead wire

TBR Tire



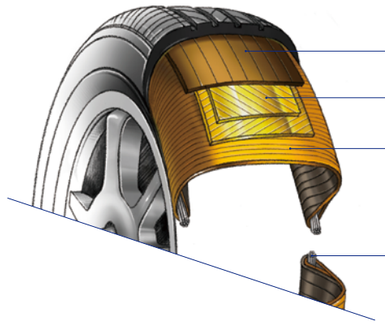
Type		Materials
Carcass	Steel	Steel cord
Belt	Steel	Steel cord
Bead	Steel	Bead wire
Others	Textile	Nylon-66, PET, Aramid

Others

: OTR, Motorcycle, Bike tire reinforcement

The Innovator of Future Materials for Every Generation

HS HYOSUNG's Strategy (Sustainable materials)



>> For Capply cord

Nylon-66 (Petro) → PET for Capply (Recycled, Bio-based)

Nylon-66 (Petro) → Bio-Nylon (Nylon-4,10, Nylon-5,6)

>> For Belt cord

Steel cord → Recycled steel cord (EAF)

>> For Carcass cord

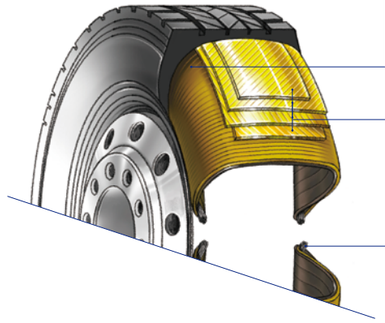
PET (Petro) → Recycled PET

PET (Petro) → Bio-based PET

Rayon → Lyocell

>> For Bead wire

Bead wire → Recycled bead wire (EAF)



>> For Carcass (#1, #2, #3. #4)

Steel cord → Recycled steel cord (EAF)

>> For Belt (#1, #2, #3. #4)

Steel cord → Recycled steel cord (EAF)

>> For Bead

Bead wire → Recycled bead wire (EAF)

Tire & Industrial Reinforcements
Textile Tire cord

Textile Tire Cords
determines the durability and performance of tires

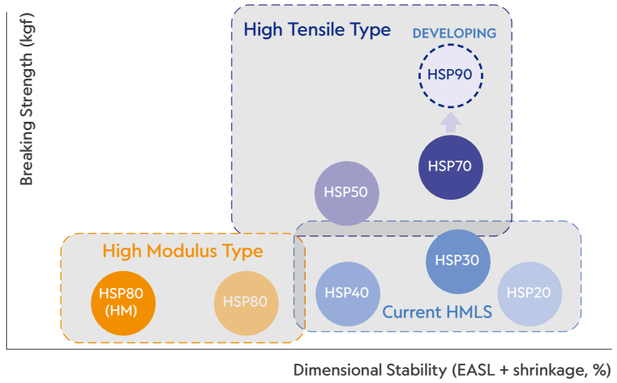
HS HYOSUNG's textile tirecord has superior physical properties, excellent adhesion to rubber, and fatigue resistance, and it is used as reinforcement materials in various tires (PCR, LTR, TBR, Bias tires, etc.).
Based on its dominant technologies, HS HYOSUNG ADVANCED MATERIALS has continuously supplied various tirecords to top-tier global tire makers for over 50 years.



Commercial Products (Tire cord)

PET Tire cord

HS HYOSUNG ADVANCED MATERIALS' PET Tirecord is a world-class product with high strength, excellent dimensional stability, and strong adhesive properties.



Portfolio

Yarn Type		Titer Range (Denier)					
		850	1000	1300	1500	2000	3000
HSP30	Non-AA	●	●		●	●	
HSP40	Non-AA		●	●	●	●	●
	AA			●		●	
HSP50	Non-AA		●	●	●	●	●
HSP70	Non-AA	●	●	●	●	●	●
HSP80	Non-AA		●		●	●	●
HSP90	Non-AA		●		●		

* AA : Adhesive Activated
* Non-AA : Non-Adhesive Activated

Properties

Yarn Type	Dipped Cord (1500d/2)		
	Breaking Strength (kg)	EASL + Shrinkage (%)	Twist (T/10cm)
HSP-30	23.0	6.3	37
HSP-40	22.0	5.8	38
HSP-50	24.0	5.6	36
HSP-70	25.5	6.0	37
HSP-80	22.0	5.1	37
HSP-90	26.5	6.2	37

* General specification are given, all properties are adjusted to customer's specifications.

Nylon-66 Tire cord

Portfolio

Yarn Type	Titer Range (Denier)				
	420	840	1260	1680	1890
HT	●	●	●	●	●
SHT			●		●
High LASE	●	●	●		

Properties

Yarn Type	Yarn Tenacity (g/d)	Dipped Cord (1260d/2*37T/10cm)		
		Breaking Strength (Kgf)	EASL (%)	Elongation (%)
HT	10.3	23.0	9.0	21.5
SHT	11.0	26.0	9.0	20.0
High LASE	10.3	23.0	7.0	17.0

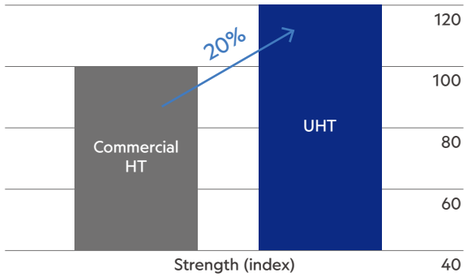
* General specification are given, all properties are adjusted to customer's specifications.

Advanced Products (Tire cord)

Advanced PET Tire cord

UHT PET cord

UHT PET cords, which has excellent fatigue resistance and high strength, is advantageous for securing performance while reducing tire weight.



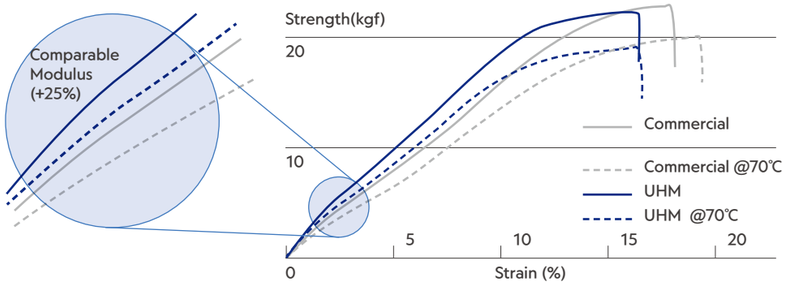
Tire weight reduced by 2~6%
Less use of tirecord & rubber

Sustainability
Reduced CO_2 emissions due to reduced use of tirecord and rubber

Improved RRc performance

UHM PET cord

This product has a higher modulus than commercial PET and maintains a high modulus even at high temperatures. It is advantageous for securing tire performance such as handling and can replace Rayon cords.

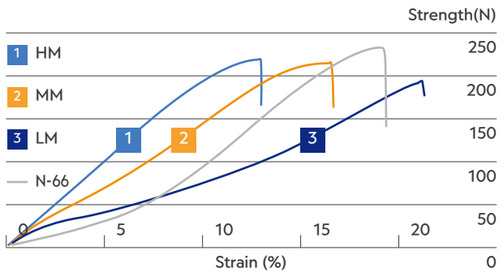


- Replace rayon cords
- Better tire performance (Flat-spot, Ride & Handling)

Nylon replacing PET cord

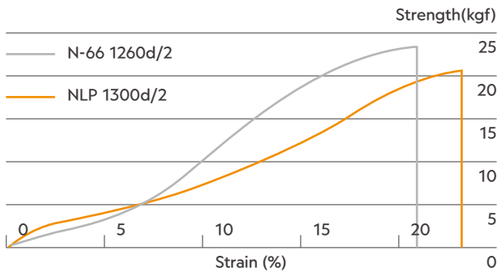
PET cord for capply

By applying the premium recipe developed by HS HYOSUNG ADVANCED MATERIALS, PET capply cord can secure excellent heat-resistant adhesive strength and fatigue resistance.



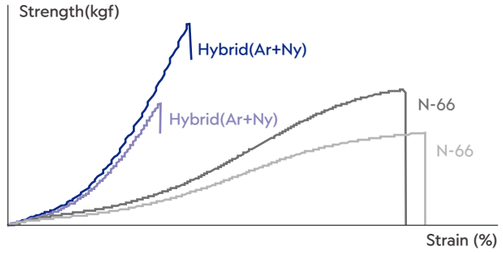
HSP-N

HSP-N is a PET cord with high initial modulus and heat/fatigue resistance properties and can replace Nylon-6 and Nylon-66.



Hybrid & Aramid Tire cord

Aramid Tirecord has outstanding strength and heat resistance and is powered by the excellent technology of HS HYOSUNG ADVANCED MATERIALS. Hybrid Tirecord, designed to maximize the strengths of each material, can be produced using various materials produced by HS HYOSUNG ADVANCED MATERIALS and can be customized according to customer demand performance (e.g., modulus and tenacity).



Material	Denier range (Denier)			
	840	1260	1680	1890
Nylon-66	O	O	O	O

Material	Denier range (Denier)	
	1000	1500
Aramid	O	O

* HS HYOSUNG has Aramid, N-66 production (yarn) facilities for a wide range of denier construction.

Eco-friendly Tire Cord (Sustainable Materials)

HS HYOSUNG ADVANCED MATERIALS, an eco-friendly company, develops and produces eco-friendly tirecords that replace commercial products, such as Lyocell, Recycled PET (mechanical, chemical), Bio-based PET, and Bio-based Nylon.

Lyocell Tire cord

Lyocell Tirecord is environmentally friendly, from raw materials to manufacturing methods. It was developed using HS HYOSUNG ADVANCED MATERIALS' proprietary technology for global tire makers.

Bio-Based Tire cord

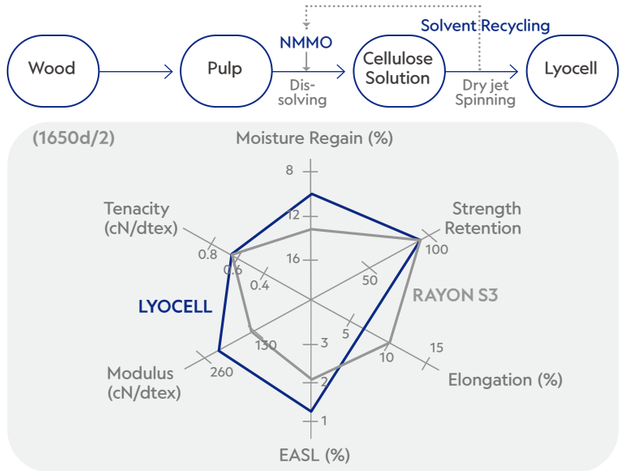
(Bio-Based PET, Bio-Based Nylon)
It is made from natural raw materials extracted from plants, such as bio-based PET and bio-based Nylon, to reduce CO2 emissions compared to conventional products.

Recycled PET Tire cord

There are two methods for manufacturing recycled PET using discarded PET bottles: mechanical recycling and chemical recycling. HS HYOSUNG ADVANCED MATERIALS develops and produces recycled PET tirecord.

Lyocell Tire cord

HS HYOSUNG offers products (Lyocell yarn) in customized denier (from 1100denier to 4400denier) to meet customized needs.
- Under 2200denier : 900 filaments
- Above 2200denier : 1800 filaments



Portfolio

Yarn Type	Denier range		
	1100	1650	2200
E-Type	●	●	●
M-Type		●	

Properties

Yarn Type	Yarn Properties (Dry 1650D)		
	Tenacity (g/d)	EASL (%)	Elongation (%)
E-Type	6.2	1.3	6.5
M-Type	6.9	1.0	3.7

* General specification are given, all properties are adjusted to customer's specifications.

Tire & Industrial Reinforcements
Steel cord & Bead wire

Steel cord & Bead wire
enables faster and more stable driving.

Steel tirecord serves as a framework to maintain and support the tire structure, ensuring vehicle stability even at high speeds. HS HYOSUNG ADVANCED MATERIALS is the top tier UT(ultra tensile strength) steel cord supplier with an optimized production process and advanced technology facilities.



Steel cord

Steel cord manufacturing requires strict process control, such as adhesiveness with rubber, strength, and fatigue resistance. It is mainly used in the belt and carcass of tires, increasing the tire strength to withstand impact from the road surface, and acts as the tire frame to support the outside load. Focusing on developing high-strength products due to the expansion of electric vehicles, we have developed recycled steel cords in line with the global eco-friendly trend. In addition, we are accumulating various product development and facility development technologies based on our primary research.

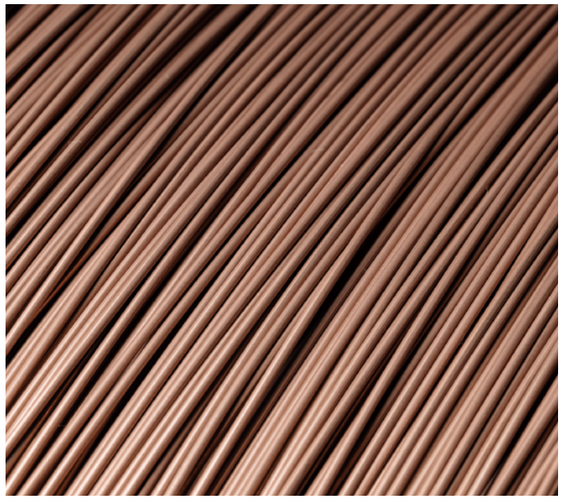
UT(Ultra Tensile strength) Steel cord

HS HYOSUNG's ultra-tensile-strength steel cord holds a substantial global market share.
As demand for high-strength steel cords to reduce tire weight grows due to the expansion of the electric vehicle market, we are developing innovative UT steel cords with global tire makers.



Bead wire

Bead wire secures the carcass which withholds the internal pressure of the tire from the vehicle's weight.
The driving/braking/steering force to the road by pressing the tire to the rim.
HS HYOSUNG ADVANCED MATERIALS' bead wire is produced in various lengths and diameters and customized according to a wide range of customers' needs.
In addition, to respond to customers' needs for eco-friendly products, we conduct continued research and development and have developed and supplied recycled bead wires to meet customers' requirements.



Recycled Steel cord & Bead wire

Conventional wire rods, the raw materials for steel cords and bead wires, are produced by melting iron ore in a blast furnace, emitting significant greenhouse gases. However, wire rods made with eco-friendly electric arc furnaces use scrap iron as raw material, resulting in low carbon emissions and better resource recycling.
HS HYOSUNG ADVANCED MATERIALS develops and supplies products using wire rods from eco-friendly electric arc furnaces.



Steel cord | Steel Properties & Specifications

Passenger Car

Construction	Tensile Grade	General use	Breaking Force (Min. N)	Diameter (Aim. mm)	Lay length (Aim. mm)	Linear Density (Aim. g/m)
2×0.25	UT	Belt	340	0.50	14.0	0.77
2×0.295	HT	Belt	445	0.60	14.0	1.08
2×0.30	HT	Belt	405	0.60	14.0	1.12
2×0.30	ST	Belt	441	0.60	14.0	1.12
3×0.30	HT	Belt	610	0.65	16.0	1.68
3×0.30	SST	Belt	657	0.66	14.0	1.67
2+2×0.32	ST	Belt	1,019	0.83	16.0	2.57
2+4×0.30	ST	Belt	1,279	0.98	16.0	3.34

Light Truck

Construction	Tensile Grade	General use	Breaking Force (Min. N)	Diameter (Aim. mm)	Lay length (Aim. mm)	Linear Density (Aim. g/m)
3×0.38	ST	Belt	980	0.80	20.0	2.67
2+2×0.35	HT	Belt	980	0.94	16.0	3.00
2+2×0.35	ST	Belt	1,169	1.01	18.0	3.04
3+2×0.35	ST	Belt	1,544	1.07	18.0	3.82
3+2×0.35	UT	Belt	1,706	1.07	18.0	3.82
3+3×0.35	ST	Belt	1,848	1.09	18.0	4.53
1+6×0.35	HT	Belt	1,863	1.08	18.0	5.42
2+7×0.26	HT	Belt	1,339	1.05	15.0	3.80
3+8×0.21	HT	Belt	1,204	0.85	12.8	3.08

Truck and Bus

Construction	Tensile Grade	General use	Breaking Force (Min. N)	Diameter (Aim. mm)	Lay length (Aim. mm)	Linear Density (Aim. g/m)
1+5×0.40HT	ST	Belt	2,087	1.20	19.0	5.99
4+3×0.35	UT	Belt	2,382	1.19	18.0	5.31
3+6×0.35	HT	Belt	1,818	1.13	18.0	5.34
3+8×0.33	HT	Belt	2,648	1.36	18.0	7.48
3/9×0.185	UT	Belt	1,289	0.83	12.5	2.74
3×7×0.20 HE	HT	Belt	1,274	1.38	6.3	5.80
1/18×0.175	ST	Carcass	1,608	0.90	10.0	3.66
1/18×0.185	UT	Carcass	1,938	0.95	11.8	4.15
1+18×0.20	NT	Carcass	1,653	1.02	12.5	4.84
3/9×0.20+w	HT	Carcass	1,269	0.85	12.5	3.33
3/9×0.175+w	HT	Carcass	1,019	0.75	10.0	2.67
3+9×0.22+w	NT	Carcass	1,199	1.15	12.5	3.85
3+9+15×0.175+w	NT	Carcass	1,679	1.34	16.0	5.42
3+9+15×0.22+w	NT	Carcass	2,547	1.62	18.0	8.50

Off the Road

Construction	Tensile Grade	General use	Breaking Force (Min. N)	Diameter (Aim. mm)	Lay length (Aim. mm)	Linear Density (Aim. g/m)
7×7×0.22	NT	Belt	4,645	2.00	20.0	15.2
7×7×0.25	HT	Belt	6,394	2.25	20.0	19.3
7×7×0.35	ST	Belt	12,887	3.20	32.0	39.6
7×(3+8×0.25)	HT	Belt	9,800	3.18	38.0	31.2
7×(3+9×0.245)	HT	Belt	8,991	3.10	29.0	32.5
7×12×0.22	HT	Carcass	7,840	2.80	24.5	26.0

Bead Wire | Steel Properties & Specifications

Passenger Car

Construction	Tensile Grade	Diameter (Aim. mm)	Breaking Force (Min. N)	Elongation (Min. %)	Torsion (Min. Turn)	Straightness (Max. cm/3m)
0.89	NT	0.89	1,205	7.5	50	60
0.89	HT	0.89	1,352	5.5	30	60
0.94	NT	0.94	1,372	6.5	25	60
0.95	NT	0.95	1,274	4.0	30	60
0.95	HT	0.95	1,529	4.0	30	60
0.96	NT	0.96	1,294	5.0	25	60
0.96	HT	0.96	1,431	5.0	30	60
0.965	NT	0.965	1,343	5.0	50	60
0.965	HT	0.965	1,539	5.0	30	60

Light Truck

Construction	Tensile Grade	Diameter (Aim. mm)	Breaking Force (Min. N)	Elongation (Min. %)	Torsion (Min. Turn)	Straightness (Max. cm/3m)
1.20	NT	1.20	1,960	5.0	25	60
1.20	HT	1.20	2,254	4.0	30	60
1.26	NT	1.26	2,362	5.0	40	60
1.26	SST	1.26	2,744	7.0	40	60
1.30	NT	1.30	2,423	4.0	20	60
1.30	HT	1.30	2,754	5.0	25	60
1.42	NT	1.42	2,744	4.0	25	60

Truck and Bus

Construction	Tensile Grade	Diameter (Aim. mm)	Breaking Force (Min. N)	Elongation (Min. %)	Torsion (Min. Turn)	Straightness (Max. cm/3m)
1.55	NT	1.55	3,244	5.0	20	60
1.55	HT	1.55	3,891	5.0	20	60
1.60	HT	1.60	4,165	6.0	25	60
1.83	HT	1.83	4,753	5.0	20	60
1.85	HT	1.85	4,900	4.0	20	60
2.00	HT	2.00	5,802	5.0	25	60

Sustainability

We have been recognized by global rating agencies for our systematic management and transparent disclosure across the areas of Environmental, Social, and Governance. Going forward, we will continue to strengthen responsible ESG management through transparent communication and accountable practices.

EcoVadis

Platinum 2024-2025
Two years in a row
Top 1% among ~150,000 companies

- Globally validated ESG credibility: EcoVadis global top-tier performance

CDP
(Carbon Disclosure Project)
2025

Climate Change **Leadership A-**
Water Security **Leadership A-**

- Demonstrating leadership in climate action and water stewardship through strategic execution.

MSCI
(Morgan Stanley Country Index)

BBB 2024 - 2025

- Investor-oriented assessment of ESG risk and governance performance

Korea ESG Standards Institute (KCGS)

Overall A 2021-2025
5th years in a row

- Sustainability management performance assessed under Korea's leading ESG evaluation framework.

S&P Global CSA
(Corporate Sustainability Assessment)

Sustainability Yearbook Member
2024~2025

- Sustainability management competitiveness validated by global benchmarks

Sustainalytics
2024 - 2025

Risk Rating **Low**
Exposure **Low**
Management **Strong**

- Credibility assessment from an ESG risk perspective, informing the investment decisions of financial institutions and investors

Ready to meet customer ESG requirements
Systematically managing assessments, due diligence, and disclosure requests

Globally validated ESG
Building trust through top-tier performance across major benchmarks

Reduce risks and create opportunities
Turning climate, water, ethics, and governance into execution

Notes: Ratings and years are based on each evaluating organization's latest publicly disclosed criteria.

Detailed information regarding our ESG initiatives is available at

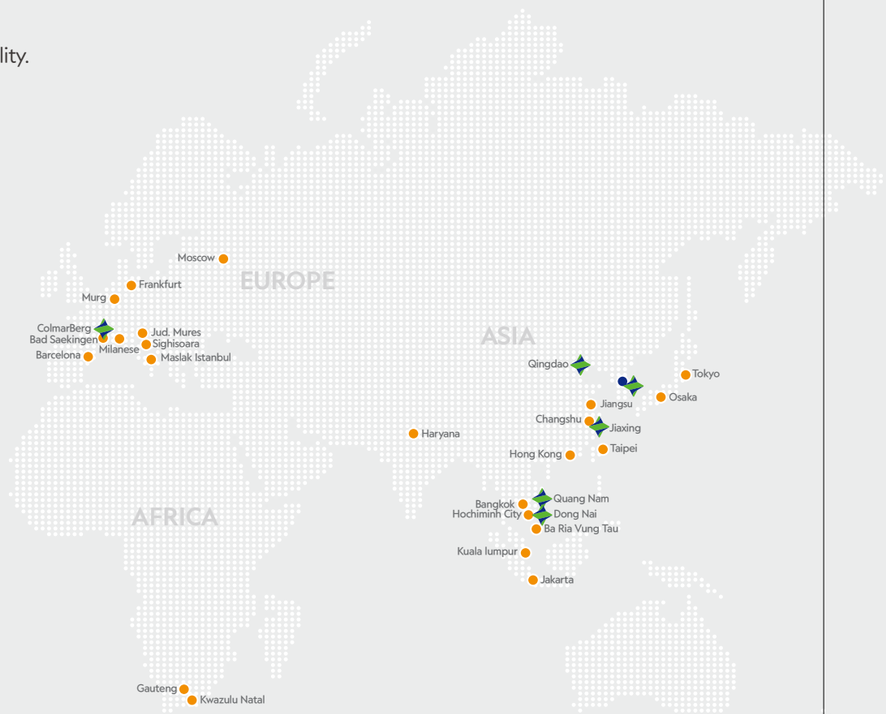
Global Networks

HS HYOSUNG builds a systematic global network, aiming for value management through unrivaled technology and excellent quality.

Global Locations

37 locations in 19 countries

Production Affiliate **17** | Trade Affiliate **13**
Logistics Affiliate **1** | Branch and Office **6**



Korean Locations

HQ 1 Plant 4 Institute 1



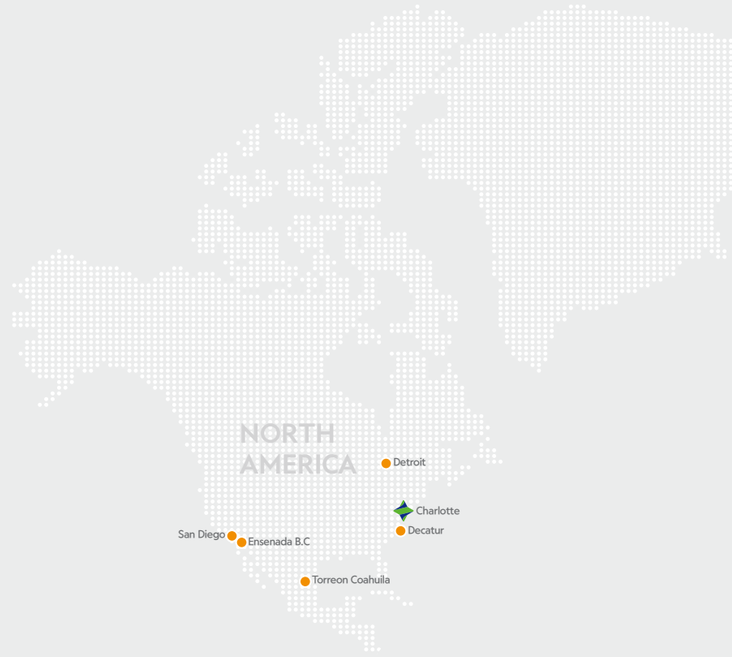
SEOUL
· Mapo

ANYANG
· Anyang plant
Roll carpet, Automotive carpet, Nylon BCF, PET (Polyester) BCF

DAEJEON
· Daejeon plant
Tile carpet, PP BCF

ULSAN
· Steel Wire Technical Center
· Ulsan plant
Aramid, PET (Polyester) BCF

JEONJU
· Jeonju plant
Carbon fiber



TIRE & INDUSTRIAL REINFORCEMENTS NETWORKS

Tire & Industrial Reinforcements production site

51 locations in 22 countries

1 HQ
· Korea

7 Plants
· Korea · Vietnam
· China · USA
· EU

14 Sales offices
· Vietnam · China
· Japan · USA
· EU · Turkey
· Russia · Bangkok
· Jakarta · India

29 Warehouses
· Korea · Japan
· Indonesia · India
· Canada · USA
· EU

Asia

17 locations in 10 countries

KOREA

CHINA
· Jiaxing · Qingdao · Jiangsu · Changshu

HONG KONG

VIETNAM
· Dong Nai · Quang Nam
· Ba Ria Vung Tau · Hochiminh City

JAPAN
· Tokyo · Osaka

INDIA
· Haryana

INDONESIA
· Jakarta

MALAYSIA
· Kuala lumpur

TAIWAN
· Taipei

THAILAND
· Bangkok

Europe & Africa

12 locations in 8 countries

GERMANY
· Murg · Bad Saekingen

LUXEMBOURG
· Colmar-Berg

ROMANIA
· Jud. Mures · Sighisoara

RUSSIA
· Moscow

ITALY
· Milanese

SPAIN
· Barcelona

TÜRKIYE
· Maslak Istanbul

SOUTH AFRICA
· Kwazulu Natal
· Gauteng

Americas

8 locations in 2 countries

USA
· Charlotte
· San Diego
· Decatur
· Detroit

MEXICO
· Torreon Coahuila
· Ensenada B.C