Manufacturing of Printing Inks with Formulation (Flexographic Inks, Typographic Printing Inks, Planographic Inks, Intaglio Printing Inks, **Gravure Printing Inks, Special Inks, Offset** Printing Inks, Ball Pen Inks, Fluorescent Inks, **Phosphorescent Pigments, Silk-screen Fluorescent Printing, Inorganic Pigments)**

Introduction

Printing inks are widely used in publishing and packaging industry. The publishing industry consists of commercial printing and other printing products such as newspapers, magazines, periodicals, etc. This is also used on many different surfaces ranging from aluminium cans and plastic bottles through to paper. Special inks have been developed for use in these different situations. Although the newest of the major print processes, flexography (or flexo) is now the most important process for the production of flexible packaging. A number of other applications include corrugated cases, tickets, forms, directories, paperback books and comics.



Ink is a liquid or paste that contains pigments or dyes and is used to colour a surface to produce an image, text, or design. Ink is used for drawing or writing with a pen, brush, or quill. Thicker inks, in paste form, are used extensively in letterpress and lithographic printing. Ink can be a complex medium, composed of solvents, pigments, dyes, resins, lubricants, solubilizers, surfactants, particulate matter, fluorescents, and other materials. The components of inks serve many purposes; the ink's carrier, colorants, and other additives affect the flow and thickness of the ink and its appearance when dry.



Printing ink sector in India witnessed a growth of around 7.5% per annum during the Past years. Printed packaging accounts for around 27% of the demand for printing inks in India followed by newspapers at 20%. **Commercial** printing/promotional and printed advertising together account for around 19% of the demand. Other key end user segments for printing inks include books and stationery. With the print sector forecast to grow at around 8% per annum, in coming years, printing ink segment is expected to grow strongly.



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India is among the fast growing printing ink markets globally spurred by the rapid expansion of the domestic print markets. Backed by a strong demand from key end user segments such as package printing, newsprint, publishing and other commercial printing, the printing ink market in India has registered strong growth over the years. The printing ink industry is fragmented with hundreds of manufacturers and a large number of players in the unorganised sector.





The global printing ink market can be categorized on the basis of types of processes, products, applications and geography. On the basis of various printing processes, the global printing ink market can be segmented into gravure printing, lithographic printing, flexographic printing, digital printing and letterpress printing and others. The growing demand from the packaging industry is expected to boost the growth of the global printing inks market. Rising demand for UV-cured inks from various printing processes is also expected to fuel market growth.



On the basis of product type, the global printing inks market has been divided into oil-based, water-based, solvent-based, and other printing inks.

The global market for Printing Inks is projected to reach US\$20.4 billion by 2022, driven by growing opportunities in the packaging print sector supported by steady growth in consumer retail sales and the ensuing importance of printed materials in packaging, labelling, and advertising.



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Media

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Solvent Power Undesirable Solvent Properties Instability Bad Odour Bad Colour Impurities **Toxicity Petroleum Alkanes** Natural Petroleum **Petroleum Ether** S.B.P. Spirit Petroleum Spirit, Ligroin Or Gasoline White Spirit (W/S) **Mineral Oils Coal-tar Hydrocarbons Benzene C6h6 Toluene, C6H5CH3, Methyl Benzene Solvent Naphthas**



Light Naphtha Heavy Naphtha or Aromatic White Spirit (A.W.S.) **Terpene Solvents** Turpentine **Oxidized Turpentine** Dipentene, C10H16 **Pine Oils** Hydrogenated Naphthalene Solvents Decalin, C10H18 **Tetralin C10H12 Alcohol Solvents** Ethanol, Ethyl Alcohol, CH3CH2OH Isopropanol **Butanol CH3CH2CH2CH2OH** Methyl Isobutyl Carbinol (M.I.B.C.) **Diacetone Alcohol Or Dical** Benzyl Alcohol C6H5CH2OH **Glycol Solvents**



Ethylene Glycol HO.CH2CH2OH (E.g.) Diethylene Glycol HO.CH2CH2O.CH2CH2OH. (D.E.G.) Propylene Glycol Ch3.CHOH. CH2OH (P.G.) Dipropylene Glycol HO. (CH2)3.O. (CH2)3OH (D.P.G.) Hexylene Glycol, 2 Methyl, (2, 4) Pentanediol (H.G.) **Ethers** Di-ethyl Ether, C2H5.O. C2H5 The Ether Alcohols or Cellosolves Methyl Cellosolve / CH3.O.(CH2)2.OH Cellosolve, Ethylene Glycol Monoethyl Ether Butyl Cellosolve CH3.(CR2)3.O.(CHZ)2OH **The Carbitols** Carbitol **Methyl Carbitol Ketones** Acetone



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Methyl Ethyl Ketone (M.E.K.) CH3.CO. C2H5 Methyl Isobutyl Ketone (M.i.b.k.) Isophorone, C9H14O Sextone B, Methyl Cyclohexanone Acetonyl Acetone, 2.5 Hexanediol Furfural **Ester Solvents** Butyl Acetate. C4h9.coo.ch3 **Butyl Lactate C4H9COO.CHOH.CH3 Plasticizers Di-butyl Phthalate (D.B.P.) Tri-phenyl Phosphate (T.P.P.) Tri-cresyl Phosphate (T.C.P.)** Triacetin **Ethyl Abietate Solvents From Petroleum**



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Nature of Pigments Specific Gravity, Opacity, Oil Adsorption and Brilliancy Grinding and Rheological Properties Stability to Heat and Light Stability to Acids and Alkalis Resistance to Fat, Soap, Wax, Oil, Alcohol, and Water Special Advantages and Defects Four-colour Process Pigments Madder Lake Scale Test

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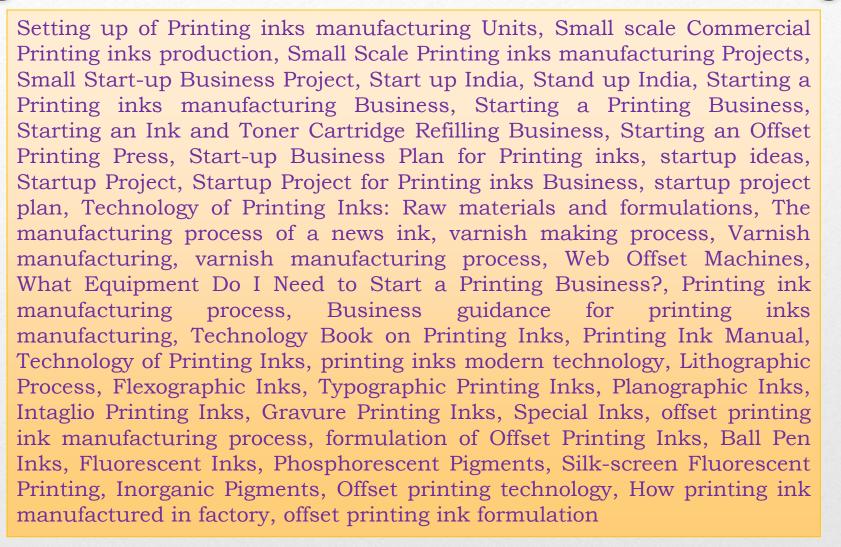




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Requirement collection

Thorough analysis of the project

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- Activated Carbon & Activated Charcoal
- Aluminium And Aluminium Extrusion Profiles & Sections,
- Bio-fertilizers And Biotechnology
- Breakfast Snacks And Cereal Food
- O Bicycle Tyres & Tubes, Bicycle Parts, Bicycle Assembling



- Bamboo And Cane Based Projects
- Building Materials And Construction Projects
- Biodegradable & Bioplastic Based Projects
- Chemicals (Organic And Inorganic)
- Confectionery, Bakery/Baking And Other Food
- Cereal Processing
- Coconut And Coconut Based Products
- Cold Storage For Fruits & Vegetables
- Coal & Coal Byproduct



- Copper & Copper Based Projects
- Dairy/Milk Processing
- Disinfectants, Pesticides, Insecticides, Mosquito Repellents,
- Electrical, Electronic And Computer based Projects
- Essential Oils, Oils & Fats And Allied
- Engineering Goods
- Fibre Glass & Float Glass
- Fast Moving Consumer Goods
- Food, Bakery, Agro Processing



- Fruits & Vegetables Processing
- Ferro Alloys Based Projects
- Fertilizers & Biofertilizers
- Ginger & Ginger Based Projects
- *Herbs And Medicinal Cultivation And Jatropha (Biofuel)*
- Hotel & Hospitability Projects
- Hospital Based Projects
- Herbal Based Projects
- Inks, Stationery And Export Industries



- Infrastructure Projects
- Jute & Jute Based Products
- Leather And Leather Based Projects
- Leisure & Entertainment Based Projects
- Livestock Farming Of Birds & Animals
- Minerals And Minerals
- Maize Processing(Wet Milling) & Maize Based Projects
- Medical Plastics, Disposables Plastic Syringe, Blood Bags
- Organic Farming, Neem Products Etc.



- Paints, Pigments, Varnish & Lacquer
- Paper And Paper Board, Paper Recycling Projects
- Printing Inks
- Packaging Based Projects
- Perfumes, Cosmetics And Flavours
- Power Generation Based Projects & Renewable Energy Based Projects
- Pharmaceuticals And Drugs
- Plantations, Farming And Cultivations
- Plastic Film, Plastic Waste And Plastic Compounds
- Plastic, PVC, PET, HDPE, LDPE Etc.



- Potato And Potato Based Projects
- Printing And Packaging
- *Real Estate, Leisure And Hospitality*
- Rubber And Rubber Products
- Soaps And Detergents
- Stationary Products
- Spices And Snacks Food
- Steel & Steel Products
- Textile Auxiliary And Chemicals



- Township & Residential Complex
- Textiles And Readymade Garments
- Waste Management & Recycling
- Wood & Wood Products
- Water Industry(Packaged Drinking Water & Mineral Water)
- 0 Wire & Cable





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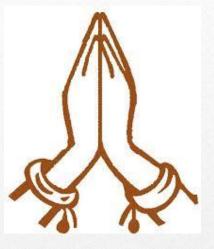
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