



One stop shop for plastic auxiliaries

www.bryair.com

# Ecoplast

...News from



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## PRODUCT PARADE

### Bry-Air Ecoplast range on display at Bry-Air's Corporate Office

We invite you to visit the display area at our Corporate office. It will be our pleasure to escort you through the Display Area and demonstrate the products of your interest. Just get in touch with the Plastingineers at our offices at different locations. They will ensure that your visit is a beginning of a mutually beneficial relationship.

Bry-Air's new Corporate Office and (additional) Manufacturing facility was inaugurated on March 22, 2002 by Mr. Paul D. Griesse. The building houses 2,400 sq. ft. of Permanent Display showcasing the entire product range of the Group.

Occupying a focal point in the Display is the entire Bry-Air Ecoplast range.



The 'Plastics' corner at the permanent display at Bry-Air's Corporate Office



A front view of the Corporate Office and Plant III

Bry-Air (Asia)

ISO 14001 and ISO 9001

certified

Twin Pride

### A COMMITMENT FOR QUALITY

Bry-Air(Asia) has received the ISO 14001 certification. Bry-Air's plant in India, Bry-Air(Asia) is the only plastics auxiliaries and dehumidification manufacturing facility in the world to be both ISO 14001 and ISO 9001 certified.

ISO 14001 certification pertains to Environment Management System Standard and covers all activities related to design, development and manufacture.



**E**XTRUDED PLASTICS have become intrinsic parts of our daily lives in the form of packaging material and plastics sheets.

## Extrude with Confidence

We are familiar with extruded plastics in the following finished forms:

- Packaging Material, eg. Film Packaging, blister packaging, shrink wrap, BOPP films etc.
- Plastics Sheets, e.g. Roofing, consumer durables, construction materials
- Cables and pipes : fibre optic cables, irrigation pipes, etc.

In this article, we are going to focus on **FILM EXTRUSION**

### Understanding FILM Extruded Plastics

The basic extrusion process is designed to convert, continuously a thermoplastic material into a film. The equipment for Film Extrusion consists of an extruder, fitted with a suitable die, equipment(Chiller) to cool the molten film, haul off machinery and a wind-up unit. Fundamentally, there are two methods of extruding films:

**Blow Extrusion** : produces tubular films

**Slit Die Extrusion** : results in flat films

Blow Extrusion and Slit Die extrusion vary in the design of the die used and the process of cooling. The basic process sequence of extrusion is as follows:

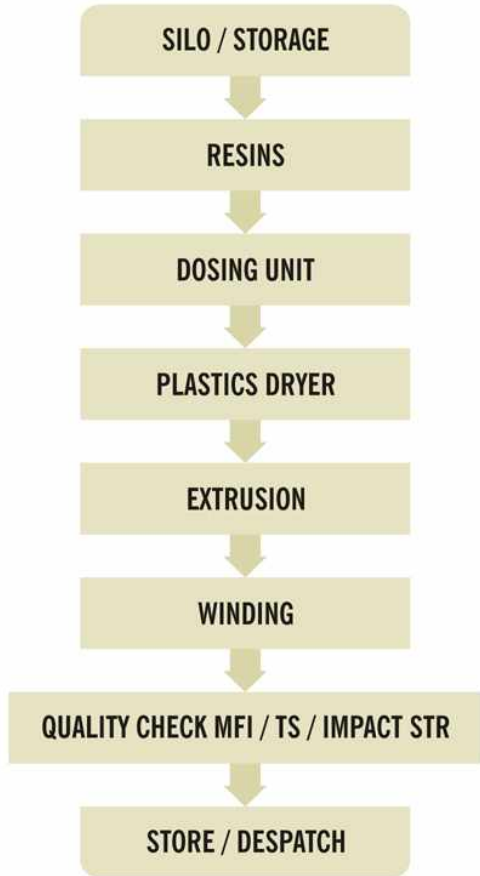
- Plasticisation of the raw material in granule or powder form
- Metering of the plasticised product through a die which converts it to the required form (i.e. tubular or flat)
- Solidification into the required form
- Winding into reels

**Generally, both commodity plastics like PVC, PP, HD, LD, HDPE as well as engineering plastics like ABS, PET, etc are used for film extrusion.**

All commodity plastics are non hygroscopic and thus, have surface moisture on the resins. This surface moisture, if not removed prior to processing, affects the final product quality.

Engineering Plastics like ABS, PET, HIPS (High Impact Polyesterine) are highly hygroscopic in resin state and absorb moisture during storage or before being processed, which adversely affects the final finished product quality.

This is where Bry-Air works as partners with film manufacturers to ensure quality finished film. Bry-Air has a large range of Plastics Auxiliaries to ensure that extruded film is without blemish and there are lesser rejections.



A typical flow sketch of the Extrusion Process.

## Making Plastics Har

- **Bry-Air EcoDry** Dehumidification based Plastics dryers ensure all moisture from within l
- **Bry-Air EcoDry** Hopper Dryers removes surface moisture from non-hygroscopic resins e
- **Bry-Air EcoMove** Autoloaders ensure that the plastics pellets are conveyed from the stc
- **Bry-Air EcoBlend** Gravimetric and Volumetric Blenders ensure correct and economical

You hear about fibre-optic cables whenever people talk about the telephone systems, the cable TV systems or the Internet. Fibre optic cable products meet the challenge of the industry today and address nearly all communication applications including data communication, LANs, telecommunication, video transmission, cable TV, traffic signaling, and military tactical communications.

## Fibre Optic Cables

### What are Fiber Optics?

Fiber optics (optical fibers) are long, thin strands of very pure glass about the diameter of a human hair. They are arranged in bundles called optical cables and used to transmit light signals over long distances. They carry digital information over long distances and are also used in medical imaging and mechanical engineering inspection.

If you look closely at a single optical fiber, you will see that it has the following parts:

- **Core** - Thin glass center of the fiber where the light travels
- **Cladding** - Outer optical material surrounding the core that reflects the light back into the core
- **Buffer coating** - Plastic coating that protects the fiber from damage and moisture.

Hundreds or thousands of these optical fibers are arranged in bundles in optical cables. The bundles are protected by the cable's outer covering made of plastics, called a jacket or jacketing.

### Spot Bry-Air!

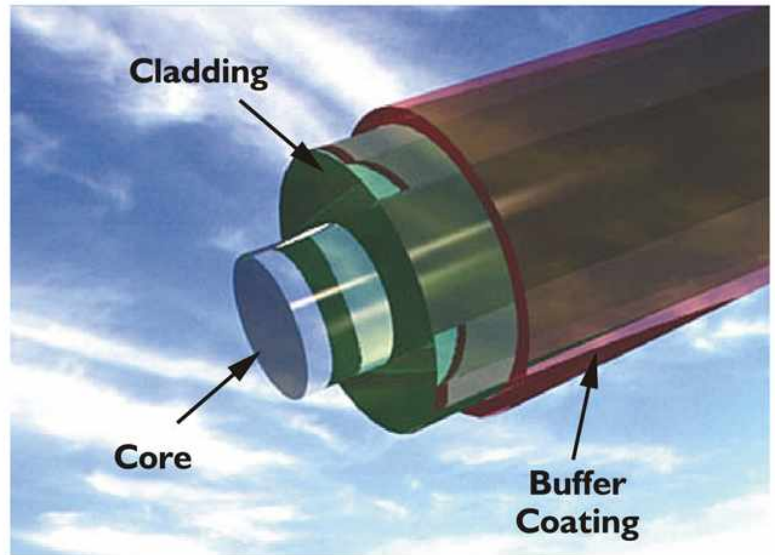
The buffer coating as well as the jacket is made of protective plastics. If the plastic coating itself is defective and retains moisture, one can imagine the disastrous results.



Finished spool of optical fibre

Bry-Air Plastics Auxiliaries step in here to ensure that the plastics is free of all moisture when it is processed. If moisture is not removed thoroughly from the plastics resins prior to processing it to the finished buffer coating /jacket, the tensile strength as well as the protective capability is compromised and the Optical Fiber Cable is rendered ineffective.

The Bry-Air Plastics dryers are complimented by the Bry-Air Auto Loaders, Blenders and Dosers.



Parts of a single optical fibre

**If you were on top of an ocean that is miles of solid core optical fibre glass, you could see the bottom clearly.**

Some of the satisfied users of **Bry-Air** Plastics Auxiliaries in the Extrusion segment and for Fibre Optic Cables

Aksh Optic Fibre Ltd.  
Sterlite Industries Ltd.  
ARM Ltd.

Cocepta Cables  
RPG Cable Ltd.

Himalaya Comm. Ltd.  
Supermac Industries  
Flex Industries Ltd.  
Max India Ltd.

Hitkari Industries Ltd.  
Cosmos Films Ltd.  
Gujarat Propack Ltd.  
Aryan Thermoform Ltd.  
Geo Logging Ltd.  
Suyog Extrusions

## Handling Easier

Hygroscopic resins is removed thoroughly and effectively.

Storage silos to the processing machines effectively and hygienically. Dosing and blending.



# PRODUCT REVIEW



## Mould Dehumidification System

### Don't Let 'Mould Sweating' Affect Your Productivity !

The usual method to correct this problem has been to raise the mould temperature, thereby increasing the cycle time and decreasing production... an unattractive solution to a continuing problem.

An eminently attractive, alternative is to blanket the mould surface with a constant supply of dehumidified air at an appropriate dewpoint below that of the mould.

#### Why does a Mould Sweat !!

Chilled water reduces cycle time, but . . .

- During high humidity period, condensation forms on the surface of the mould, causing imperfections in the parts.
- Causes parts to be imperfect structurally or cosmetically, thereby increasing scrap.

#### Install a Bry-Air EcoDry

Mould Dehumidification System (MDS) to:

- Eliminate mould sweating
- Improve cycle time



- Increase mould life
- Reduce scrap rate
- Enhance part/product quality
- Eliminate streaks, bubbles and other defects

#### Special Features:

- Can supply dry air to multiple machines
- Portable and easy to handle
- Choice of individual, plant wide and centralized control.

MOULD STORAGE

**Is your Mould losing Shape in Storage?**

Your Moulds are expensive and need to be kept in "shape" during storage.

Every Plastics processor usually has many moulds in storage as most produce a variety of items. Moulds can be made of wax, wood, refractory, metal or any other base material and generally lose "shape", get corroded and get damaged due to moisture or humidity in the storage area. Thus damaged, they are practically useless.

Mould can be protected and assured of long life if stored in a dehumidified area. Bry-Air has many dehumidifiers protecting moulds in storage in various companies manufacturing many types of products.



## Plastics Auxiliary Equipment

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