

OUR PRODUCT RANGE

1. Organic Pigments	All types of Organic, Azo, Phthalocyanine, toners Fanal toners, High
	Performance Pigments
2. Inorganic Pigments	All types of Chromes, Chrome Oxides for Paint, Inks and Plastic
3. Pigmented Chips	Pre-disperse Pigmented Chips with Binders like NC, PA, Acrylic, PVB with and
	without Plasticizer for Printing Ink, Paint, Coatings
4. Titanium Dioxide	Rutile and Anatase grades for Paint, Printing Inks, Plastic & Paper
5. Carbon Black	N series for News Inks, flexo and gravure Inks, Paint and Plastics.
6. Dyes	All types of Solvent, Acid, Basic and Vat dyes
7. Aluminium Paste	Leafing and Non Leafing Paste for Paint, Ink and Plastic
8. Pearlescent Pigments	All types for Printing Inks, Paint, Coatings, Cosmetic and Ceramic
9. Ethoxylates	Non Ionic & Anionic Surfactants
10. Resin	
Industrial Nitrocellulose	RS & SS grades in IPA, Ethanol, Butanol and Water Damp
Polyamide	Alcohol Soluble and Co-solvent grades
Polyurethane	Surkopak and Surkofilm series of BIP UK
Acrylic	Resin & Emulsion for Flexographic Ink
Ketonic	ABC 801, ABC 1001, ABC 1181 & ABC 1231
Maliec	Oil and Spirit Soluble for Printing Inks, Wood Coating and Paint
Hydrocarbon	C5 and C9 type for Road Marking, Paint, Adhesive and Ink
Alkyd Resin	All types of Long Oil, Short Oil and Medium Oil for Ink and Paint
Amino Resin	Melamine and Urea Formaldehyde for Coating and Paint
Epoxy Resin	For paint and coatings
Polyvinyl Butyral	Abpol 16, Abpol 18, Abpol 30 and Abpol 60
Phenolic	Pure and Modified for Printing Inks
Vinyl Resin	Vinyl acetate and Vinyl Co-polymer type for Printing Inks and coatings
Hydrocarbon Distillates	Aliphatic & Aromatic distillates with various distillation Range
Chlorinated Polypropylene	Various grades for Printing inks and Paints
Chlorinated EVA	Various grades for Printing Inks
EVA Resin	Printing Inks and Coatings
Aldehyde resin	Against BASF Laropal A 81 grade
11. Plasticizer	All types of Phthalate and Food grades like ATBC & Sulphonamide
12. Adhesion Promoter	Organic Titanates for Adhesion and high Heat Stability for Inks.
13. Resin Raw Materials	Pentaerythritol, Phthalic and Maliec Anhydride, Glycerine, SOFA, COFA, Dimer Acid
	NPG, Benzoic Acid, Gum Rosin, Adipic Acid, Melamine, Fumaric Acid, TPP, MPG,
	PTSA, VAM and Styrene etc.
14. Additives	Wetting, Dispersing and leveling agent and Defoamer etc.
15. Waxes	Micronized polyethylene, PTFE, Oleamide and Eurcamide wax.
16. Packaging Materials	All types of Substrates like, Aluminium foil, CPP, BOPA, Shrink Sleeves, Corrugated
To the domagning mutorial	Paper, Coated Paper, Solvents etc.



RESINS

PRODUCT	APPLICATIONS
Aliphatic hydrocarbon resin	Paint, ink and adhesive
Aromatic hydrocarbon resin	Road marking paint and adhesive
Aldehyde resin	Pigment paste, coatings and UV inks
Epoxy resin	Paints and coatings
Ketonic resin	Ink and paint
Maleic resin	Ink and paint
MF (Melamine Formaldehyde)	Paint, ink, coatings and adhesive
Polyamide resin (Alcohol Soluble / Co-solvent)	Ink
Phenolic resin (Pure/ Modified)	Ink, paint and adhesive
PVB (Poly Vinyl Butyrate)	Paint and ink
Short oil alkyd (COFA Base)	Paint and wood coating
Short oil alkyd (TOFA Base)	Paint and wood coating
UF (Urea Formaldehyde)	Paint and coating
Polyvinyl chloride polyvinyl alcohol and polyvinyl ace	tate Printing inks and coatings
Vinyl chloride vinyl acetate and dicarbonic acid	Printing inks and coatings
Vinyl chloride vinyl acetate copolymer resin	Printing inks and coatings
Vinyl Chloride vinyl acetate dicarboxylic acid terpoly	mer Printing inks and coatings
Thermoplastic acrylic resin	Heat seal lacquer, road marking paint, printing inks and adhesive
Ethylenevinyl acetate Co-polymer (EVA) Resin	Printing inks and coatings









RESIN RAW MATERIAL

PRODUCT	APPLICATIONS
Acrylamide Crystal	Acrylic emulsions
Adipic acid	PU base adhesive, elastomers
1, 4 Butanediol	Polyurethane resin
Benzoic Acid	Alkyd resin
Bisphenol A	Epoxy resin
Castor Oil, linseed oil, coconut oil, soya oil, su <mark>nflower oil</mark>	Alkyd resin, adhesives
Coconut fatty acid, castor oil fatty acid, soya <mark>fatty acid</mark>	Alkyd resin
Cyclohexanone	Ketonic resin
Dimer acid	Polyamide resin
Fumaric acid	Polyester resin, modified phenolic & maleic resin
Glycerine (USP/ Technical)	Alkyd resin
Gum rosin	Modified phenolic and maleic resin
Isophthalic acid	Polyester resin
Isocyanate like TDI, MDI and IPDI	Polyurethane resin
Maleic anhydride	Maleic resin and modified phenolic resin
Melamine	Melamine formaldehyde resin
Monomers like BA, MA, MMA, EA, AA, HEMA, 2EHA, 2HEA	Acrylic emulsions and other resin
Phthalic anhydride	Polyester & alkyd resin, Phthalocyanine pigments
Pentaerythritol-95% and 98%	Alkyd resin
Para tert butyl phenol (PTBP)	Pure and modified phenolic resin
Para toluene sulphonic acid (PTSA)	Catalyst in Melamine / Urea formaldehyde resin
Polyether polyol / Polyester polyol	Polyurethane resin
Triphenyl phosphite (TPP)	Catalyst for alkyd and polyester resin
Neo pentyl glycol (NPG)	Polyester resin
Mono propylene glycol (MPG)	Polyester resin
Vam and Styrene monomer	Emulsions









HIGH QUALITY PIGMENTS

PRODUCTS	CLOSEST TO INTERNATIONAL	PROPERTIES
	GRADE	

PIGMENT FOR FLEXO WATER BASE INKS

BLUE 15:3	OUR SPECIAL GRADE	REDDER SHADE WITH STANDARD FLOW
BLUE 15:3	DIC 2680	REDDER SHADE WITH HIGHER FLOW
GREEN 7	CLARIANT GNX	BLUER SHADE
VIOLET 27	BASF VIOLET D-6060	BLUER & REDDER SHADE
RED 112	CALRIANT FGR	SEMI-TRANSPARENT STANDARD GRADE
RED 49:1	OUR SPECIAL GRADE	SEMI-TRANSPARENT YELLOWER SHADE
RED 57:1	OUR SPECIAL GRADE	YELLOWER SHADE AND GOOD STABILITY.
YELLOW 12	CLARIANT DHG	GOOD FLOW PROPERTIES & OPAQUE GRADE



PIGMENT FOR SOLVENT BASE INK

BLUE 15:3	STANDARD GRADE	EXCELLENT FOR VINYL BASE INK
BLUE 15:4	CIBA GLVO	EQUIVALENT TO CIBA GLVO
BLUE 15:4	T0Y0 7400 G	EQUIVALENT TO 7400 G
GREEN 7	CLARIANT GNX	UNIVERSAL GRADE CAN BE USED IN NC / POLYAMIDE
VIOLET 3	CAPPELLE 0345 N	BLUISH SHADE & TRANSPARENT
VIOLET 23	STANDARD GRADE	SPECIAL GRADE FOR PU BASE LIQUID INK
VIOLET 23	CLARIANT RL	EQUIVALENT TO CLARIANT RL SPL
VIOLET 27	BASF VIOLET D-6060	BLUER SHADE FOR POLYAMIDE INKS
RED 22	OUR SPECIAL GRADE	NC & PU COATING
RED 48:2	CIBA 2BXL	TRANSPARENT GRADE FOR NC AND POLYAMIDE BASE INKS
RED 53:1	CLARIANT LCLL	UNIVERSAL GRADE CAN BE USED IN NC / POLYAMIDE AND VINYL INKS
RED 53:1	CIBA CBNL	YELLOWER SHADE FOR NC & POLYAMIDE INKS
RED 57:1 4BL	CIBA 4BL	YELLOWER SHADE FOR NC & POLYAMIDE INKS
RED 57:1 4BGL	CIBA 4BGL	BLUER SHADE FOR NC & POLYAMIDE INKS
RED 81	OUR SPECIAL GRADE	YELLOWER & BLUER SHADE FOR NC INKS
RED 122	OUR SPECIAL GRADE	YELLOWER SHADE FOR CPP & EVA INKS
RED 170 F5RK	OUR SPECIAL GRADE	YELLOWER SHADE FOR NC INKS
RED 238	OUR SPECIAL GRADE	BLUER SHADE
ORANGE 5	STANDARD GRADE	EXCELLENT GRADE FOR NC CHIPS
YELLOW 13	CLARIANT PGRL06	VERY TRANSPARENT WITH EXCELLENT GLOSS IN NC BASE LIQUID INKS
YELLOW 83	CLARIANT HR	TRANSPARENT SHADE





PIGMENT FOR OFFSET INK

RED 53:1 C	CLARIANT CT	YELLOWER SHADE WITH GOOD DISPERSION
RED 8 - F4R	STANDARD GRADE	BLUER SHADE
YELLOW 174	CIBA LBS	SEMI-TRANSPARENT GREENER SHADE
ORANGE 13	STANDARD GRADE	YELLOWER SHADE
RED 57:1 BHD	CIBA L4BH	YELLOWER SHADE
RED 57:1 BHN	CIBA L4BH	BLUER SHADE
RED 57:1 BHMB	CLARIANT L5B01	BLUER & TRANSPARENT SHADE
YELLOW 12	CLARIANT 44	TRANSPARENT GRADE
GREEN 7	CLARIANT GNX	BLUER SHADE
BLUE 15:3	BASF D 7080 & D 7072	CLEAN SHADE AND GOOD FLOW
CARBON BLACK	N SERIES GRADE	GOOD PRODUCT FOR NEWS INKS

PIGMENT FOR PLASTIC MASTER BATCH APPLICATION

BLUE 15:0MZ	STANDARD GRADE	HEAT STABILITY 180 Deg C / 5min
BLUE 15:1MZ	BASF 6902 / CLARIANT A2R	HEAT STABILITY 240 Deg C / 5 min
BLUE 15:1 MZ-EP	BASF 6902 / CLARIANT A2R	HEAT STABILITY 280 Deg C / 5 min
BLUE 15:3 MZ	BASF 7090 / CLARIANT BG	HEAT STABILITY 260 Deg C / 5 min
GREEN 7MZ	CLARIANT GNX / BASF 8730	HEAT STABILITY 280 Deg / 5 min



PACKAGING RAW MATERIAL

BRIDGING OCEANS TRADING Packaging has commenced its operation with the vision of providing all kinds of flexible packaging raw materials under one roof to the converting printing and packaging industries and would like to operate as a "SINGLE WINDOW" source for all raw material for packaging converters.

BRIDGING OCEANS TRADING - PACKAGING DIVISION works on a business to business level, connecting an international supply based to the vibrant and evolving market of the GCC, Middle East, India, Pakistan and African Countries Australia.

ALUMINIUM FOIL

Low Thickness Foil High Thickness Laminating Foil House Hold Foil Blister Foil Lidding Foil

SHRINK SLEEVES

PVC PET BOPP ROSO

SOLVENTS

Ethyl Acetate
Ethanol
Normal Propanol
ISO Butanol
Methoxy Propanol
Ethoxy Proponal
N - Propyle Acetate
IPA Technical Grade
Toluene
Xylene
MEK
Thinners

LAMINATING ADHESIVES

Solvent Less Adhesive Solvent Base Adhesive General Performance Adhesive High Performance Adhesive

PAPER

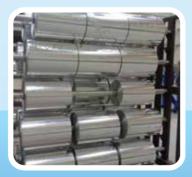
COATED PAPER CORRUGATED PAPER

SUBSTRATE

PET SHRINK PVC SHRINK CPP BOPA PVC RIGID FILM

HEAT SEAL LACQUER RESIN

VINNOL RESIN (Vinyl Chloride Vinyl Acetate Co Polymer) THERMOPLASTIC ACRYLIC RESIN (TPA)







ADHESION PROMOTERS

The adhesion promoters marketed by BOT help printing inks to bond with any surface and withstand the rigors of weather and also the attack from various chemicals and solvents. We have a range of such adhesion promoters which bring an entirely different concept in the print technology.

The basic product in the adhesion promoters is Titanium acetylacetonate and its formulations BOT has made these adhesion promoters which are very safe and environment friendly and do not have any hazardous effects.

The adhesion promoters can be used on various substrates and are very effective on any surface. Our products use cross-linking mechanism to achieve type of bonding which gives high heat stability.

THE MAIN EFFECTS WHICH CAN BE ACHIEVED ARE:

- Adhesion improvement to substrate
- Improved resistance to cracking and moisture or chemical attack
- Improved overall strength of surface by cross linking
- Reduced curing time and faster drying times by improved cross linking
- Pigments dispersion enhanced stability and compatibility.
- Improved gloss

PROPERTY	TAA-75	TAA-65	ADDITIVE 011	UNIT
TiO2 Content	16.5 ± 0.30	15.0 ± 0.3	14.3 ± 0.5	%
Density at 25°C	1.000 ± 0.005	0.98 ± 0.01	1.00 ± 0.01	Gm/cm3
Pour Point 25°C	- 20	- 70	< - 50	°C
Viscosity @ 25°C	7.5 - 9.5	5 - 6	20 ± 5	m.pas
Flash Point	12	12	12	°C
CAS No	17927-72-9	17927-72-9	109037-78-7	-





Nitro Chemical Industry Ltd. (NCI) was founded in 1982 to fulfill the growing need for **top quality industrial nitrocellulose**. Today, we are considered the first choice in many countries. NCI corporate offices are located in the heart of Bangkok, with the factory in Samutsakorn, 40 km south of Bangkok.

With a production capability of more than 10,000 tons per annum, we serve customers around the globe. For nearly 20 years, our constant commitment has been to deliver the highest value nitrocellulose while safeguarding the environment and ensuring customer satisfaction.

Our best quality nitrocellulose is used in:

- *Wood Lacquers
- *Paper Coatings
- *Printing Inks
- *Aircraft Lacquers
- *Automotive Lacquers
- *Aluminum Foil Coatings
- *Protective finishes for metal

We supply both SS and RS grades with varying viscosity.





Nobel NC Co., Ltd. is a joint venture in Thailand between two shareholders with an excellent presence in industrial nitrocellulose, NCI of Thailand and Inabata KK of Japan.

The new company has a simple and single vision - to manufacture the highest quality industrial nitrocellulose in the world.

The production of Nobel is in the form of "dense chip" widely regarded having defined the standard for quality and consistency in the market for many years.

Product Benefits: -

Superior clarity

Guaranteed consistency and quality

Choice of nitrogen grades

Choice of viscosities

Easy to handle

Convenient packaging and storage options

On-going research and development

Safer to handle









TIO2 TR-52 by BILLIONS EUROPE LTD. — UK.

Specialist pigment for high quality white inks

TR52 Titanium dioxide pigment is a rutile pigment specifically designed for the printing ink industry. An optimized crystal size combined with carefully selected mineral and organic surface treatments make it the ideal choice for the pigmentation of white inks.

- Solvent & water based
- Surface & reverse printing

Suitable for a range of packaging application







TR 52 pigment has the lowest weight loss (i.e. it is the least abrasive) when compared with a range of competitive products.

Exceptional performance across a range of properties

Superb Gloss

Delivering high gloss in ink formulations with no compromise in opacity, proving it, is possible to combine the highest gloss with high opacity.

Excellent Opacity

Optimised to consistently deliver a high level of performance across a range of ink formulations.

Outstanding Dispersion

Providing superior product quality as well as process efficiencies - enabling our customers to stand out in today's competitive market and also realize cost saving.

Low Abrasivity

Providing low abrasivity enabling process efficiency due to less wear on equipment.





Surkopak® Plasticising Polyurethane Resin

- Used in nitrocellulose based inks and coating systems
- Available in a choice of hardness and plasticizing effects
- Can be applied to both rigid and flexible substrates
- The products are supplied as isocyanate, benzene & toluene free liquids

Surkofilm® Polymers

- Contain both polyether and polyester, aliphatic and aromatic based high molecular weight structures
- Used on wide variety of substrates demanding performance for high quality inks
- Formulated to low non-volatile
- Special grades have been developed for vinyl substrates
- The products are supplied as isocyanate, benzene & toluene free liquids







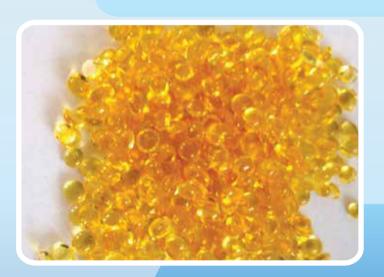


POLYAMIDE RESINS

Specification							
Туре	Grade	SP °C	AcidValue mgKOH/g	AmineValue mgKOH/g	Viscosity mPa.S/25°C	Color Fe-Co	Characteristic
	BOT 3525	110 ± 5	< 6	< 5	80 ~ 160	< 7	General type (irregular granule)
	BOT 3301	108 ± 5	< 6	< 5	80 ~ 160	< 7	General type (regular granule)
Co-solvent	BOT 3301H	108 ± 5	< 6	< 5	160 ~ 240	< 7	High viscosity
Type	BOT 3303	110 ± 5	< 6	< 5	100 ~ 160	< 7	High gloss & excellent release
	BOT 3306	102 ± 5	< 6	< 5	100 ~ 160	< 7	Excellent anti-frozen performance
	BOT 3356	95 ± 5	< 16	< 3	30 ~ 100	< 7	For untreated membrane
	BOT 2033	120 ± 5	< 6	< 5	110 ~ 160	< 7	Alcohol-soluble General type
	BOT 2033L	110 ± 5	< 6	< 5	90 ~ 150	< 7	Alcohol-soluble General type
Alcohol-soluble							with low frozen point
Type	BOT 2400	104 ± 5	< 6	< 5	60 ~ 120	< 7	High gloss & good release
	BOT 2084	115 ± 5	< 6	< 5	100 ~ 160	< 7	High gloss & low frozen point
	BOT 2055	115 ± 5	< 6	< 5	80 ~ 120	< 8	High gloss & low viscosity &
							low frozen point

Note:

- 1. When dissolving Co-solvent type polyamide resin the solid content is 40% and the solvent we use to dissolve it is Benzene and Isopropanol with a proportionality of 7:3.
- 2. When dissolving Alcohol-soluble type polyamide resin, for 2400 type the solid content is 40% and the solvent we use to dissolve it is Ethyl Alcohol (95% purity) and Isopropanol with a proportionality of 1:1
- 3. When dissolving the other types of Alcohol-soluble polyamide resin the solid content is 50% and the solvent is Ethyl Alcohol (95% purity).





C5 HYDROCARBON RESIN

BOT-L is new resin developed specifically to meet the technical requirement for hot melt road marking paint.

BOT-L is suitable to be used in hot melt road marking paint, It can enhance the paint toughness, hardness and adhesion to form a smooth surface and by adding additive to make resin at the Four Season always in a stable condition and rosin resin and good compatibility. In the high-end mixed paint, paint film can form a water resistant, UV resistant, Chemical resistant properties, with remarkably improvement in the brightness of the dry film.

SPECIFICATION	TEST METHOD	UNIT	SPECIFICATION RANGE
Softening Point	ASTM-E-28	°C	98.0 - 105.0
Color	ASTM-D1544	GC	5 Max
Melt Viscosity	ASTM-D3236	M pas	220.0 Max
Insoluble	ASTM-E 99	Vol %	0.1 Max
Acid Value	ASTM-D 974	MgKOH/ gm	1 Max

Application Field Recommended:

Holt Melt Road Marking Paint, Pressure Sensitive Adhesive





CHLORINATED POLYPROPYLENE

DISCRIPTION	GRADE NO. 1	GRADE NO. 1+	
APPEARANCE	YELLOWISH GRANULE	WHITE GRANULE	
PURITY (CL%)	28% - 30%	30% - 32%	
VISCOSITY (25°C) mPa.S	200 - 600	300 - 400	
MOISTURE	≤0.6%	≤ 0.5%	
pH VALUE	6.10 - 6.30	6.0 - 8.0	
PHYSICAL APPEARANCE			
END USE APPLICATIONS:	PRINTING INKS AND ADHESIVES		

CHLORINATED EVA

DISCRIPTION	GRADE NO. 1	GRADE NO. 1+
APPEARANCE	YELLOWISH WHITE LUMPS	TINY WHITE STRIPS
PURITY (CL%)	21% - 23%	24% - 26%
VISCOSITY (25°C) mPa.S	300 - 330	250 - 300
pH VALUE	4.0 - 4.30	6.0 - 8.0
PHYSICAL APPEARANCE		
END USE APPLICATIONS:	PRINTING INKS AND ADHESIVES	8





Hanwha Alkali Water Soluble Resins (Soluryl Resins, Soluryl Emulsions) have unique features to develop outstanding properties for coating and printing applications.

2001: ASR commercial plant construction completed. Capacity 3000 MT per annum

2002: Launching of ASR/ RFE ASR Grade S-70, S-90, S-120, RFE Grade R-90, R-20B, R-20, E-80.

2004: ASR New Grade S-820, RFE New Grade R-90G, E-80F, RX-30, RX-20

2005: RFE New Grade RV-4916, RV-3502

2006: ASR Quality upgrade, RFE New Grade SX-1420, ASR Production Capacity 3400 MT/ Year

2007: ASR New Grade S-20 , RFE New Grade R-9061 ASR Production Capacity 3600 MT / Year

2008: ASR New Grade S-160, RFE New Grade SE-1001, ASR New type Pellet Production

2009: ASR New Grade S- 840 , RFE New Grade E-80T , ASR Thailand Plant construction completed , Capacity 6500 MT / Year

2010: On moving ASR Production Korean line to Thailand, Capacity 10,000 MT / Year , ASR New Grade S74 ,RFE New Grade SE-1301, CE-1217

2011: ASR New Grade Eco Product, RFE New Grade CE-0113



Vinyl Acetate Vinyl Chloride Copolymer Resin : CP 430 , CP450 , CP 705 , CP 710 Vinyl Acetate Vinyl Chloride Carboxylic Acid Terpolymer Resin : TP 400M

