

**Bottle to  
Garment**



**A UNIQUE POST CONSUMER RECYCLED POLYESTER  
FABRIC COLLECTION BY HOLLIT / INDORAMA**



*“ NUSANTARA “ is an endeavor to make this world a greener and cleaner place to live in. This is jointly promoted by Indorama, a conglomerate with a conscience and Hollit a byword in high fashion. Together we bring to you a sustainable fashion with no compromise on quality or functionality. In fact we are in a unique position to offer enhanced functionality with sustainable fashion.*

PT. Hollit International and PT Indorama work on this project with the full support and joint ventura of the leading fabric mills in Indonesia : PT. Taroko & PT. Hay.

*(For a brief introduction of all the company, Please refer to page 2).*

Brand “NUSANTARA” took birth about a year ago with the aim of bringing to fruition the desire of conscientious consumers of branded fashion to support environment conservation directly without any compromises to looking and feeling good.

*“ NUSANTARA is an Indonesian word meaning archipelago - a group of Island. Figuratively it means concerning everybody or touching a global populace. ”*

We decided that we cannot solely depend on others to develop new technology to slow or halt global warming and climate change. In our own industry we have to take a lead and provide alternatives to the consumers who care for our home we call the planet Earth. With this concept the seed of Nusantara was germinated.

Recycling is not new to the textile industry but we wanted to go the whole distance & committed ourselves to the development and the promotion of POST CONSUMER RECYCLED POLYESTER (PCR). The difference in carbon Foot print of PCR is huge as compared to virgin polyester. The idea of Nusantara starts with clearing up the landfills of the used up soft drink & water bottles. Each Kilogram of PCR helps to remove 15 bottles from Landfills. The collection, segregation, cleaning and delivery of the used bottle generates huge amount of employment for the lowest strata of the society and also prevents toxic gases being

released into the atmosphere when these bottle try to “degrade” in the landfills over the decades. The recycling of the used bottles for textiles also reduces the over exploitation of crude oil and thus further reduces the carbon emissions. The lesser use of crude for refining also means far less Sulphur Di-Oxide which is far more toxic than Carbon Di-oxide. Even during the manufacture of PCR PET yarn, far less energy is used as the step of polymerization is all together avoided.

The PCR route saves 7000MJ of energy per ton of polyester. This is 52.6% saving in energy consumption. This translates to a reduction of 594kg of CO2 emission per metric ton of Polyester produced. This represents a cut of 54.6% in CO2 emissions.

Polyester as a raw material for packaging and textiles is something which is omnipresent. Something for which we don't have an alternative to not only in terms of economic costs but in terms of environmental costs. In the packaging alone a whopping 16 million metric tons of polyester is used globally. If all this is converted to plastic bottles (for soft drinks and mineral water) we would have about 240 trillion bottles!! This will go down in the landfills to clog the mother earth maybe for centuries to come. Thankfully about one third is already recycled for lower grade end uses like fiber fill etc. This means economic activity at the lower end of the society is already helping reduce the carbon foot print, reduce land use, reduce water use and prevent expansions of landfills.



Now with NUSANTARA range of fabrics we are offering a unique opportunity for fashionistas to make the ultimate fashion statement “WE CARE”.

Recycled polyester holds the maximum potential of making a substantial reduction in the carbon footprint of textiles, reduction in land use for textiles, and reduced water consumption at the time of manufacture as well in the hands of the consumers. PCR polyester is poised to be the fiber of choice for fashion industry and we can affirm confidently that fashion & sustainability go hand in hand.

We are currently offering more than 20 fabric qualities in 100% PCR polyester. Our range is growing steadily. We also offer complete garments in 100% PCR as even our labels and accessories are made up of PCR. In the current range we have woven fabrics made starting from 25 denier for jacket shell. This is also available in laminated variant, thereby eliminating the need for lining fabric. We also have micro 150 denier fabrics for outerwear. Almost all qualities can also be We are also offering three varieties of micro anti pilling polar fleece. The fleece fabrics can be further refined to your requirements of weight and anti -pilling etc.

Under development we have a new generation of yarns based on biodegradable Polyester.

*(Please refer to page 2 for general offering).*

Please let us know if you would like to receive our complete range of NUSANTARA fabrics.

We as Hollit, are very proud to have taken on a major role in the development of NUSANTARA and for enquiries and other information, please contact:

• Mr. Bibit Hariyanto :  
mobile : +62-87877900822.  
Email : bhariyanto@hollitinternational.com

• Mr. Neeraj Agarwal:  
Mobile : +62-811233092.  
Email : agarwaln@indorama.com

for further information about indorama you can click on below link:  
<http://www.indorama.com/>

## INDORAMA FOR NUSANTARA

Indorama is the world's largest polyester manufacturer. Indorama makes a wide variety of yarns using Post Consumer Recycle Polyester (PCR Polyester) from bottle as an eco friendly product. Indorama use Hydro electric power to make these specialty yarns. There by cutting CO2 emissions to zero during manufacture of yarns. Indorama plants meets and exceed all the local government regulations on environmental protection. Indorama has ISO 9001 & ISO 14001 certifications and also has Oeko-tex certification. In addition Indorama have certification by Control Union for producing PCR yarns.

Indorama other green endeavors include ECO PET, a PET resin for making plastic bottles using Bio-MEG. Indorama are also developing Poly Lactic Acid (PLA), a bio-degradable polyester. Indorama is a leading spinner of Organic cotton yarns & is certified by Control Union for processing Organic cotton. Indorama decided that cannot solely depend on other to develop new technology of slow or halt global warming and climate change, Indorama have to take a lead and provide alternatives to the consumer who care for our home we call the planet Earth.

## TAROKO FOR NUSANTARA

PT Indonesia Taroko is a specialized & integrated woven fabric maker of high quality fashion and performance fabrics. Taroko factory is conveniently located between Bandung and Jakarta with easy access to toll road. Our facilities are built on a picturesque green piece of land measuring 400,000 sq meter.

Taroko has top class fabric coating facilities using Acrylic, PU, Color, PU Breathable (hydro philic & micro porous) materials. Taroko also provide various finishes like Shiny effect, dry, peach, durable wash for WR, high water proof, Breathable, Wind proof, Anti-Chlorine and down proofing. Apart from this we have facilities for Calendaring, CIRE, Lamination & Bonded fabrics. Taroko has production capacity 4.8 million yards per month. Taroko is also committed to the environment protection and care about global warming effect. Taroko has standard meeting or exceeding local governments' requirements.

Taroko has Oeko-Tex certification class I, for infants and babies use. Taroko has ISO 9001: 2008 quality management systems and also a certified processor for recycled polyester from Control Union. Taroko is a one stop shop for fashion and performance fabrics. The one of best product is fabric from polyester recycled yarn as eco friendly product.

## HAY FOR NUSANTARA

PT HAY Indonesia has been established in Bandung, Indonesia, since 1990. PT HAY has knitting, dyeing, printing and finishing division in one single location at the factory compound site. The average production capacity is around 600 tons per month. Additional facilities for finishing cover bonding, lamination, brushing, peaching, velouring, in various combinations over a quite wide range of knitting capabilities. PT HAY has been certified by Oeko-Tex since 1998, by GOTS since 2008, by MATTEL since 2008. The factory compound has a total area of over 50% covered by green plants and the water consumption in the production activity is covered by over 80% coming from the wastewater recycling plant. PT HAY has been identified by the Indonesian Ministry of the Environment as a role model of environmental friendly of industrial textile production.

## Biodegradable Polyester

Poly (lactic acid) or polylactide (PLA) is **a thermoplastic aliphatic polyester** derived from renewable resources, such as corn starch, tapioca products or sugarcanes.

It can **biodegrade under certain conditions**, such as the presence of oxygen, and is difficult to recycle.

Bacterial fermentation is used to produce lactic acid from corn starch or cane sugar.



## CHEMICAL AND PHYSICAL PROPERTIES

Poly-L-lactide (PLLA) has a crystallinity of around 37%, a glass transition temperature between 60-65 °C, a melting temperature between 173-178 °C.

PLA has similar mechanical properties to Polyester polymer, but has a significantly lower maximum continuous use temperature. Poly lactic acid can be processed like most thermoplastics into fiber (for example using conventional melt spinning processes) and film.

## RECYCLING

In Belgium, Galactic started the first pilot unit to chemically recycle PLA (Loopla). Unlike mechanical recycling, waste material can hold various contaminants. Through thermal depolymerization, a highly purified lactic acid is extracted and can be considered as raw material for the manufacturing of virgin PLA with no loss of original properties (cradle-to-cradle recycling).



## APPLICATIONS

PLA is currently used in a number of biomedical applications, such as sutures, stents, dialysis media and drug delivery devices. The total degradation time of PLA is a few years. [5] It is also being evaluated as a material for tissue engineering.

Because it is biodegradable, it can also be employed in the preparation of bioplastic, useful for producing loose-fill packaging, compost bags, food packaging, and disposable tableware. In the form of fibers and non-woven textiles, PLA also has many potential uses, for example as upholstery, disposable garments, awnings, feminine hygiene products, and diapers.

PLA is a sustainable alternative to petrochemical-derived products, since the lactides from which it is ultimately produced can be derived from the fermentation of agricultural by-products such as corn starch [6] or other carbohydrate-rich substances like maize, sugar or wheat.

PLA is more expensive than many petroleum-derived commodity plastics, but its price has been falling as production increases. The demand for corn is growing, both due to the use of corn for bioethanol and for corn-dependent commodities, including PLA.

PLA is used for biodegradable and compostable disposable cups for cold beverages, the lining in cups for hot beverages, deli containers and clamshells for food packaging. [8]

PLA is being used as a replacement for nylon in "silken" teabags. [9]

**NUSANTARA FABRIC COLLECTION**  
**WOVEN FABRICS**

STYLE	CODE	DESCRIPTION	SPEC CODE	WEIGHT	WIDTH
				(GSM)	(INCHI)
Lombok	W-205	50/48 FDY Nusantara, W/R + Cire 1 X	8253 A5	67	59
Lombok	W-206	50/48 FDY Nusantara, W/R + Cire 3 X	8253 A5	69	59
Lombok	W-207	50/48 FDY Nusantara, W/R + Cire 5 X	8253 A5	69	59
Bali	W-203	40/72 Nusantara, W/R + Cire 1 X	8278	61	59
Bali	W-200	40/72 Nusantara, W/R + Cire 3 X	8278	63	59
Bali	W-202	40/72 Nusantara, W/R + Cire 5 X	8278	62	59
Manado	W-208	80/48 + 80/48 Nusantara, W/R + Cire 1 X	8288	84	59
Andalas	W-204	80/48 FDY + 150/288 DTY	8299	145	59
<b>Palembang</b>	W-204	126X48 / E75D REC X P300D REC	8299A1	130	59
Sumbawa	W-209	220 X 192 / E 25D /24 X E 25D/24 REC - 100% Polyester Mini Rec Rib Stop - W/R. PRT + Down Proof	8294	52	55
Kalimantan	W-210	258 X 182 / E 25D / E 25D REC - 100% Polyester Mini Rec Rib Stop - W/R. PRT + Down Proof	8293	55	56
Bunaken	W-211	150X84 / 75DX170D - Crinkle + AC Transcoat W/P + Cire + D/P + PRT	8284	140	52
Komodo	W-212	160X105 / 75DX150D - P/D + Sueding + W/R	8156	144	57
Toraja	W-213	158X106 / 75DX75D - P/D + W/R + Cire = Back + D/P + PRT	8298	103	58
Samarinda	W-214	184X90 / 75DX170D - P/D+Quick Dry	8123	154	56
Karimata	W-215	157X131 / 75DX75D - P/D + AC Coat W/P + W/R + Cire + PRT	8005	114	57
Pontianak	W-216	153X92 / 75D/72DX75D/72D - P/D+Cire = Back+W/R+PRT	8004	96	59
Balikpapan	W-217	160X160 / P75D REC X P75D X 2 REC, Polyester Twill Recycled Peach Skin (1/2), Sueding + W/R	8007	147	58
Barito	W-218	258 X 182 / E 25D / E 25D REC - 100% Polyester Mini Rec Rib Stop - W/R. PRT + Down Proof + <b>PU Lamination on Back</b>	8293	55	56
Denpasar	W-219	40/72 Nusantara, W/R + Cire 5 X + <b>PU Lamination on Back</b>	8278	62	59



**NUSANTARA FABRIC COLLECTION**  
**KNIT FABRIC**

STYLE	CODE	DESCRIPTION	WEIGHT	WIDTH
			(GSM)	(INCHI)
Krakatau	K-497	Micro Polar Fleece, 150/288 + 150/48, 2 Side Brushed, 2 Side Anti Pilling	290	59
Krakatau	K-498	Micro Polar Fleece, 150/288 + 150/48, 2 Side Brushed, 2 Side Anti Pilling	274	59
Sulawesi	K-521	Micro Polar Fleece, 75/144 + 100/72, 2 Side Brushed, 1 Side Anti Pilling	180	60
Java	K-499	Micro Polar Fleece, 75/144/2 + 150/48, 2 Side Brushed, 2 Side Anti Pilling	279	59



100% Recycled Polyester



100% Recycled Polyester



Nusantara, the fabric used in this unique garment is made 100% from recycled used bottles: you directly contribute to the benefit of our environment



H11# Bali-Nusantara  
H11 # Denpasar - Nusantara  
H11 # Lombok - Nusantara



H11# Java-Nusantara  
H11 # Krakatau - Nusantara  
H11 # Sulawesi - Nusantara



H11# Palembang-Nusantara  
H11 # Barito - Nusantara  
H11 # Toraja - Nusantara  
H11 # Karimata - Nusantara  
H11 # Manado - Nusantara  
H11 # Bunaken - Nusantara  
H11 # Sumbawa - Nusantara  
H11 # Komodo - Nusantara  
H11 # Kalimantan - Nusantara  
H11 # Samarinda - Nusantara  
H11 # Balikpapan - Nusantara

