



KARJEN INDUSTRIES
Chasing the Color

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17L/1A, Dover Terrace, 2nd Floor, Kolkata – 700019

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Dogachia, Monmohanpur, Chandpara
PS-Gaighata, North 24 PGS, PIN – 743245

Email
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033 – 4001 1021



Founded in 2008 by **Mr Bhaskar Palit**, a recognized name in Bangladesh packaging industries. Karjen Industries, a sister concern of Nao Kalong, was established in 2016 to cater printing ink requirements to various flexible packaging customers in India and Abroad. Noa Kalang is a leading exporter of raw materials and related products for printing Industries in Bangladesh. Having our presence in Bangladesh, India and Singapore, we are delivering the best product and service and technical support to our various renowned clients.

We are the partner and Authorized representative of leading adhesive brand HENKEL ADHESIVES TECHNOLOGIES in Bangladesh for Flexible, Hygiene, Construction, Furniture and Textile segments to our long clientele like, Bashundhara, Square, ACI GSK, Incepta etc.

We are also catering to clients like Akij Printing, Pran RFL Group, Unilever, Nestle Beximco, Al Mustafa, Tampaco, Premoaflex, Partex, Reneta and others.

Our sister concern Boond Engineering & Development Pvt Ltd is engaged in Solar Energy and have made remarkable contributions in the Solar Energy Field. Details can be found out from the link: <http://boond.net>

Karjen Industry has a modern production Centre with machineries from reputed European Companies and reputed Indian Houses as well and testing equipment from USA, UK”





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The Product Management Team:

The company has a very strong and experienced management team with a proven track record and long association, almost since inception.

The **operation** is headed by an Alumna of IIT BHU. Started his career in Hindustan Unilever and served them for about 9 years as Quality Control Manager and Packaging Development Manager. Have experience of working in Coates of India (and then DIC India Ltd) for 23 years heading departments like, Technical Buying, Production, Marketing, and last position held was Vice President Operation. He was responsible for building 3 state of the art Ink factories from Green Field. Worked with Flint Group, USA, as Operation Director for 7 years and was responsible for setting up of a modern Ink Plant in Gujarat.

Technology and R & D is under a PhD on Printable and Biodegradable Flexible Packaging Films. Having experience of working with MNCs for 43 years. Worked with DIC for 23 years and his last position was the Chief Technical Manager, Was with Eckert GmbH, Germany & Wolstenholme International for 19 years heading their marketing & Technical support for South Asia. He is a Member of Bureau of Indian Standard (BIS)





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PRODUCT PROFILE:

1. KARLAM (Vinyl Base Reverse Printing Gravure Lamination Inks for PET Film)

- a. **Description:** KARLAM Inks are formulated to offer sharp printability for solid and halftone jobs on Polyester Film, at quite a wider range of Press Speeds.
- b. **Application:** KARLAM Inks offer good Adhesion on Polyester (untreated, unprimed and plain) film and are meant for Reverse Printing. These Inks are not suitable for Surface Printing Application.
- c. **Printing Process:** Roto Gravure Printing only.
- d. **Printing Substrate:** Polyester (untreated, unprimed and plain) film. Can be printed on Corona Treated BOPP Film, with 38 – 42 Dyne/Cm treatment level on the printing side, by adding a recommended dose of an Additive to these Inks.
- e. **Lamination:** KARLAM Inks are suitable for Adhesive Lamination with Polyethylene Film, Aluminum Foil, Paper and Board. Lamination Peel Strength is depended on Adhesive used, its coating weight, Ink Coating weight, Substrates laminated, nature of jobs etc. It's desirable to select right Adhesive applied with proper coating weight to get the best result.
- f. **Key Product Features:** Good Bond Strength, Excellent printability resulting in clean and sharp images. Extremely stable and excellent re-usability, excellent half tone reproduction.
- g. **Colour Range:** A full range of colours are available. Specific Shades are matched on Demand. It is desirable that User mentions his/her special requirements regarding Light Fastness, ARSR Properties or any other specific requirement of that sort beforehand while placing his/her indent with us. Desired shades can be obtained by intermixing standard colors at press room level.
- h. **Solvent System:** Toluene: Ethyl Acetate → 50: 50, for Slowing the Drying Toluene: Ethyl Acetate: MIBK → 50: 40: 10. **Accelerator** Ethyl Acetate or MEK **Retarder** MIBK (as required, extra may lead to blocking)

2. KARPLUS (Vinyl Base Reverse Printing Gravure Lamination Inks for PET Film)

- a. **Description:** KARPLUS Inks are formulated to offer sharp printability for solid and halftone jobs on Polyester Film, at quite a wider range of Press Speeds.
- b. **Application:** KARPLUS Inks offer good Adhesion on Polyester (untreated, unprimed and plain) film and are meant for Reverse Printing. These Inks are not suitable for Surface Printing Application.



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- c. **Printing Process:** Roto Gravure Printing only. Printing Substrate: Polyester (untreated, unprimed and plain) film. Can be printed on Corona Treated BOPP Film, with 38 – 42 Dyne/Cm treatment level on the printing side, by adding a recommended dose of an Additive to these Inks.
- d. **Lamination:** KARPLUS Inks are suitable for Adhesive Lamination with Polyethylene Film, Aluminum Foil, Paper and Board. Lamination Peel Strength is depended on Adhesive used, its coating weight, Ink Coating weight, Substrates laminated, nature of jobs etc. It's desirable to select right Adhesive applied with proper coating weight to get the best result.
- e. **Key Product Features:** Good Bond Strength. Excellent printability resulting in clean and sharp images. Extremely stable and excellent re-usability. Excellent half tone reproduction. }
- f. **Colour Range:** A full range of colors are available. Specific Shades are matched on Demand. It is desirable that User mentions his/her special requirements regarding Light Fastness, ARSR Properties or any other specific requirement of that sort beforehand while placing his/her indent with us. Desired shades can be obtained by intermixing standard colors at press room level.
- g. **Solvent System:** Normal Toluene : Ethyl Acetate → 50 : 50 Slowing the Drying Toluene : Ethyl Acetate : MIBK → 50 : 40 : 10 Accelerator Ethyl Acetate or MEK Retarder MIBK (as required, extra may lead to blocking)

3. **KARBOND** (PU Base) (A multipurpose Reverse Printing Ink)

- a. **Description:** KARBOND is low odour lamination inks having high bond strength, excellent printability and specifically formulated for reverse printing on treated BOPP and Polyester film.
- b. **Application:** KARBOND the low odor and low solvent retention features make it suitable for the packaging of food products e.g., Coffee, Biscuits, Snack foods, Confectionery etc. High bond characteristics of KARBOND make it suitable for Polyester laminates to pack liquids and heavy weight materials.
- c. **Printing Process:** Roto Gravure Printing only.
- d. **Printing Substrate:** PET – Corona treated, chemically treated, plain. OPP – Plain Corona treated, co-extruded (surface tension should be over 38 dynes/cm²). Nylon – One-side or both-side treated (surface tension should be over 52 dynes/cm²) others – Cellophane, PVA film, EVOH film. Lamination:
- e. **DRY LAMINATION:** KARBOND inks are excellent for adhesive lamination with substrates like Polyethylene, BOPP, Aluminum Foil, Metalized film, Paper, Board etc. KARBOND printed films may be laminated with a number of two components solvent -based adhesives. The actual bond strength in the printed area is a function of the quality of substrate, ink, adhesive and the adhesive coating weight. Normal recommendation is to exceed a minimum adhesive coating weight (approx. 2 – 2.5 GSM dry coating weight).



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- f. **EXTRUSION LAMINATION** imine and **Polyisocyanates** AC Agent) to achieve good lamination bond strength, 2% (by weight) Hardener must be mixed with the ink during printing. Key Product Features: Multipurpose application. Lamination from snacks to boil and retort packaging. Many applications for various films. Low odour in BOPP making it exclusive for food packaging. Low solvent retention. High lamination bond in Polyester and BOPP. Good laminating property (acceptable imine and **Polyisocyanates** AC Agent). Good adhesion. Excellent printability and tonal reproduction, particularly at higher printing speeds. High colour strength at low viscosity. Colour Range: A full range of colours are available. Desired shades can be obtained by intermixing standard colors at press room level Web temperature of 60°C to 70°C is normally sufficient. However, the actual temperature can vary with substrate, process, press conditions and printing speed.
- g. **Solvent System:** Normal drying Ethyl Acetate : MEK : IPA → 60 : 30 : 10 Slow drying Ethyl Acetate : MEK : MIBK : IPA → 60 : 20 : 10 : 10 Retarder MIBK / PGMME It is essential to ensure efficient solvent removal especially slow drying solvents to avoid.



4. KARGLOSS (Surface Printing Inks for Polyethylene Film)

- a. **Description:** KARGLOSS INKS have been designed for Flexographic and Rotogravure printing respectively, meeting the requirements of high gloss and high print strength on a wide range of substrates.
- b. **Application:** KARGLOSS INKS can be printed on a wide range of Films, Aluminum foil, Paper and board. These inks have good adhesion on Corona Treated Polyethylene and Polyester Films. The recommended treatment level for Polyethylene Film is at least 38 dynes/cm to ensure Good Adhesion and optimum Rub Resistance properties.
- c. **Printing Process:** Can be used both for Flexographic and Rotogravure Printing.
- d. **Printing Substrate:** A wide range of Films, Aluminum foil, paper and board. Corona Treated Polyethylene Film Polyester Film
- e. **Lamination:** KARGLOSS INKS are not recommended for Lamination purpose.



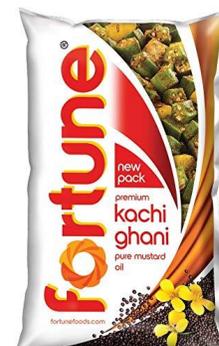
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- f. **Key Product Features:** A number of properties like high surface slip, scratch resistance are in-built in these inks for general purpose printing. KARGLOSS INKS do not have enough heat resistance to enable heat sealing on the printed area. Inks with resistance towards water, fruit juice, oil milk and deep freeze are separately available. KARGLOSS INKS are inadequate to resist aggressive oil/ghee, alkali and detergent. For detergent packaging in polythene bags Two Pack AR INKS should be used.
- g. **LIGHTFASTNESS:** The pigments used have specific light fastness, but may not be suitable for extended exposure to direct sunlight.
- h. **Solvent System:** A blend of IPA and NBA is used in combination. Ratio varies with press speed. Toluene also can be used in Gravure process.

5. KARFREEZ (Surface printing Oil resistant Inks for treated Polyethylene)

- a. **Description:** KARFREEZ Inks have been carefully formulated for Flexographic and Rotogravure printing. KARFREEZ inks satisfy the demand of gloss and high print strength and qualify vegetable oil / milk and butter resistance test. The recommended treatment level for Polyethylene Film is at least 38 dynes/cm to ensure Good Adhesion and optimum Rub Resistance properties. We recommend that you Consult Karjen Service Team before you chose for any aggressive Brand of Oil to re ensure its resistance property.
- b. **Printing Process:** Can be used both for Flexographic and Rotogravure Printing. Printing Substrate: KARFREEZ inks have good adhesion to treated Polyethylene and OPP films. The recommended treatment level for polyethylene and OPP films is at least 38 dynes/cm to ensure good adhesion and optimum resistance properties.
- c. **Lamination:** KARFREEZ Inks are not recommended for Lamination purpose. It will have Compatible issue with the Lamination Adhesive leading to poor Bond Strength.
- d. **Key Product Features:** Resistant to Vegetable Oil. High Surface Slip and Scratch Resistant. Deep Freeze Resistant it is not Heat Resistant and printing with this ink should be avoided in sealing area. Its Resistance property towards Soap and Detergent is inadequate. Due to its conformity towards Resistance Property use of some pigments are barred. Availability of any typical colour may be an issue. We recommend consulting our service team beforehand for such cases.
- e. **Solvent System: Flexographic:** A blend of Ethyl acetate and isopropyl alcohol. **Rotogravure:** A blend of Ethyl acetate and isopropyl alcohol, the proportion will depend upon press speed. **Retarder:** Isopropyl Alcohol is the recommended retarder





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6. KARSHRINK (Surface Printing Inks for PVC Film)

- a. **Description:** KARSHRINK INKS are formulated for reverse printing over shrinkable PVC and pet film labels. These inks are suitable for high speed printing and can be used for Rotogravure Printing.
- b. **Application:** KARSHRINK INKS can be printed on Shrinkable PVC and Polyester Films. The recommended treatment level of Film is at least 38 dynes/cm to ensure Good Adhesion and optimum Block Resistance properties.
- c. **Printing Process:** Can be used for Rotogravure Printing. Printing
- d. **Substrate:** Shrinkable PVC Film, Treated Polyester Film
- e. **Lamination:** KARSHRINK INKS are not recommended for Lamination purpose.
- f. **Key Product Features:** A number of properties like high surface slip, scratch resistance are in-built in these inks for general purpose printing. } KARSHINK INKS have good heat resistance to enable heat sealing on the printed area. Inks with resistance towards water and deep freeze are available. KARSHRINK INKS are inadequate to resist aggressive oil/ghee, alkali and detergent.
- g. **LIGHTFASTNESS:** The pigments used have specific light fastness, but may not be suitable for extended exposure to direct sunlight.
- h. **Solvent System:** Rotogravure A blend Ethyl Acetate, toluene and MEK, the proportion will depend upon press speed. Retarder: MIBK is the recommended retarder.



7. KAR NTKN (A multipurpose Non-Toluene Non-Ketotic Gravure Reverse Printing Ink)

- a. **Description:** KAR NTKN is the series of toluene & Ketone free low odour lamination inks having high bond strength, excellent printability and specially designed for reverse printing on treated BOPP and Polyester film Application: The low odour and low solvent retention characteristics make it particularly suitable for the packaging of food products e.g., Coffee, Biscuits, Snack foods, Confectionery etc. A high bond characteristic of Polyester laminates printed with KAR NTKN makes it suitable for packing liquids and heavy weight materials.
- b. **Printing Process:** Roto Gravure Printing only.
- c. **Printing Substrate:** PET – Corona treated, chemically treated, plain. OPP – Plain Corona treated, co-extruded (surface tension should be over 38 dynes/cm²). Nylon – One-side or both-side treated (surface tension should be over 52 dynes/cm²)
- d. **Lamination: DRY LAMINATION: 1** KAR NTKN inks are excellent for adhesive lamination with recommended substrates, like, Polyethylene, BOPP, Aluminum Foil, Metalized film, Paper, Board etc. Films printed by KAR NTKN can be laminated with a number of two component solvent-based adhesives. The actual bond strength in the printed area is a function of the quality of substrate, ink, adhesive and the adhesive coating weight. It is normally necessary to exceed a minimum adhesive coating weight (approx. 2.0 – 2.5 GSM dry coating weight).
- e. **EXTRUSION LAMINATION: 2** (Imine and Polyisocyanates AC Agent): 2% (by weight) Hardener must be mixed with the ink during printing to achieve good lamination bond strength.
- f. **Key Product Features:** KAR NTKN have been formulated to meet some precision requirements of the laminates involving Polyester and BOPP substrates. Non-toluene Non-Ketonic usage – especially suitable for food packaging. Multipurpose application. Packaging for snack to boil and retort packaging. Many specialized applications for various films. Low odour, particularly in BOPP based laminates makes its usage exclusively for food packaging. Low solvent retention. High lamination bond in Polyester and BOPP. Good laminating property (acceptable imine and Polyisocyanates AC). Good adhesion. Excellent printability and tonal reproduction, particularly at higher printing speeds. High colour strength at low viscosity. Web temperature of 60°C – 70°C is normally sufficient. However, the actual temperature requirement may vary with substrate, process, press conditions and printing speed.
- g. **Solvent System:** White & Solid Colours EAc : NPAC: IPA = 50 : 25 : 25 Process Colour, Halftone NPAC: EAc : IPA = 50 : 25 : 25 Retarder Approximately 5 to 10% PGMME addition to above solvent blend It is essential to ensure efficient solvent removal especially slow drying solvents to avoid blocking and to maintain the low odour properties of KAR NTKN inks



Above was a brief on Band of Products we supply commercially. There are products tailor made to serve various other application purposes cut appropriately to meet its requirements, like, HR Foil inks, Paper ink etc. A complete package is available which are normally required by the Industry in the country today. This gives only an outline on Product Applications, We recommend that customers refer to the relevant Technical Information Leaflets and/or consult our Technical Service Team for advice. Please mail to: info@karjenindustries.com for information or help.