



Safe Harbor

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WSF

Consolidated Highlights

Our increased capacity utilization of **Water Soluble Film** has led to high double digit growth for FY19. However, the ramping up of capacity is slower than expected. Developing new grades has always been our motive and the management continues that journey for FY 20 as well. Recently we achieved breakthrough in the exports business in new market with one of our major client. We expect higher capacity utilisation from expanded capacity and higher sales volume in FY20.

Avery Pharma We are setting up state of the art manufacturing facility and R&D centre near Ahmedabad, for manufacturing our patented products in Health, Hygiene and **Pharma** sector. We expect to start commercial production in H2 FY20.

Management is in talks with major Pharma companies to consume our entire production in order to enter the sale revenue cycle at the early stage of development / production.

Key Business
Verticals

IP
Business

We have taken positive steps into reviving **IP** revenue. We are in process of filing more patents and monetising of our few patents. We expect this business to grow in the coming quarters. In a strategic move the company has decided to venture in to new markets.

Klenz

The investment phase for **Klenz** is over. As business picks up, we expect the business to support our topline growth

BIO PLAST

Eco-friendly solutions (Bioplast) to replace toxic plastic for future generations. We are in process to grab the opportunities with ban on use of plastics. We are expecting fast movers advantage in this area as we are one of the very few companies in India that has been granted with a license (CPCB) and also having a tie up with one the leading global manufacturers of the raw material.



About the Company





Arrow Greentech in a Snapshot ...

Only Manufacturer of Water Soluble Films in India

Vastly Experienced Research & Development Team



State of the Art
Manufacturing Facility
located in Ankleshwar,
Gujarat

Caters to the Niche Market

39 registered patents across the globe





Experienced Board Of Directors



Mr. Shilpan P. Patel Chairman & M.D



Mr. Neil Patel, Joint Managing Director



Mr. Haresh Mehta Independent Director



Mr. Harish Mishra Independent Director



Mr. Dinesh Modi Independent Director



Mr. Dinkar Trivedi Independent Director

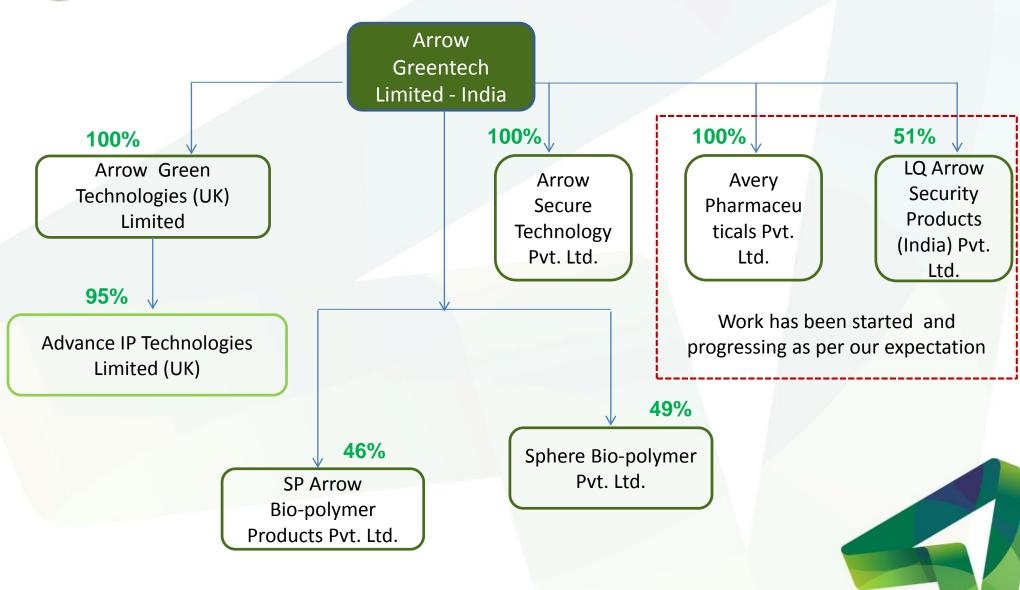


Ms. Aradhana Singh Independent Director





Corporate Structure





Business Overview



Water Soluble Film (WSF)

Development, Production & Marketing of Wide Range of Water Soluble Film



Klenz Pro

Arrow's Klenz Pro is the most concentrated range of hygiene, in water-soluble capsules. Does not generate plastic waste and is firmly committed to the environment



Intellectual Property

Total of 39 granted patents across the World, based on Core Technology of Water Soluble Film



Bio Plast

An eco-friendly solutions to replace toxic plastic for our future generation. This is 100% Bio-compostable, made from renewable plant resources and has a diverse range of applications such as carry bag, garbage bag and food container etc.



Edible Film

This is based on Water soluble film technology which allows a small quantity of Active Ingredient to be delivered in a user friendly format. This is a new drug delivery system. The Company has a patent for this product





Water Soluble Film (WSF)



What is Water Soluble Film (WSF)?



Liquid Detergent Packed in WSF







What it WSF?

Packaging material that is environmentally safe & fully biodegradable when disposed in water or waste

Properties of WSF

- Optimum Tensile Strength
- Flexibility for using in multiple forms of packaging
- Excellent Moisture/Heat Sealing
- Eco-friendly

Dissolves Completely





Applications of WSF

Packaging Film

Safe for the environment & fully biodegradable when disposed of in water or in waste

02

Soap Film

Watersol Soap Strips, 'Arrow Magic Strips' are a boon for travellers for maintaining hygiene while on the move

Water Transfer Printing Film

Decoration technology that uses a specialized Watersol film that is printed with a range of natural and abstract patterns to decorate complex-shaped plastics, metals and other materials

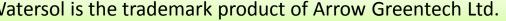
Embroidery Film

Help to avoid puckering and slipping of the fabric and make it more stable

Mould Release Film

Forms a barrier between parts and mold surfaces that are still curing. Film is resistant to solvents and yet is water-soluble









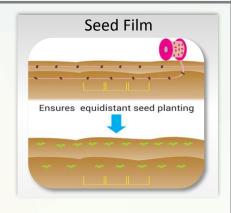
Use of WSF in Packaging Film



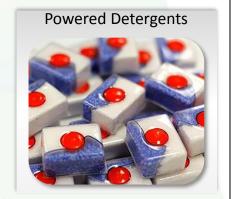
















State of the art Manufacturing Facilities



State of art Manufacturing Facilities

Ankleshwar, Gujarat: ~ 350 Km far from Bombay

Land on 99 years renewable lease from GIDC

R&D Centre with Modern Equipment's

Common Utilities and R&D available for future expansion





Global Presence



Presence in Europe, Asia, North & South America and Africa – mainly 3 supply points located in India, United Kingdom and South America

Wide Distribution channel to service our clients from around the world

















What is Arrow Klenz Pro?

Klenz Pro is the most concentrated range of hygiene chemicals available in India

<u>Product Range</u>: General Cleaning, Kitchen Cleaning, Industrial Cleaning and Laundry Cleaning

Klenz Presence is currently in all states in West and South region of India with over 25 distributors

80 products already introduced in the market and plans to expand the range to about 90 products by FY19

First company to successfully launch cleaning chemical in water-soluble film

Designed in collaboration with Proquimia (Spain)

Caters to Hotels, Pharmaceutical plants, Manufacturing Industry, Auto Mobile Industry, Corporate offices, Facility Management companies, Government bodies











Benefits of Klenz Pro

100% ECO-FRIENDLY



High concentrated bio-degradable products
Reduced use of raw materials and packaging
Reduced use of energy on the production process
75% less CO₂ emissions during transport
No plastic packaging (water soluble pouches) and carton casing

APPLICATION COST CONTROL



Precise control over product consumption, same dosage every time No more waste management costs

OCCUPATIONAL RISKS MANAGEMENT



Safe handling, no direct contact with chemical product 85% reduction on loading weight Easier and more convenient (pouch dissolves in water) Dosing system not required

REDUCES 85% STORAGE ROOM AND TRANSPORT



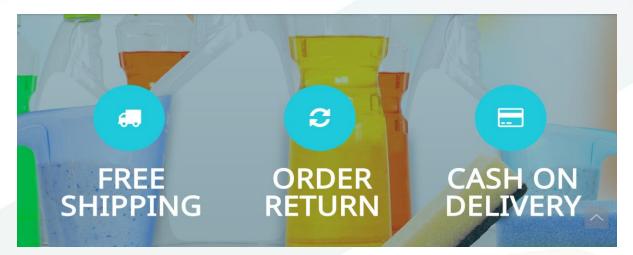
Reduced volume thanks to its high Concentration formula

Klenz Pro Products are all compliant with European 2017 norms and have a wide range of ECO-LABELED products in the portfolio



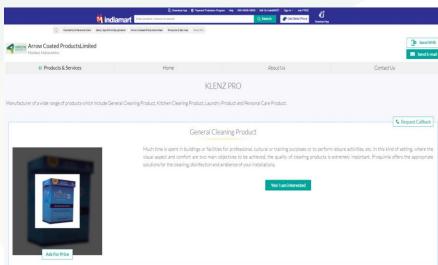


Distribution Channel



Company's website –

http://klenzpro.com/general cleaning.html

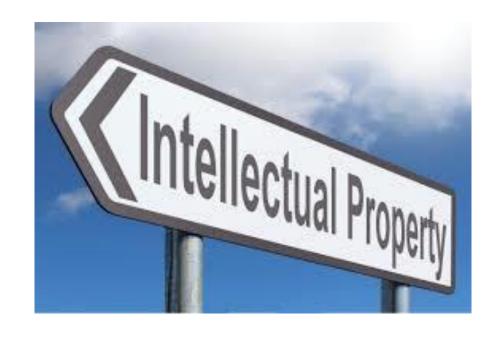


Our Marketing & Launch Strategy along with Quality built Products made us win the "Best Innovative Chemical Product" in to build a strong Distribution and Sales team which will help our long-term vision





Intellectual Property





Key Granted Patents across the Globe

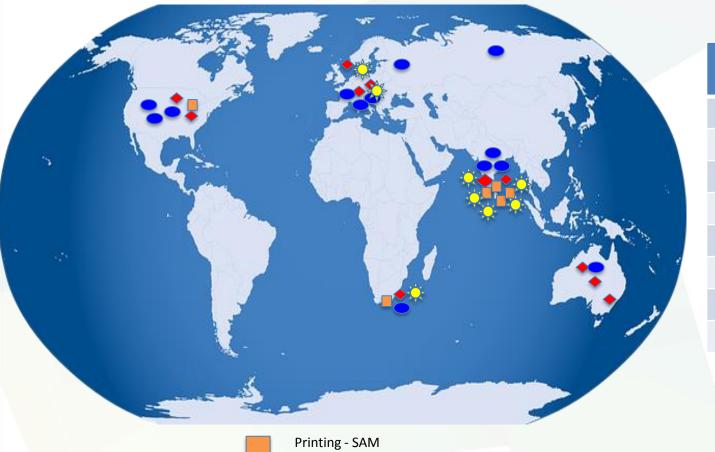
Health Hygiene Packaging Security Printing Self-Adhesive

- Mouth Melting strips, Gel strips, Enzyme strips,
- Vitamins, Drugs, Medicine, Disinfectants and other Pharma ingredients
- For clinical setting like blood, serum, urine testing etc.
- Used to add Active ingredients of Detergents, Softeners, Cleaning Laundry, Dishes, Floorings, Walls, Furnitures and other Cleaning agents that are retained and remained intact for a longer time
- Used in agronutrients such as fertilizers, urea, agrochemicals etc.
- Used for packaging for food products, liquid cement, shopping bags etc. or other biodegrable material
- Used in making security labels or secure packaging of the products for identification
- Used in manufacturing of security documents such as cheques, bank notes, passport papers etc.
- Used for printing sarees, net or perforated cloth
- Used for printing paper, vinyl
- Used in printing of hoardings, one-way vision films
- Used in making labels for product identification and/or advertising etc.

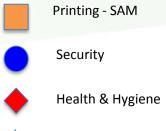
39 patents granted across the world



Key Granted Patents across the Globe



Region	No. of Patents Granted			
India	15			
Australia	4			
South Africa	4			
Europe	7			
USA	6			
UK	1			
Eurasia	1			
Russia	1			



Packaging





BioPlast





BioPlast



An eco-friendly green solution to replace toxic plastic for our future generation



Replacement of Plastics packaging, made from petrochemicals



Have in-licensed the technology for manufacturing the bioplast film from Biotec, Germany that is compliant with the European standards (EN 13432)



Biotec's expertise in bioplastics and Arrow's water soluble film technology together could revamp the packaging with sustainable solutions



Future proposed products such as Tea-Coffee portion packs, aluminum foil, jute hessian bags when laminated inside with bio compostable film will provide dual advantages of heat blockage inside the packaged material and sustainability









Edible Film





Edible Films

01

Technology is a relatively new development, but broadly based on water soluble film technology, which also allows small quantities of active ingredients to be delivered in a user-friendly format

02

Edible film division will work closely with clients to create the most effective thin film product and process solutions. this patent has now been granted in several countries, including Australia, South Africa, Europe and India. This patent is still being prosecuted in the USA

03

Recently invested into our new Wholly Owned Subsidiary (WOS) Company, Avery Pharmaceuticals Private Ltd. to manufacture, produce or to otherwise deal in pharmaceuticals and other related products. Arrow's water soluble edible film foray will be limited to the use of its patented drug (Active) delivery system, using edible Water Soluble Film for many major pharmaceutical and nutraceutical companies









Strategic Benefits & Growth Opportunities



Grant of Method of Producing Security Film for Incorporating into a Security Paper

- The company has received a grant for patent titled "Method of Producing Security Film for Incorporating into a Security Paper". The invention relates to a high security film, in form of a slit thread or micro tape, which is then inserted in to high security paper.
- The invention provides a process of delivering one or more security features at precise places into security paper during the paper manufacturing process. This process is more economical when compared to random spread of security taggants dispused in pulp and paper. The technology also helps control pollution and helps environment.
- This invention will support the government of India's Make in India initiative in many sectors such as security
 paper for Bank Notes and other paper-based security products such as Passport, Visa, Identity documents,
 Academic and Qualification Certificates, High-Value Security Packaging etc. The invention will boost the efforts
 to prevent counterfeiting of Bank Notes.
- It is the Company's on-going endeavour to commercialize these patents appropriately



Arrow Greentech Limited and Versarien PLC have entered into a Collaboration Agreement

- Versarien and Arrow Greentech have entered into an exclusive commercial arrangement for the supply of the Versarien's propriety Graphinks (graphene inks) to Arrow Greentech, for onward supply to the water-soluble film market world-wide
- Versarien and Arrow Greentech have agreed to collaborate on exploring the potential benefits of using graphene within security threads for banknotes and passports on a named-exclusive basis
- Arrow Greentech will act as the Company's exclusive agent for the supply of graphene to the tyre and associated rubber sectors in India. This will be subject to the terms of a separate sales agency agreement
- Versarien will grant Arrow Greentech the right of first refusal to enter into discussions regarding any future plans
 for the Company to create a manufacturing facility in India. Those discussions may include the creation of a joint
 venture company or the right to operate under a license granted from the Company.



Key Entry Barriers

Product Formulation

Proprietary Information

- · Special Chemistry per end use
- Customized Formulations designed for various types of parameters of WSF
- Example: Various Water Temperature, time of dissolution and types of Water
 Hard, soft, Salty etc.



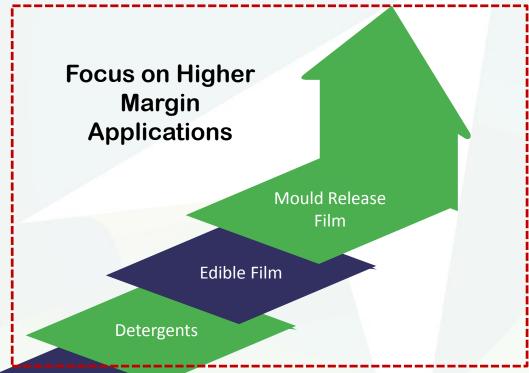
- RND outcome is privy to Arrow
- Example: Given a particular material to be packed: Under What Conditions will the WSF dissolve and the Chemical Properties of WSF once it is dissolved

- WSF goes through Accelerated Ageing test under accelerated ageing conditions. This matrix of information is vital to development of right WSF
- To help determine the long-term effects for the purpose of expected shelf life of packed product





Future Potential for Water Soluble Film



Current WSF Revenue Contributors

Agrochemical Packaging

Embroidery



Ban of Plastics will help grow BioPlast Business

- Our products are plasticizer-free, thermoplastic material that contains natural potato starch and other biologically sourced polymers
- The absence of plasticizer allows the material to be easily processed to manufacture products of consistent quality
- Due to its composition the material is edible, digestible, water soluble and will biodegrade readily in an industrial or domestic composting environment





Growth Drivers

Intellectual Property

- Monetize the existing Patents by selling or licensing the Patents
- R&D to develop more of Products & Processes and file New Patents

KLENZ

- Increase the product basket under KLENZ
- Once KLENZ reaches a sizeable turnover, we shall manufacture the chemicals ourselves

Water Soluble Film

 Focussing on high margin applications thereby moving up the value chain

Partnerships / JV's

- Partner / JV with the players in the FMCG and Pharmaceuticals to develop products for the end consumers using our Patents
- Water Soluble Film /
 Packaging to be provided
 by Arrow Greentech Film
 Division



Financials



Consolidated Profit & Loss Statement

Particulars (Rs. In lakhs)	Q4 FY19	Q3 FY19	FY19	FY18
Net Revenue from Operations	1,232.3	1,042.6	3429.2	3472.7
Cost of Material Consumed	33.1	58.5	366.7	345.8
Purchase of Stock-in-Trade	1165.6	562.9	2294.4	709.1
Change in Inventories	-39.8	78.4	-89.5	-231.1
Excise Duty Total Raw Material	- 1158.9	- 699.8	- 2571. 6	14.5 838.3
Employee Expenses	233.8	272.0	924.2	718.9
Other Expenses	339.5	375.6	1429.9	1,380.7
EBITDA	-499.9	-304.8	-1496.5	534.8
Other Income	30.1	46.1	161.7	226.9
Depreciation	79.6	87.8	370.1	438.0
EBIT	-549.3	-346.5	-1704.9	323.7
Finance Cost	0.0	0.0	0.0	0.0
Profit before Tax	-549.3	-346.5	-1704.9	323.7
Tax	-45.4	0.3	-18.2	306.6
Profit After Tax	-503.9	-346.8	-1686.7	17.1
Other Comprehensive Income (Net of Tax)	125.9	-309.9	-76.7	661.3
TOTAL COMPREHENSIVE INCOME	-378.1	-656.7	-1763.4	678.4
EPS (Rs.)	-4.23	-2.95	-14.21	0.23



Consolidated Balance Sheet

EQUITY AND LIABILITIES	Mar-19	Mar-18
EQUITY		
Equity Share capital	1,174	1,174
Other Equity	6,612	8,591
Shareholders' Funds	7,786	9,765
Non Controlling Interest	163	197
LIABILITIES		
Non-current liabilities		
Provisions	16	8
Deferred income tax liabilities	37	76
Total - Non-current liabilities	53	84
Current liabilities		
Financial liabilities		
Trade payables	343	251
Other financial liabilities	256	218
Borrowings	4	5
Provisions	13	23
Other current liabilities	38	26
Total - Current liabilities	654	523
TOTAL - EQUITY AND LIABILITIES	8,656	10,570

ASSETS	Mar-19	Mar-18
Non-current assets		
Property, plant and equipment	2,111	2,414
Capital Work in Progress	144	-
Investment Property	14	15
Intangible Assets	158	185
Intangible Assets Under development	98	66
Financial assets		
Investments	1,660	2,946
Loans	45	40
Other financial assets	64	40
Tax assets (net)	117	72
Other non-current assets	673	190
Total - Non-Current Assets	5,084	5,968
Current assets		
Inventories	589	461
Financial assets		
Trade receivables	760	799
Cash and cash equivalents	1,770	2,905
Bank balances other than Cash and Cash equivalents	64	51
Loans	11	15
Other financial assets	2	30
Other current assets	376	341
Total - Current Assets	3,572	4,602
TOTAL - ASSETS	8,656	10,570





For further information, please contact

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THANK YOU

