



NA NYA PLASTICS CORP.

CHROMUCH

Innovational Technology of Dope Dyed Polyester





Innovational Dope Dyed

Traditional Piece Dyed Are Exhausting Earth Resources



1 kg 115 kg water



1 kg 3.75 kg CO₂



1 kg 3.67 KWH



Water
Consumption



CO₂ emission



Energy
Consumption



Innovational Dope Dyed

Most Eco-friendly Dyeing Method

No Dye  Dope Dyed

- But Traditional Dope Dyeing Method Has Some Problems
- New Dope Dyed— **CHROMUCH** Has the Solutions





Innovational Dope Dyed

Traditional Dope Dyed



Pigment

- good color fastness
- dull color
- limited series of colors

Dye Stuff

- diversified color
- more brilliant
- migration problem



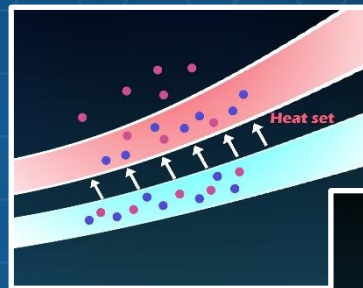
Innovational Dope Dyed

Chromuch— New Dope Dyed

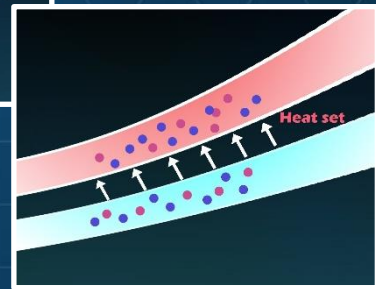
- Polyester Blending with **Pigment + Dyestuff**
→ Better Colors Development
- Unique technology to **Trap** the Dyestuff
→ Excellent Color Fastness



Traditional



Migration when
Heat Setting



CHROMUCH

No Migration
when Heat Setting



Innovational Dope Dyed

5 Advantage

EN 20471
Better Color Fastness
High Visibility Color

ALL Color > 4 Grade
Better Color Fastness



Most Brilliant and
Deepest Color

Bluish Black,
Neon Colors

Widest Color Range
82% Wider

Most Colors
Available

More Than 1,000
Standard Colors



Innovational Dope Dyed

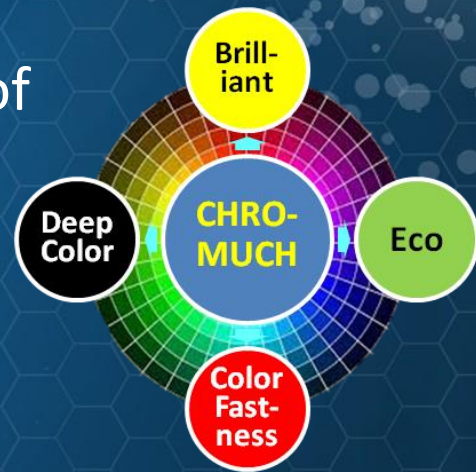
➤ Most Brilliant and Deepest Color—

- Bluish Black Color can satisfy color standard of brand's black color

black with different color shade



uniqlo asics adidas Nike GAP columbia





Innovational Dope Dyed

- EN 20471 High Visibility Color
- Neon Colors with Good Color Fastness





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➤ Excellent Color Fastness —

- Washing Color Fastness of Bluish Black



AATCC 61 III A
(wash temp. 71°C)

- Washing Color Fastness of Brilliant Color (AATCC 61 II A)

LKA17
190°C



LXA16
190°C





Innovational Dope Dyed

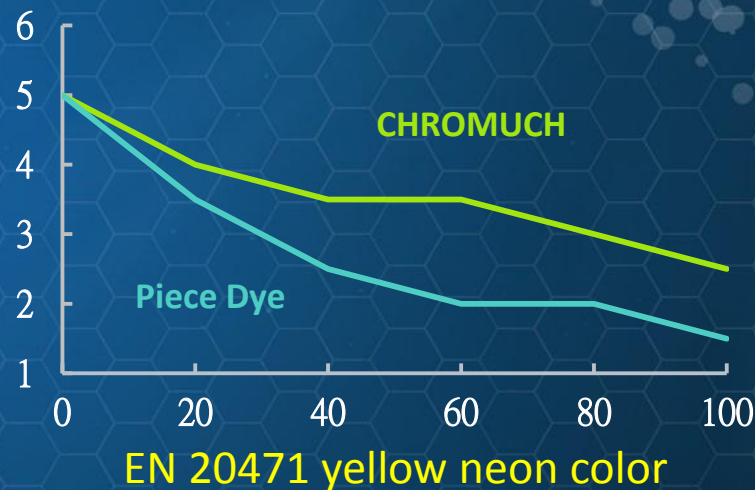
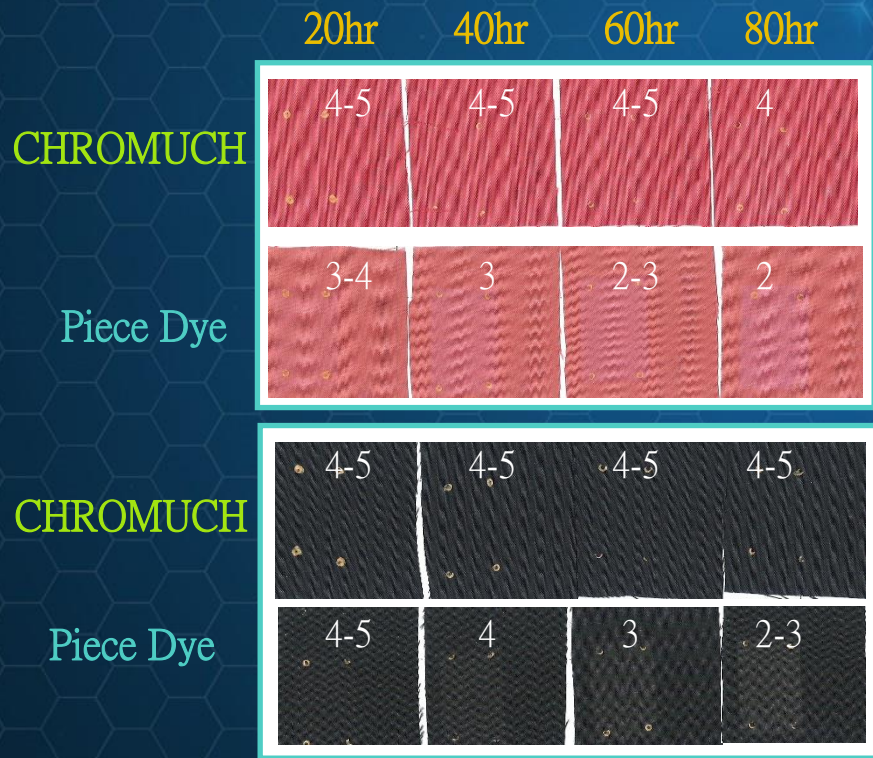
- 95°C Industrial Washing (ISO 105 C06 E2S-2010)
EN 20471 yellow neon color

	A	C	N	E	A	V	Colour Change
CHROMUC H	4-5	4-5	4-5	4-5	4-5	4-5	4-5
Piece Dye	4	4-5	3	4	4-5	4-5	4-5



Innovational Dope Dyed

- Excellent Light Fastness

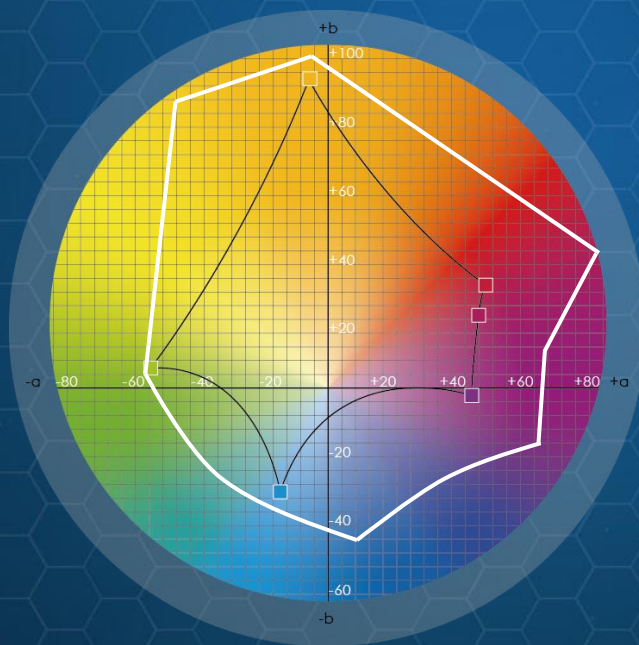




Innovational Dope Dyed

➤ **Widest Color Range —**

82% Wider Compared to Traditional Dope Dyed



— CHROMUCH

— traditional dope dyed



Innovational Dope Dyed

- **More Than 1,000 Colors Available—**
Most Colors Available No Need Color Matching

A1-1	A1-2	A1-3	A1-4	A2-1	A2-2	A2-3	A2-4	A6-10	A6-11	A6-12	A6-13	B1-1	I-YF	I-XF
<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>
NGA11	NGA21	NGA31	NGA41	NHA11	NHA21	NHA31	NHA41	NAB41	NAB31	NAB21	NAB11	NAA11	21AYY	A1'XY
NGA12	NGA22	NGA32	NGA42	NHA12	NHA22	NHA32	NHA42	NAB42	NAB32	NAB22	NAB12	NAA12	21AYY	B1'XY
NGA13	NGA23	NGA33	NGA43	NHA13	NHA23	NHA33	NHA43	NAB43	NAB33	NAB23	NAB13	NAA13	21AYY	C1'XY
NGA14	NGA24	NGA34	NGA44	NHA14	NHA24	NHA34	NHA44	NAB44	NAB34	NAB24	NAB14	NAA14	21AYY	D1'XY
NGA15	NGA25	NGA35	NGA45	NHA15	NHA25	NHA35	NHA45	NAB45	NAB35	NAB25	NAB15	NAA15	21AYY	E1'XY
NGA16	NGA26	NGA36	NGA46	NHA16	NHA26	NHA36	NHA46	NAB46	NAB36	NAB26	NAB16	NAA16	21AYY	F1'XY
NGA17	NGA27	NGA37	NGA47	NHA17	NHA27	NHA37	NHA47	NAB47	NAB37	NAB27	NAB17	NAA17	21AYY	G1'XY
1GA11	1GA13	1GA15	1GA17	1HA11	1HA13	1HA15	1HA17	1AA17	1AA16	1AA14	1AA12		11AYY	H1'XY
1GA12	1GA14	1GA16		1HA12	1HA14	1HA16	1HA18	1AA15	1AA13	1AA11			11AYY	I1'XY
75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	151W25 YTD	151W25 YTD



Innovational Dope Dyed

A2-5	A3-1	A3-2	A3-3	A3-4	A3-5	A3-6	A3-7	A3-8	A3-9	A3-10	A3-11	A3-12	A4-1	A4-2	A4-3
<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>
NHA51	NHB11	NHB21	NHB31	NHB41	NFA11	NFA21	NFA31	NFA41	NHC11	NHC21	NHC31	NHC41	NMA11	NMA21	NMA31
NHA52	NHB12	NHB22	NHB32	NHB42	NFA12	NFA22	NFA32	NFA42	NHC12	NHC22	NHC32	NHC42	NMA12	NMA22	NMA32
NHA53	NHB13	NHB23	NHB33	NHB43	NFA13	NFA23	NFA33	NFA43	NHC13	NHC23	NHC33	NHC43	NMA13	NMA23	NMA33
NHA54	NHB14	NHB24	NHB34	NHB44	NFA14	NFA24	NFA34	NFA44	NHC14	NHC24	NHC34	NHC44	NMA14	NMA24	NMA34
NHA55	NHB15	NHB25	NHB35	NHB45	NFA15	NFA25	NFA35	NFA45	NHC15	NHC25	NHC35	NHC45	NMA15	NMA25	NMA35
NHA56	NHB16	NHB26	NHB36	NHB46	NFA16	NFA26	NFA36	NFA46	NHC16	NHC26	NHC36	NHC46	NMA16	NMA26	NMA36
NHA57	NHB17	NHB27	NHB37	NHB47	NFA17	NFA27	NFA37	NFA47	NHC17	NHC27	NHC37	NHC47	NMA17	NMA27	NMA37
1HA19	2HA17	2HA16	2HA14	2HA12	2FB11	2FB13	2FB15	2FB17	3HA17	3HA18	3HA14	3HA12	3MA11	3MA13	3MA15
1HA10		2HA17	2HA13	2HA11	2FB12	2FB14	2FB16			3HA15	3HA13	3HA11	3MA12	3MA14	3MA16
75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY



Innovational Dope Dyed

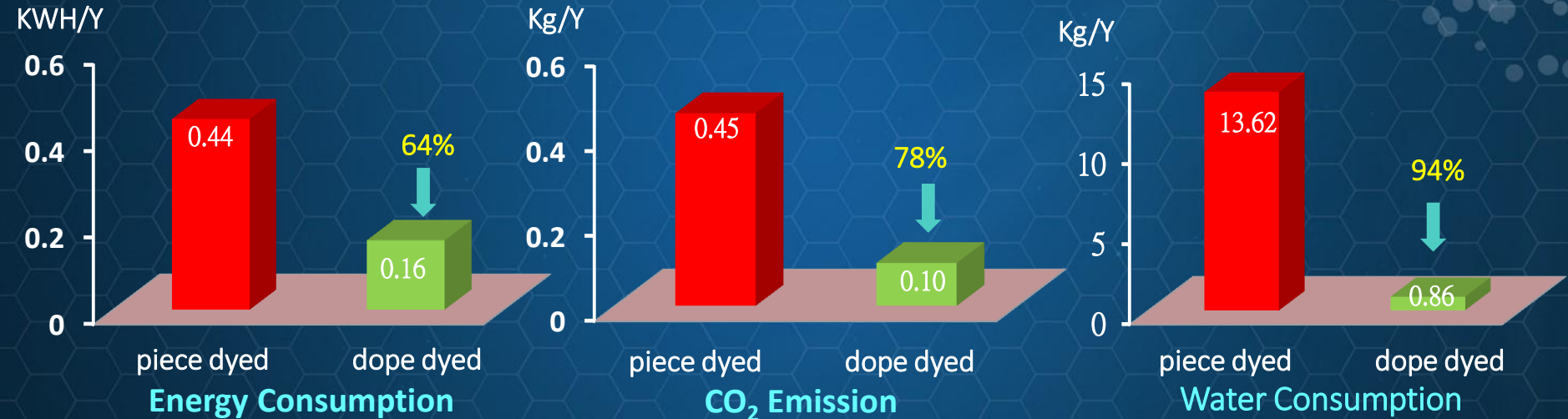
A6-3	A6-4	A6-5	A6-6	A6-7	A6-8	A6-9	A4-4	A4-5	A5-1	A5-2	A5-3	A5-4	A5-5	A5-6
<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>	<i>Chromuch</i>
NTA21	NTA11	NAC51	NAC41	NAC31	NAC21	NAC11	NMA41	NMA51	NPA41	NPA31	NPA21	NPA11	NMB51	NMB41
NTA22	NTA12	NAC52	NAC42	NAC32	NAC22	NAC12	NMA42	NMA52	NPA42	NPA32	NPA22	NPA12	NMB52	NMB42
NTA23	NTA13	NAC53	NAC43	NAC33	NAC23	NAC13	NMA43	NMA53	NPA43	NPA33	NPA23	NPA13	NMA53	NMB43
NTA24	NTA14	NAC54	NAC44	NAC34	NAC24	NAC14	NMA44	NMA54	NPA44	NPA34	NPA24	NPA14	NMB54	NMB44
NTA25	NTA15	NAC55	NAC45	NAC35	NAC25	NAC15	NMA45	NMA55	NPA45	NPA35	NPA25	NPA15	NMB55	NMB45
NTA26	NTA16	NAC56	NAC46	NAC36	NAC26	NAC16	NMA46	NMA56	NPA46	NPA36	NPA26	NPA16	NMB56	NMB46
NTA27	NTA17	NAC57	NAC47	NAC37	NAC27	NAC17	NMA47	NMA57	NPA47	NPA37	NPA27	NPA17	NMB57	NMB47
6TA14	6TA12	6AB11	6AB13	6AB15	6AB17	6AB19	3MA17	3MA19	4PA11	4PA13	4PA15	4PA17	5MA10	5MA18
6TA13	6TA11	6AB12	6AB14	6AB16	6AB18	6AB10	3MA16	3MA10	4PA12	4PA14	4PA16		5MA19	5MA17
75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY	75d/72f DTY



Innovational Dope Dyed

➤ Eco-friendly

traditional piece dyed v.s dope dyed



* woven (based on fabric weight 120 G/Y)



Work Hand in Hand with You to Make Contribution to the Earth



Contact Us

Eric Huang

erichuang@npc.com.tw

www.npc.com.tw