HEAVY DUTY RUBBER CONVEYOR BELT

ICL AMERICA LTD.

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Nylon / Nylon Conveyor Belt
Polyester / Nylon Conveyor Belt

NYLON FABRIC (NN) CONVEYOR BELT

Item	Unit	NN100	NN120	NN150	NN200	NN250	NN300	NN350	NN400	NN500
Minimum Tensile Strength	kg/cm - ply	100	120	150	200	250	300	350	400	500
	lb/in - ply	560	672	840	1,120	1,400	1,680	1,960	2,240	2,800
Working Tension Rating (Vulcanized)	kg/cm - ply	8.4	10.0	12.5	16.7	20.8	25.0	29.2	33.3	41.7
	lb/in - ply	46.7	56.0	70.0	93.3	116.7	140.0	163.3	186.7	233.3
Approx., Guage/Ply with skim coat	mm	0.70	0.85	0.90	1.15	1.20	1.35	1.60	1.70	2.10
	inch	0.028	0.034	0.035	0.045	0.047	0.053	0.063	0.067	0.083

Special Features

- Exceptionally shock & impact resistance to the carrying surface.
- Superior in fastener holding ability.
- Excellent troughability and exibility
- Smaller pulley available.
- Greatest resistance to water and mildew.

POLYESTER FABRIC (EP) CONVEYOR BELT

Item	Unit	EP100	EP120	EP150	EP200	EP250	EP300	EP350	EP400	EP500
Minimum Tensile Strength	kg/cm - ply	100	120	150	200	250	300	350	400	500
	lb/in - ply	560	672	840	1,120	1,400	1,680	1,960	2,240	2,800
Working Tension Rating (Vulcanized)	kg/cm - ply	10.0	12.5	15.0	20.0	25.0	30.0	35.0	40.0	50.0
	lb/in - ply	56.0	70.0	84.0	112.0	140.0	168.0	200.0	224.0	280.0
Approx., Guage/Ply with skim coat	mm	0.75	0.90	1.00	1.20	1.30	1.50	1.70	2.20	2.80
	inch	0.030	0.035	0.039	0.047	0.051	0.059	0.067	0.057	0.110

Special Features

- High resistance to tension.
- Low elongation.
- Outstanding stability dimensionally.
- Impact resistance.
- Complete moisture & mildew protection.

- This construction, utilizing all nylon, offers maximum impact and damage resistance from material and suitable for transporting a varitey of materials: Ore, Crushed Stones, Grain, Sand, ect.
- Several types of carcasses using nylon/nylon fabrics with various thicknesses are avalible according to load conditions

High Abrasion Resistant
Conveyor Belting - HARK

FABRIC GRADE

(Tensile Strength: kg/cm, lb/in)

Fabric/Ply	3P		4P		5P		6P	
	kg/cm	lb/in	kg/cm	lb/in	kg/cm	lb/in	kg/cm	lb/in
NN - 100	300	1680	400	2240	500	2800	600	3360
NN - 120	360	2016	480	2688	600	3360	720	4032
NN - 150	450	2520	600	3360	750	4200	900	5040
NN - 200	600	3360	800	4480	1000	5600	1200	6720
NN - 250	750	4200	1000	5600	1250	7000	1500	8400
NN - 300	900	5040	1200	6720	1500	8400	1800	10080
NN - 350	1050	5880	1400	7840	1750	9800	2100	11760
NN - 400	1200	6720	1600	8960	2000	11200	2400	13440
EP - 100	300	1680	400	2240	500	2800	600	3360
EP - 125	375	2100	500	2800	625	3500	750	4200
EP - 150	450	2520	600	3360	750	4200	900	5040
EP - 200	600	3360	800	4480	1000	5600	1200	6720
EP - 250	750	4200	1000	5600	1250	7000	1500	8400
EP - 300	900	5040	1200	6720	1500	8400	1800	10080
EP - 350	1050	5880	1400	7840	1750	9800	2100	11760
EP - 400	1200	6720	1600	8960	1200	6720	2400	13440

COVER RUBBER GRADE

Cover Grade	Tensile Strength Min (Mpa)	Elongation Min (%)	Abbrasion Loss (mm^2)	Abbrasion Loss (in^2)
DIN-W	18	450	90	0.14
DIN-Y	20	450	110	0.17
GRADE 1	17	450	120	0.19
GRADE 2	14	400	170	0.26
GRADE 1 HARK	18	450	90	0.14
MOR	12	300	300	0.47
SOR	15	300	200	0.31

Fabric Type	
NN	Nylon/Nylon
EP	Polyester/Nylon
SW	Straight Nylon
CFW	Crow Foot
Breaker Fabric	Steel Mesh

- Abbrasion Test is based on DIN 53516

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- Conveyor belt is designed for the ultimate resistance to abrasion and recommended for transporting abbrasive materials. Equivalent to DIN-W and AS-A grade with less than 90 cm^2 abbrasion loss. Conveyor belt is developed to assure you the longest belt lifetime and suitable for conveying glass, cullet, granite, trap rock, and other abrasive material.
- The Combination of polyester in warp and nylon in filling provides technically low-stretch, high impact resistance.

Heat Resistant Conveyor Belting - HR

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Special Features

- Excellent heat resistant and abrasion resistant cover rubber compound.
- Recommended to protect conveyor belt from surface cracking and ardening by heat
- Specially heat-treated and dipped fabric to minimize carcass shrinkage by heat ageing.

HEAT RESISTANT CONVEYOR BELT

Temperature	Type	Compound of Cover Rubber	Temperature Range of use		Application
			Peak Material Temp. Short Time (°F)	Cont. Material Temp. (°F)	
Low Temperature	HT-400 (HR-400)	SBR	Lump 300-400 °F Fines 150-200 °F	Lump 200-300 °F Fines 100-200 °F	Low temperature with abbrasive material. (coke, sintered products, ect.)
Medium Temperature	HT-550 (HR-130)	BUTYL	Lump 500-550 °F Fines 300-400 °F	Lump 350-450 °F Fines 200-300 °F	Medium temperature application (castings, sintered ore, coke, limestone)
High Temperature	HT-710/750 (HR-150)	EPM	Lump 650-700 °F Fines 450-500 °F	Lump 550 °F Fines 300-400 °F	High temperature application. (dried clay, cement, clinker, ect.)
Super Temperatrue	HT-850 (HR-180)	EPM	Lump 800-850 °F Fines 600-650 °F	Lump 700-750 °F Fines 500-550 °F	Super high temperature applications. (stintered ore, cement clinker, chemocals, ect.)

KINDS OF BELT MATERIALS AND BELT SURFACE TEMPERATURE

Materials Carried	Lump Size	Temperatures of Carried Material	Belt Surface Temperature
Sintered Ore	25-200 mm 1-8 in	390-750 °F	270-300 °F
Return of Sintererd Ore	below 10 mm 0.4 in	480 °F	300-370 °F
Coke	100-200 mm 4-8 in	160-210 °F	120-140 °F
Raw Materials	below 30 mm 1.2 in	360-410 °F	210-250 °F
Clinker	10-30 mm 0.4-1.2 in	210-410 °F	210-230 °F
Cement	Powder	210-250 °F	170-190 °F
Metal Powder	Powder	340 °F	250-270 °F
Molding Sand	Powder	390-480 °F	170-190 °F

- The performace proven ICL America Ltd. heat resistant belt meets hot service application like hot sintered ore, hot clinker, hot chemical, fertilizer and hot cement ect.
- ICL America Ltd. heat resistant conveyor belts are sutible for heat resistant applications where the temperature of material to be carried is over 140 °F

Characteristics indispensably required for heat resistant conveyor belt are as follows:

- Rubber cover and carcass should not deteriorate due to heat.
- Rubber cover and carcass should maintain durability, even at high temperatures.
- Rubber cover and carcass should maintain good adhesion to form one unit even when they are exposed to high temperatures.

The surface temperature of heat resistant conveyor belt varies with the material type, belt speed, loading rate and size depending on circumstance condition.

In order to select the proper heat resistant conveyor belt, it is necessary to consider not only the material temperature to be conveyed but also the surface temperature of conveyor belt.

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Fire Retardant Conveyor Belting - FR

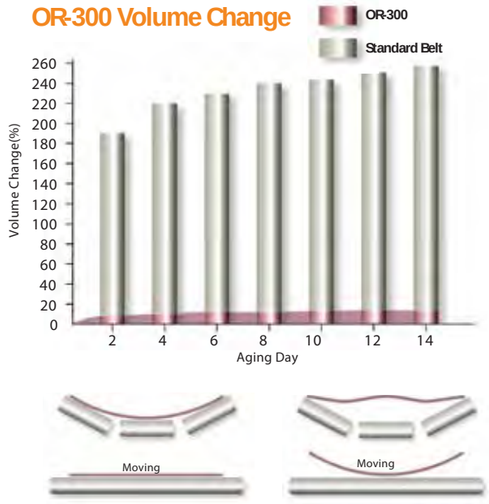
Cover Rubber Grade

Type	Cover Rubber				Special Features
	Min. Tensile Strength		Minimum Elongation	Application Grade	
	kg/cm²	psi			
FR-140	170	2400	450%	ISO, DIN JIS, KS	Reqiring fire resistance, static conductivity. Selfextinguishable cover rubber and meets drum friction test.
FR-120	150	2100	400%	MSHA / SBR (USA)	SBR fire resistant cover rubber meeting USA MSHA requirements.
FR-100	170	2400	450%	MSHA / SBR (USA)	Oil treated coal and grain industries reqiring fire & oil resistance, and electrical resistance lower than one megohm.

ICL America Ltd. conveyor belt supplies □re resistance covers which meet the □re performance requirements of several regulation such as USMSHA, SABS, DIN, AS etc.

Special Features

- FR-140 grade is specially compounded Neoprene over rubber for the underground operation requiring □re resistance, static conductivity. The important characteristic is self-extinguishable cover rubber and meets drum friction test.
- FR-120 is SBR □re resistant cover rubber meeting U.S.A MSHA (Mine Safety and Health Administration). It provides highly resistance to wear and cold resistance.
- FR-100 grade is □re resistance with medium oil resistance and accepted by U.S.A MSHA. It is recommended for the typical applications like oil treated coal and grain industries requiring □re & oil resistance, and static conductivity with lower electric resistance than one Megohm.



Oil Resistant Conveyor Belting Heat & Oil Resistant Conveyor Belt

Cover Rubber Grade

Type	Cover Rubber		Minimum Elongation	Volume Change ASTM #3 oil	Special Features
	Min. Tensile Strength				
	kg/cm²	psi			
OR-100	140	2000	450%	Max 150	Wood chip, linseed, cottonseed, corn kernels, whole soybeans, static conductivity and moderate oil resistance.
OR-200	120	1700	500%	Max 90	Oil treated materials and for carring oily metal turnings and shavings, crushed soybeans, animal or vegetable fats.
OR-300	160	2400	500%	Max 20	Oily metal parts, crushed soybeans, automatic hydrocarbons (ie. benzol, toluene and petroleum based oils.
HTN/HOT	120	1700	500%	Max 60	Hot asphalt, coke whafs, and other oil & heat resistant applications.

* Oil resistance (volume change) and immersion condition : 70ºC x 96Hr

Special Features

- OR-300 grade has excellent resistance to the toughest oil application such as oil-treated coal, petroleum based oils.
- OR-200 grade has superior oil resistance to various kinds of animal and vegetable oil with severe cold temperature up to – 45ºC(50ºF).
- OR-100 grade is to resist Moderate Oil Resistant operations like wood chips, linseed, cottonseed and whole soybeans where static conductivity is needed.
- HTN/HOT grade is recommended for conveying hot asphalt with material temperature up to max 175ºC (350ºF, in normal condition) where both oil & heat resistance are required.

Flame retardant conveyorbelt is designed for the best service conditions of coal mining industries.
It is suitable for mining, power plant, electric utilities, coal cleaning plants.
Di□erent rubber compounds are available in accordance with the needed requirements.

This rubber cover is especially compounded for the appliecations requiring resistance to oils.
It has outstanding abrasion, ozone, and weather resistance.
Conveyor belt is recommended for the conveyor lines causing swelling and sponginess by oils.

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