

Astral Poly Technik Ltd Initiating Coverage





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Astral Poly Technik Ltd

Astral 2.0 - Sealing The Next Growth Opportunity

Astral Poly Technik Ltd. (Astral) has established itself as one of the most innovative manufactures of CPVC and PVC pipes/plumbing systems in India and internationally. Over the years the company has been pursuing innovation led growth opportunities by expanding into bore-well, agricultural and electrical ducting pipes. Astral is also Lubrizol's sole licensee for Blazemaster, Bendable and Corzan pipes. Over the years Astral has commanded huge valuation premium above peers and many investors have been debating the reasons for the same and have actually missed participating in the spectacular growth story of Astral. We were the lucky few who had high conviction in Astral growth story at the initial stages. Some of the recent developments at Astral give us confidence that the company is getting ready for the next big opportunity and hence we are re-initiating our coverage on Astral in order to present our perspective on the transformation that Astral is aiming to achieve and the opportunities it offers for equity investors.

Accumulate	TP: Rs. 500
CMP: Potential Upside:	Rs. 400 25%
Stock Data	
CMP	400
Mcap (Rs Mn)	47,912.0
Avg Vol (6M) '000	37.3
FV	1
Beta	0.6
52 week H/L	534.1 / 311.0
Bloomberg/ Reuters As	STRA IN /ASPT.BO
Group	В

Astral 2.0:

- One of the biggest reasons for Astral's Success was the promoter's ability to
 envision the structural transformation opportunity in a product as basic as
 Pipes. A transformation that developed world had adopted decades back but
 nobody in India thought about. This one opportunity transformed Astral from
 a USD 10 Mn market cap company to USD 1 Bn in less than 7 years.
- We believe Astral is on to a similar opportunity which can catapult the company into the next level of Growth Orbit and needless to say that this offers equity investors another opportunity to participate in Astral's growth.
- Astral 2.0 Growth opportunity is focused on Adhesives business, where the market leader Pidilite enjoys almost a monopoly, offering a clear opportunity for a second large player which is non existent today.
- In addition, application of adhesives in the Construction & Real Estate Industry provides Astral another untapped opportunity similar to pipes.
- To pursue this opportunity, Astral acquired majority stakes in two adhesive and sealants manufacturing companies Resinova Chemie and Seal It Services (UK) in 2014.
- Finer details about the opportunity offered by the adhesives business & Astral's strategy for the same have been thoroughly analyzed in our report and we believe that Astral 2.0 offers a compelling growth opportunity for equity investors.

Year	FY14	FY15	Q3FY16
Promoter	63.82%	60.15%	59.35%
Public	18.98%	18.30%	23.07%
FII	16.09%	13.69%	11.76%
DII	1.11%	7.86%	5.82%

ABS%	3M	6M	1Yr
Sensex	-4.2	-5.0	-14.1
Astral	-6.2	-6.5	-9.3

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Year	Revenue (Rs Mn)	EBIDTA margin (%)	PAT (Rs Mn)	EPS	PE	PBV	EV/EBIDTA	ROCE %	ROE %
FY14	10,796	14.4%	789	6.6	60.5	14.9	31.4	33.6%	28.4%
FY15	14,294	11.7%	759	6.3	63.0	7.4	29.3	20.3%	16.4%
FY16E	17,072	13.1%	1063	8.9	44.9	6.4	21.8	20.8%	16.2%
FY17E	21,229	14.3%	2036	17.0	23.5	5.4	15.5	27.9%	25.5%
FY18E	26,427	14.5%	2563	21.4	18.6	4.3	11.8	32.3%	26.4%



The Astral Journey...

- Astral Poly Technik Ltd. was established in 1999 with a focus to manufacture the best plumbing system in India. It was the first licensee of Lubrizol, USA to manufacture and market CPVC piping and plumbing system in India.
- Astral entered into a techno-financial JV with Specialty Process LLC of USA, which provided the required technical expertise for manufacturing CPVC pipes and fittings for home and industrial application.
- As part of its strategy to launch innovation led products, Astral introduced lead free PVC pressure pipes and fittings in the year 2004.
- Wherever the market size for new products was small, Astral started by trading in such products such as CPVC and PVC fittings, flanges and valves from Spears (USA), solvent cements (adhesive solutions) for joining pipes and fittings from IPSC (USA), underground specialty fittings from Hunter (UK) and CPVC and PVC plastic pipes of a larger diameter from Harvell Inc (USA). As & when the market size grew, Astral started producing the same locally.
- Astral also forayed in African markets with a JV in Kenya and has been selling products in SE Asian & Middle east countries.
- As part of a well considered strategy, Astral has made an inorganic foray in Adhesives business which offers an equally compelling growth opportunity as CPVC.

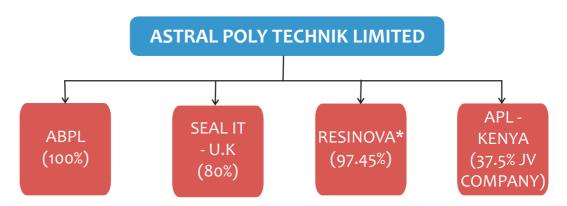
Milestones

- 1998: Entered into a JV with Specialty Process LLC, by signing an agreement for equity and technical collaboration. Entered into the Corzan Processor Agreement with B.F. Goodrich Co., USA.
- 1998: Entered into the FlowGuard CPVC Processor Agreement with B.F. Goodrich Co., USA (now known as Lubrizol) for launching CPVC in the Indian market. Commenced production of FlowGuard CPVC products.
- 1999: Entered into the Technology License Agreement in continuation of the CPVC Processor Agreement with B.F. Goodrich Co., USA.
- 2001: Commenced manufacturing of CPVC fittings. Expansion of manufacturing facilities at Santej, Gujarat.
- 2005: Setting up second manufacturing facility at Baddi, Himachal Pradesh.
- 2006: Entered into the BlazeMaster Processor Agreement with Noveon, which is now a part of Lubrizol.
- 2008: Entered into the Joint Venture Agreement with Kenya Based Group.
- 2011: Acquired 85% stake in Advanced Adhesive.
- 2013: Induction of JV Partner, Ramco Group, Kenya in M/s Astral Technologies Ltd, Kenya.
- 2014:
 - > Acquired a controlling stake (80%) in UK based Seal It Services Ltd.
 - Astral received Grant of Licence by BIS for company's product Blaze Master CPVC Pipes for Fire Sprinkler System.
 - > Commenced commercial production and sale at its new manufacturing facility at Hosur, Tamil Nadu having annual capacity of 7000 M.T.
 - > Astral acquired 76% Stake in Resinova Chemie Ltd.
- 2015: Astral acquired the remaining 24% stake in Resinova Chemie Ltd.



Astral - Business Overview....

• Astral earns ~86% of its revenue (FY15) from CPVC/PVC pipes. At present, the company has 3 subsidiaries and 1 JV company - Astral Biochem Pvt. Ltd, Resinova Chemie, Seal It Services Ltd, and Astral Pipes Ltd. (Kenya) (JV).

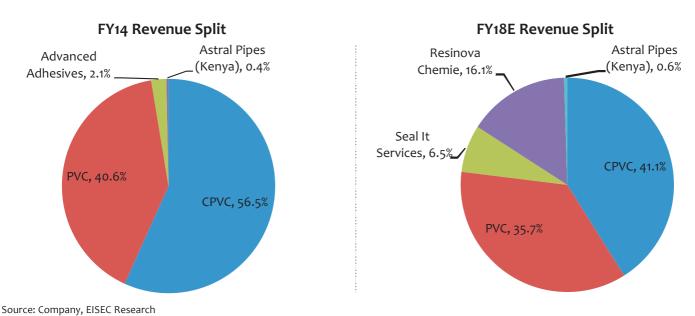


^{*} Post amalgamation of subsidiary companies Advance Adhesive and Resinova Chemie, wef 11th Feb 2016.

INR in Mn	FY11	FY12	FY13	FY14	FY15	FY16E	FY17E	FY18E
CPVC	2,609	3,603	4,789	6,099	6,698	6,973	8,705	10,865
PVC	1,500	2,162	3,287	4,381	5,480	5,822	7,415	9,443
Advanced Adhesives (1)	-	26	124	230	317	-	-	-
Seal It Services	-	-	-	-	906	1,428	1,571	1,728
Resinova Chemie	-	-	-	-	806	2,754	3,420	4,243
Astral Pipes (Kenya)	12	26	27	44	76	95	119	148
Consolidated Revenue*	4,113	5,827	8,252	10,796	14,294	17,072	21,229	26,427

^{*} Please note that summation of individual items differs from the consolidate revenue on account of intersegment transactions.

⁽¹⁾ W.e.f. 11th Feb 2016, Advanced Adhesives is a part of Resinova Chemie, hence its numbers are merged with Resinova FY16 onwards.



• Acquisitions of Adhesives and Sealants businesses done during FY15 give Astral much needed product diversification and lays a roadmap for the next growth opportunity.



Santej, Gujarat



Dholka - Gujarat



Hosur, Tamil Nadu



Astral's plastic product's performance between FY11-FY15 has been robust, where revenues have grown at a CAGR of 32%, testifying the market's overwhelming acceptance of the products.

Plastic Products (86% of FY15 Revenue)

- Astral Poly Technik has 3 manufacturing plants in India at Santej, Dholka, & Hosur and 1 in Nairobi (Kenya JV). The company is also setting up a pipe manufacturing plant in Ghilot near Neemrana in Rajasthan for which the land has already been acquired.
- Product portfolio:
 - Astral offers Astral FlowGuard Plus CPVC pipes & fittings, and Astral FlowGuard Bendable multilayer pipes for hot and cold water domestic plumbing.
 - > Astral Aquarius ASTM uPVC pipes and fittings for cold water domestic plumbing
 - > Astral BlazeMaster pipes and fittings for fire sprinkler systems
 - Astral Aquasafe agriculture pressure pipes
 - > Astral CORZAN HP piping systems for industrial applications
 - > Astral column pipes for submersible pumps
 - Astral Wavin AS pipes and fittings
 - ➤ It also provides sewerage waste and rain water products, including Astral Ultradrain pipes & fittings, grooved rings, and pasting type fittings; and Astral DWV uPVC foam core pipes and click ring type fittings.
 - > In addition, the company offers Astral under ground drain & sewer products, Astral foam core pipes, Astral wire guard rigid PVC conduit pipes and fittings.
 - It also offers Astral Alca Plast for drains and waste traps, as well as accessories comprising Astral clamps and hangers.



Growth Driver 1 -> CPVC is now a pull product & Astral has the highest brand recall

- Few years back CPVC pipe was a push product and a customer had to be convinced for buying CPVC pipe instead of a GI pipe.
- Now there is a very good understanding and acceptance of the value proposition offered by CPVC pipes and has become the preferred choice for plumbing. In fact given the ease of installation, plumbers have been one of the biggest contributor for pushing customers to use CPVC pipes and all the efforts put in by Astral to educate plumbers has helped it become the preferred brand.
- Astral commands the highest brand recognition & recall because of all the efforts and awareness campaigns done with customers & plumbers. Further hiring Salman Khan as the brand ambassador and catchy ad campaign has catapulted Astral to the status of a generic brand for CPVC pipes. Customers ask for Astral pipe rather than CPVC pipe.
- This has helped Astral to reap the benefit of the consumer shift towards CPVC pipes and Astral has been able to capture a lion's share of the growth being witnessed by CPVC pipes. As the segment gains critical mass, the Brand Positioning of Astral will be the biggest growth driver for the Pipes business not only for the CPVC pipes but across the spectrum of pipes offered by Astral.





Salman Khan has been the brand ambassador for Astral since the past couple of years



Astral has been aggressive with marketing initiatives



Growth Driver 2 -> Strong dealership network and customer engagement

- Astral has developed extensive distribution channel of 750+ Distributors and 21,000+ dealers across India.
- It has been adding an average of 3,000 dealers annually and has further plans to scale up its reach by using the distribution network of recently acquired Adhesives business.
- Astral's streak of innovation pervades beyond products to customer engagement and it keeps on publishing differentiated product catalogues, technical manuals, installation literatures, audio visual CDs etc.
- Astral also regularly conducts trainings for a large number of plumbers across the country by organizing various workshops to impart training on how to - install CPVC systems and use solvent cements for joining as well.
- This method of engaging with customers and plumbers keeps on cementing the brand loyalty, and has helped push its products in the supply chain.

Dealer network

24,000 18,000 13,000 12,000 7,500 6,000

Source: Company, EISEC Research

FY₁₀

Growth Driver 3 -> Quality products and new launches

FY11

• Astral's success has largely been accredited to its product quality and ability to launch innovative products more frequently than competition.

FY13

FY₁₄

FY15

FY12

- One of the key quality aspects for CPVC pipes is the process of converting the polymers into resins after compounding. Access to CPVC compound from Lubrizol, gives a huge quality advantage to Astral. Barring the other licensee of Lubrizol (Ashirvad Pipes), other CPVC pipe manufacturers have to source CPVC polymers from Japanese & Chinese producers and then convert the polymers into compounds which cannot match Lubrizol's quality leading to sub-normal quality of pipes.
- The quality edge coupled with the brand advantage has been a very strong growth driver for Astral and will continue to be so going forward.
- Launches of new & innovative products has also been one of the hallmarks of Astral growth story and the company has recently launched 1200 mm diameter inspection chambers, the technology for which has been acquired from a German company and the production will be done at their Santej plant.
- Astral will soon launch its fire proof sprinkler system BlazeMaster. Astral BlazeMaster pipe and fittings provide unique advantages in sprinkler installations, including superior hydraulics, ease of joining, increased hanger spacing in comparison to other thermoplastics and ease of assembly.



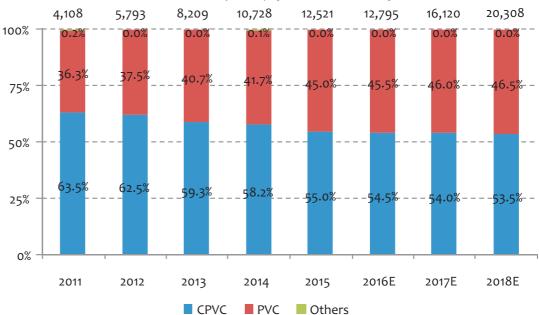
When tested in accordance with the industry's premier NSF-P171 Protocol for Chlorine Resistance of Plastic Piping Materials, PP-R has been shown to degrade by up to 50% in hot, chlorinated water.

Diversifying into different PVC pipe products helped the company maintain its growth momentum.

New product launches contd...

- Blazemaster Fire Sprinkler system has already got the ISI certification. This has huge potential to add revenues as there is no competition in this segment and this product is going to generate higher profitability as well.
- To better its utilization during off-construction season, Astral has recently focused on agrirelated pipes. This is helping the company to have better utilization throughout the year.
- The company has come out with new product Wire guard which can easily generate ~Rs300-400 Mn for the company in a year.

Standalone Revenue (Rs Mn) split - CPVC and PVC products





Indian Pipe Industry

- Plastic Piping Industry in India has been growing at CAGR of 15%+ since last many years barring the last year when the growth was low due to poor economic conditions. In spite of that Astral has done quite well by delivering 25% volume growth in FY11-FY15 period.
- Plastic Piping Industry in India has a market size of approximately Rs 215 Bn and Metal Industry is about Rs 60 Bn. Since replacement of metal by plastic has been taking place rapidly, plastic pipe industry is expected to grow at an accelerated pace.
- Plumbing industry is largely dominated by organized players accounting for 65% of the market.
- Following factors are going to drive the growth in piping industry:
 - > Implementation of GST from 2016 will support the organized sector.
 - > Replacement of metal by plastic.
 - ➤ With the growth in the demand for quality construction, builders are increasingly moving towards the branded pipes (Pricing gap between branded & unbranded pipes is very low).
 - ➤ Low cost housing is picking up as the government is supporting the concept.
 - > Proposal of the government to develop 100 Smart Cities and PM Modi's vision of "House to Each by 2022" will fuel the growth of the industry.

Advantages of CPVC and PVC pipes over GI pipes

Full Form Galvanised Iron Galvanised Iron Poly Vinyl Chloride Chlorinated Poly Vinyl Chloride Chlorinde Till the life of building Till the life of building Composition Iron/ Zinc Composition Composition Iron/ Zinc Conly for Cold Water Supply / Can be used for Hot water supply of the woolen insulation around the pipe Used for water supply/ especially for underground layered water supplied piping Durability Very Good Good Good Bendability No No No No Fire Resistance Fire Resistance Time consuming and requires more man hours than CPVC / PVC No Corrosion Resistance No Time consuming and requires more man hours than CPVC / PVC No Smooth Smooth Smooth Smooth Smooth Smooth Smooth Smooth Smooth More than PVC Cost Costy Compared to PVC / CPVC Coutcility Poor Good Clorine/ Ethylene/ Color Pigments/ Additives Chlorine/ Ethylene/ Color Pigments/ Additives Chlorine/ Ethylene/ Color Pigments/ Additives Supply Chlorine/ Ethylene/ Color Pigments/ Additives Soth Hot & Cold Water Supply Used for water supply and drain pipes Used for water supply and drain pipes Hot water supply pipes Hot water supply pipes Mood More Sale for water supply Hot water supply Hot water supply pipes West of water supply and drain pipes Hot water supply pipes Mood More Sale for water supply Hot water supply Hot water supply pipes West of water supply and drain pipes Hot water supply and drain pipes Hot water supply and drain pipes Hot water supply for water supply and drain pipes Hot water supply for water supply and drain pipes Hot water supply for water supply for water supply and drain pipes Bath Hot & Cold Water Supply Used for water supply Both Hot & Cold Water Supply Used for water supply Both Hot & Cold Water Supply Used for water supply Both Hot & Cold Water Supply Both Hot & Cold Water Supply Both Hot & Cold Water Supply Both Hot & Cold Water Supply Both Hot & Cold Water Supply Both Hot & Cold Water Supply Both Hot & Cold Water Supply Both Hot & Cold Water Supply Both Hot & Cold Water Supply Both Hot & Cold Water Supply Both H	Advantages of CPVC and PVC pipes over di pipes										
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	Leakage	Vulnerable to leakage	Leakage free	Leakage free							



Adhesive Business (14% of FY15 revenue): The New Growth Opportunity

Astral initiated its exposure to Adhesive business by setting up Advanced Adhesives Ltd to manufacture Solvent Cements, Industrial Adhesives and primers. Astral saw a clear opportunity in scaling up the adhesives business given the fact that Pidilite enjoys a sort of monopoly in the business with the second largest player clocking a negligible 1/10th of Pidilite's revenue. This provides an interesting market share gain opportunity to Astral and In order to pursue this growth opportunity, Astral acquired Seal It Services (UK) in August 2014 followed by Resinova Chemie in November 2014. Advanced Adhesives has now been amalgamated with Resinova Chemie in Feb 2016.

Sustainable position in the market

- Advanced Adhesives Limited (AAL) was established in 2010 to provide adhesive solutions to various industries and its applications.
- It has a licensing agreement with IPS Corporation, the leading manufacturer of industrial adhesives, solvent cements, and primers. The company has a production facility in Gujarat.
- IPS Corporation is the original innovator of solvent cements, primers and cleaners for PVC,
 CPVC, and ABS plastic piping systems. AAL's Weld-On brand is globally recognized as a premium product for joining plastic pipes and fittings.
- All Weld-On solvent cements, primers and cleaners meet the requirements for Low VOC (volatile organic compound) emission limits established by the California South Coast Air Quality Management District (SCAQMD), one of the most stringent air quality regulatory bodies. Low VOC emissions contribute to cleaner air.
- Currently all of Weld-On products are 100% sold to Astral, which is now going to change as Astral will now introduce Weld-On products in the Resinova marketing channel in an effort to boost the top-line further.
 - > Heavy bodied cement PVC Weld-On 717 Quality formulation for plumbing, industrial, pool, irrigation and electrical piping systems. It has good gap filling properties and its medium set allows more working time in warm weather.
 - Medium bodied cement PVC 705 Fast setting, low VOC PVC cement for all classes and schedules with interference fit through.
 - Weld-On P-70 industrial grade primer Premium, industrial strength, low VOC primer essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Excellent for cold weather applications.
 - Flowguard gold Weld-On cements have the widest range of high-strength, low VOC solvent cements for every PVC application, for rigid as well as flexible PVC pipe and fittings. Low VOC cements are environmentally friendly with lower emissions and reduced odor, and they surpass the most stringent regulations.
 - Weld-On 724 industrial grade 724 CPVC Medium setting, low VOC CPVC cement for all classes and schedules with interference fit through 12" diameter. Premium, high-strength, chemical-resistant solvent cement for use with CPVC piping systems carrying acids, bases, salts, and hypochlorite's. Ideal for use in waste water plants. May be used on PVC industrial piping systems for chemical applications. Approved for Corazon CPVC piping systems.
- On 18th January 2016, Gujarat High Court has approved the scheme of amalgamation of Resinova Chemie Ltd. with Advanced Adhesives.
- Further the court has also approved change of name of Advanced Adhesives Ltd. to Resinova Chemie Ltd.
- W.e.f. 11th Feb 2016, Advanced Adhesives is a part of Resinova Chemie.

AAL's products can be used for various piping needs, from repair adhesives for leaking pipes, pipe thread sealants / joint compounds, to test plugs for pipeline pressure testing.









Key product categories:

Sealants
Ad hesives
Building chemicals
Waterproofing products
Roofing compounds
Polyurethanes
Ad hesive tapes
Ceramic tile adhesives
Landscaping products
Decorating sundries
Ironmongery (under Darcel brand)

Key markets:

Builder's merchants
Large-scale and volume construction
DIY
Glazing
Roofing
Landscaping and gardening
Maritime

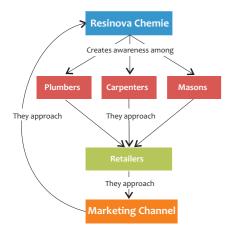
Seal It Services (80% holding)

- Established in 2002, Seal It Services Ltd is UK's leading independent manufacturer of sealants, adhesives, waterproofing compounds and other building chemicals. Seal It manufactures and sells its products under the brand name "Bond It".
- Astral acquired an 80% controlling stake in Seal It Services for Rs 440 Mn in August 2014 from a private equity investor. The promoter owns the balance 20% stake.
- Seal It provides Astral access to technology which can help improvise the manufacturing process for existing products as well as launch new products.
- Seal IT also provides an opportunity for outsourcing of manufacturing to India for the products it sells in UK markets wherever the production cost is cheaper in India.
- Around 60-70% of Seal It's revenue comes from construction chemicals.
- Their main manufacturing facility in West Yorkshire, Great Britain employs the latest in production technology.
- The current capacity of the company is around 23,000 TPA and the capacity utilization is around 30% hence no further capex would be required in near future.
- Given the exposure to a mature market like UK, the growth of the business is likely to be lower than other business of Astral and could possibly drag down the consolidated revenue growth for Astral in the near term however the payoff from technology access will more than offset this impact over next couple of years.
- We expect the company to generate revenues to the tune of Rs 1,871 Mn by FY18 from current level of Rs 1,386 Mn in FY15.
- Seal It has a wide Product Portfolio which is detailed below:

MATE RANGE	PREMIERE RANGE	ADHESIVES
Construction Adhesives	Gist	Construction Adhesives
Contractors Silicones	Mega Foam - Hand and Gun Grade in 1	Pro Adhesives & Sealants
Guns	Reload - Re-usable Silicone Cartridge	Industrial & Super Glues
Polyurethane Foams & Applicator Guns	Sealant/Adhesive Applicator Guns	Polyurethane Adhesives
Silicone Remover	Silicone Sealants	PVA Adhesives, Primers & Sealers
Silicone Sealants	Fire Rated Polyurethane Foams &	Specialist Glues
Silicone Sediants	Applicator Guns	Specialist Glues
Specialist Sealants & Decorators Sealants		
Water Based Sealants & Decorators		
TILE ADHESIVES & GROUTS	DECORATING PRODUCTS	BUILDERS COMPLETE RANGE
Primer	Fillers & Sealants	Building Chemicals & Mixes
Powder Adhesives & Grouts	Floor Protectors	Cement Based Products
Ready Mixed Adhesives & Grouts	Stain Block & Wipes	Cleaning Products
	Tapes	Concentrates
		Fire Cement
		Levelling Compounds
		Oil & Preparatory Products
		Tapes & Paints
CLEAN IT RANGE	DRIVE ALIVE	ECO RANGE
Graffiti Remover	Decking Products	Low Environmental Impact Cleaners
Household Cleaners & Degreasers	Landscape Membranes	
Paint Stripper	Paving Joint Fillers	
	Sealers	
	Surface Cleaners	
	Surface Enhancers	
BITUBOND RANGE	PLUMBING SOLUTIONS	FLOORING RANGE
Bitumen Compounds	Central Heating Treatments	Flooring Adhesives
DPC & Flashing Tape	Plumbing Products	Primers, Membranes & Levelling
Dr C & riasiling Tape	Fluiribilig Floducts	Compounds
Waterproofing Systems		
PU FOAMS	TAPES	DARCEL RANGE
Mega Foam	Extra Strong Double Sided Adhesive Tape	Escutcheons
Mega Stik	Rescue Tape	Hinges & doorstops
Fire Resistant Expanding Foam	Saves Nails Tape	Locks & latches
Fill and Fix Expanding PU Foam	PTFE Tape	Plate handles
Foam Applicators	Masking Tape	Rose handles
	Flashing Tape	Thumb Turns
	Duct Tape	
	Drywall Scrim Tape	



Resinova Supply Chain





Resinova has quality products as good as those belong to best players in the business but still they sell a huge discount of 20%-30% as lack of adequate branding currently. The company is executing huge branding exercise with the help of its brand ambassador Salman Khan. All this is expected to increase profitability of the business gradually.

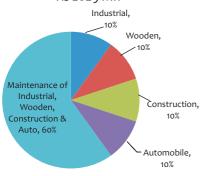
Resinova Chemie (100% holding)

- Resinova Chemie was founded in 1987 at Kanpur by Mr. Vijay Parikh, who is a qualified Chemical Engineer from IIT Kanpur. He is a first generation entrepreneur.
- The company started off by manufacturing specialty chemicals and over the years evolved as leading manufacturers of adhesives, sealants & construction chemicals. It's products have application for Industrial, Wooden, Construction, and Automobile sector.
- The company has a significant presence in Epoxy Adhesives which accounts for 60% of the revenue and its flagship brand **Bondtite** is very well established in the market.
- The company has a total manufacturing capacity of 23,000 TPA (capacity utilization ~75%),
 across two units near Kanpur. Resinova's manufacturing units are very well backward
 integrated and the company has developed manufacturing & formulation expertise in the
 field of epoxy resins & hardeners, acrylics, UV Cure, Cyanoacrylates, Silicones, Anaerobic
 etc.
- Resinova has a very well entrenched supply chain network of 2000+ distributors, serviced by their 11 offices across India and their products are available at more than 4,00,000 retail outlets which sell Resinova's over 50 brands and 400 SKUs.
- Resinova's product expertise, market leadership in couple of products, well established brand and its widespread distribution network offered Astral a compelling opportunity to tap the growth opportunities offered by adhesives business and Astral bought 100% stake in Resinova in a two stage part cash part stock transaction.
- Once in saddle, Astral took stock of the growth bottlenecks for Resinova and has taken following steps to address the same and scale up the adhesive business.
 - > Branding In order to strengthen the branding for Resinova products, Astral started co-branding the products, as a result Resinova Bondtite was rebranded as Astral Bondtite. Also Salman's brand ambassadorship was extended to Resinova products with Salman's photo printed on all the products. Given the pedigree of Astral Brand and Salman's fan following, the strategy has started reaping huge benefits with sales growth doubling.
 - ➤ Production Capacity Astral has set up a new state of the art plant at Santej in Gujarat which will almost double Resinova's capacity by Q3FY17. Resinova is conducting trial runs and production has already commenced. This will result in significant saving on freight costs as the strategic location of both the plants at Kanpur and Santej is such that the company will be able to cater to the North Indian market from their Kanpur facility and the West and the South Indian market from the Santej facility.
 - > Debottlenecking & Automation Astral has initiated debottlenecking and automation of manufacturing process in Resinova's existing manufacturing facilities which will further enhance the capacity utilization without incurring any significant capex.
 - Cost optimization Astral has been running a very lean shop and is using the same expertise to reduce costs for Resinova. In the long run, the management aims to bring down the costs through vendor optimization, better sourcing strategy etc.

Astral's branding & Aggressive marketing approach is targeted to enhance the business margins by cost / freight optimization and taking price hikes in a calibrated manner. Astral expects Resinova's EBIDTA margin to expand by 1% every year for next 2-3 years.



Revenue Split by Industry -Rs 2029 Mn

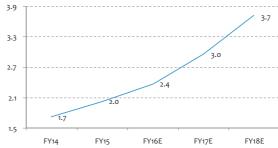


One of the important strategies of Astral is to bring some important products in construction segment from Seal It where the later is very strong and augment the Resinova's product range in construction segment which will spur the growth momentum of adhesive business.

Resinova Chemie - Industry-wise contribution

- For the total sales of Rs 2029 Mn, Resinova generates about 10% revenue each from specific products for Industrial, Wooden, Construction, and Automobile sectors. The rest 60% is generated primarily from Epoxy Adhesives which have application across Industry sectors.
- The company caters to a total market size of around Rs 100 Bn.
 - > ~35% comes from the constructions and repairs as adhesives are required for various applications like tile bonding, coatings, repair, gap filing, plumbing, etc.
 - > ~30% comes from the Wooden goods segment / Carpentry and repairs, which is expected to grow due to consumers' preference of custom-made furniture.
 - ➤ ~10% is contributed by the Industrials sector, which is expected to grow with recovery in the economy.
 - > ~ 5% comes from auto sector and remaining from other miscellaneous uses.
- For the Wooden and Construction applications, the market is huge and Resinova currently caters to a very small portion of the market in both the segments providing a compelling growth opportunity for Astral.
- In most of their existing product categories, the category leader enjoys 4-10 times sales than Resinova's product and this is the opportunity Astral aspires to capture.
- Increasing awareness, with the help of the brand "Astral" Resinova is expected to gain market share in coming years.
- Given the huge market share gain opportunity, Astral can easily grow the Resinova business by 21% CAGR to generate revenues of Rs 5.3 Bn by FY 2020.
- Resinova generates major portion of its revenue from brands such as Bondtite, followed by Resibond, Solvobond, Bond Set and Vetra.

Resinova Revenue Performance (Rs in Bn)



Source: Company, EISEC Research

Product Portfolio





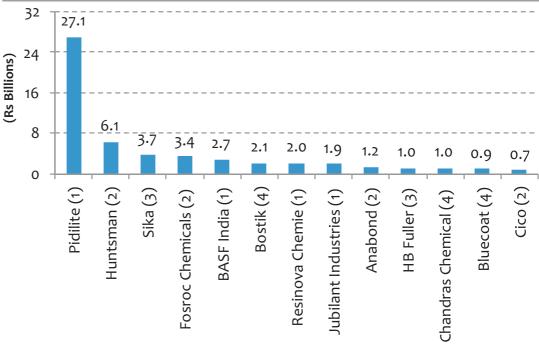
Major players

The overall market is fairly consolidated but there is considerable fragmentation of individual products and application areas. There are a large number of global Companies who have set up manufacturing operations in India. Top 7 players account for ~50% of the market; next 20 players ~25% and remaining 25% comprises of small & unorganized players. In the past there has been a change in the market share of companies due to which medium-sized and regional manufacturers have gained considerable share of market. Based on revenues, top 5 players are Pidilite, BASF, SIKA, FOSROC and SWC. Approximately 300 companies are estimated to be operating in this segment.

Company	Products range									
Company	Adhesives	Sealants	Construction chemicals							
Pidilite	Fevicol, Fevi Kwik	M-Seal	Dr Fixit, ROFF							
Huntsman India	Araldite Karpenter, Araldite Builder, Araldite Kwick C	Araseal	-							
Jubilant Industries	Vamicol, Lamino, All Rounder, Polystic, Hero, Vambond Excel	Plumber's seal, Mix n Fix, Fast Seal and Wet Set	-							
Sika India	- SikaBoom, SikaGrouts, Sikafle		Sikacim, Sika Tilofix							
Fosroc India	Nitobond, Nitotile	Thioflex, Colpor, Nitoseal	Proofex, Supercast, Nitoproof							
Anabond	Anabond Range	Tuffseald	-							
Chandras Chemical	Dendrite, Fixobond, Yamapoxy, Sona	Denseal	-							
Bluecoat India	Bluecoat, Bluegrip	-	-							
Cico Technologies	-	CICO Super, CICO Acryl, CICO Sealant	CICO Tile Plast, CICO Bond EPO							
BASF India	-	-	MasterSeal							

Source: Company, EISEC Research

Revenue comparison of major players



- (1) Used FY2015 Revenues
- (2) Used FY2014 Revenues
- (3) Used CY2014 Revenues
- 4) Used FY2013 Revenues



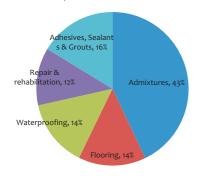
Pidilite & Astral

• Pidilite is the most formidable player in the Indian adhesive market. By virtue of its acquisitions, Astral now has presence in almost all segments where Pidilite is present. Astral sees a clear opportunity to gain market share given the almost monopolistic presence of Pidilite. Technology from Seal IT UK can potentially give Astral and innovation edge over Pidilite by way of launching new product categories.





Indian Construction Chemical product share



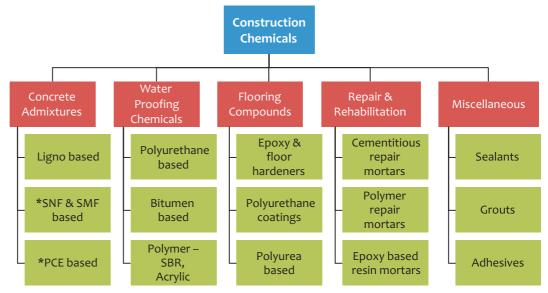
Indian Construction Chemical Market: Big driver for Astral in long run

- The size of Indian construction chemicals industry estimated at Rs 35 Bn in FY14 and grew at 12% between FY 09 to FY 14. The industry is expected to grow by 15% p.a. to reach Rs 70 Bn by FY19.
- Admixtures constitute majority of the market with 42% share. Flooring and waterproofing
 agents are the next leading segments with 14% share each. Chemicals for repair and
 rehabilitation constitute another 12% of the market while the remaining 18% is comprises of
 adhesives & sealants.
- The share of flooring chemicals is high in Indian market as compared to developed world while India has a low share of tiling, sealants and waterproofing. Hence India has a high growth opportunity in tiling, sealants and waterproofing chemicals.
- Going forward, the industry is expected to maintain high growth momentum driven by building up of Smart Cities, Government's aspiration of Housing for all by 2022 and government's investment plans in infrastructure.
- Although construction chemicals account for 2%-5% of the project cost, the benefits realized are far more than the increase in the cost of the project.
- Usage of construction chemicals is only going to increase as the usage of cement in fixing tiles is still very high and usage of adhesives offers a compelling value proposition in terms of lower cost, better outcome and lesser time to install.
- Based on end use applications, these compounds can be broadly classified into five categories as shown below in the diagram.

Key Challenges

Construction chemicals market in India is still under-developed compared to other countries, such as China, which accounted for 42% of the global construction chemicals consumption in 2014. Consumer awareness is very low regarding new chemical techniques and construction aids. Margins are lower because most contractors prefer low-cost chemicals to reduce the overall construction cost. High value products have limited demand and are used only by premium construction houses.

Some of the key challenges faced by the industry are as follows - Low awareness, Price sensitive market, Fragmented Industry, Raw material availability, Unskilled laborers, Lack of stringent regulations, Ban on illegal sand mining in India.



^{*} PCE: Polycarboxylic ether; SNF: Sodium Naphthalene Formaldehyde; SMF: Sulphonated Melamine Formaldehyde Source: FICCI Construction Chemical report dated, 8th May, 2015













Construction Chemical Segments

Admixtures

- For getting better results, better workability, more strength, and better finishing, cement or mortar admixtures are used along with Cement.
- > Admixtures are primarily used To reduce water content in concrete, to increase compressive strength and durability parameter of concrete, to enhance the workability and giving more transportation and placing time.
- Admixtures are used during the first stage of construction. The market in India was valued ~Rs 15 Bn (42%) in 2014.

Flooring agents

- ➤ Flooring compounds are mostly epoxy and polyurethane based. Industrial flooring compounds are used to meet various industrial needs such as abrasion, load impact, chemical attack, moisture penetration, strengthening of damaged floors, as well as improving the aesthetic appeal of the floor.
- > The market for such compounds in India is valued ~Rs 5 Bn in 2014. Epoxy and floor hardeners constitute major share of the market followed by PU based flooring agents.

Waterproofing agents

- ➤ Water proofing compounds are designed to stop water infiltration. These compounds or membranes can be extremely effective when applied on the exterior of a foundation system. Application of the water proofing compounds can be done by implant treatments i.e. either dipping or spraying or by low-pressure spraying on the surface.
- > The size of this segment is estimated ~Rs 5 Bn in 2014. The price of products varies depending on the raw material used. The industry is moving away from bituminous compounds due to their lower performance and non-eco-friendly nature.

Repair & Rehabilitation

Retrofitting is basically addition of new technology or features to older systems and improving the structures with energy efficiency. Rehabilitation is reconstruction of the structural components which were damaged. These products include cementations repair mortars, epoxy based mortars and other products like rust removers, anti-corrosion products etc. The size of this segment is estimated ~Rs 4.3 Bn in 2014.

• Sealants, Grouts and Adhesives

- > Sealants are used to seal expansion joints, cracks, joints in concrete roads and to fill gaps between concrete.
- ➤ Grouts are compounds used for giving extra strength for the foundations of loadbearing structures. They are also used for repair and sealing of cracks and gaps.
- Tile Adhesives are made using high quality material which enhances the durability of the adhesive and its bonding span is increased. They are primarily based on cement, epoxy and polymer formulation (mainly acrylic polymer). Cementitious adhesives are most commonly used in India owing to their lower price.
- ➤ The size of this segment is estimated ~Rs 5.7 Bn in 2014.

Resinova has all important products to offer in each segment of construction chemical market. This coupled with Astral's experience of working in the construction market and new product introduction with technology support from Seal It UK, Astral is poised to grow at a fast clip in this segment.



Strong management team with rich experience

- Mr. K. Raghunath Shenoy, Chairman: He is an M. Sc. (Statistics) from Mumbai University. He possesses experience of 37 years in the banking sector. He was the Chairman and CEO of Lakshmi Vilas Bank Ltd., Karur, Tamil Nadu till 2002. He has also served in various positions and retired as an Executive Director of Corporation Bank Ltd in 1992. He has also served in various capacities in the RBI and retired in the year 1973. Presently he is a director of an NGO in Bangalore and a member of the Executive Committee of Bhartiya Vidya Bhavan.
- Mr. Sandeep P. Engineer, Managing Director: He is a Chemical Engineer by qualification. He started his career as Project Engineer in Cadila Laboratories. After gaining an experience for around a year, he decided to promote M/s Shree Chemicals, a proprietorship concern, in the year 1986, which was operational for about 10 years. Thereafter, in the year 1992, he promoted Kairav Chemicals Pvt. Ltd. a pharmaceutical venture for the manufacture of bulk drugs. Inspired by the success achieved in this venture, he diversified into the business of plastic-pipe industry by collaborating with Specialty Process LLC, for further growth and development of Astral, for introduction of CPVC in the Indian markets, thereby revolutionizing the Indian plastic-pipe industry by replacing the conventional metallic system with polymer products. Presently, he is the member of Executive Committee of the Indian Plumbing Association, and Chairman of the Gujarat Chapter of the association, and also a member of the World Plumbing Council.
- Mrs. Jagruti S. Engineer, Executive Director: She is a Bachelor of Arts in English by qualification. She started her career as a partner in M/s Jagruti Pharmaceuticals till the year 1992. She has been actively involved in the day-to-day affairs of Astral since its inception and is responsible for the daily administrative activities of our Company. She also possesses experience in activities related to Human Resource Management.
- Mr. Hiranand Savlani, Chief Financial Officer: He is a rank holder & gold medalist and has got degrees in FCA, ACS, ICWA, LLB. He possesses a total experience of 20 years. He was previously employed at Dynamic Industries Ltd. as a Finance Consultant. He is with the company since 2003, serves as a CFO and is responsible for all the finance and accounts of the Company. He has been Instrumental in driving many strategic initiatives of the company.

The second generation is getting groomed to get into saddle. Both the sons of Mr Sandeep Engineer have already joined the business and this is going to help the company in the long run.

- Mr. Kairav Engineer, Sr. Business Development Manager: He is elder son of Mr Sandeep Engineer. He completed his Bachelor's degree in Industrial and Systems Engineering from Georgia Institute of Technology, USA in 2011. He joined the company immediately after that and currently serves as a Sr. Business Development Manager. He is playing an important role for overall development of Astral brand for both pipes as well as Adhesives & Sealant businesses.
- Mr. Saumya Engineer, Business Development Manager: He is younger son of Mr Sandeep Engineer. Recently, he has got a Bachelor's degree from Arizona State University, USA. Currently, he is actively looking after Resinova business.



Comparative Analysis

• There is no like to like comparable peer so we have stacked up Astral's performance vis-àvis some listed Pipe as well as Adhesives & Sealant companies.

All figures in Rs. Mn and for FY 2015 (consolidated)

Companies	Latest Mcap	Net Sales	EBITDA Margin (%)	PAT	PAT Margin (%)	ROCE(%)	ROE(%)	P/BV	TTM P/E
Astral Poly Technik	47,834	14,294	11.7%	782	5.5%	20.3%	16.4%	6.60	63.90
Pipe									
Kriti Industries	1,625	3,800	5.2%	21	0.5%	17.7%	4.2%	3.20	77.90
Supreme Industries	98,509	42,552	15.7%	3,224	7.6%	34.1%	27.7%	7.70	26.70
Texmo Pipes and Products	572	3,115	6.5%	34	1.1%	9.6%	2.6%	0.40	16.80
Tijaria Polypipes	126	693	11.6%	(92)	(13.2%)	(0.5%)	(12.3%)	0.20	-
Signet Industries	10,653	6,563	8.7%	117	1.8%	19.2%	16.6%	10.20	63.70
Kisan Mouldings	439	4,490	3.3%	(378)	(8.4%)	0.6%	(48.6%)	1.10	-
Dutron Polymers	500	819	4.6%	17	2.1%	13.4%	11.9%	3.00	21.00
Adhasiyas and Saalanta									
Adhesives and Sealants									_
Atul	44,327	26,564	14.7%	2,262	8.5%	27.6%	24.1%	4.30	18.40
Chembond Chemicals	2,497	3,002	8.7%	143	4.7%	19.8%	15.8%	1.10	1.60
Fineotex Chemical	2,695	1,020	16.2%	146	14.3%	28.0%	20.7%	3.10	16.20
Pidilite Industries	306,554	48,441	15.9%	5,085	10.5%	32.1%	24.1%	10.60	44.80
Nikhil Adhesives	156	2,542	3.2%	4	0.1%	12.9%	2.7%	-	58.90

Source: ACE Equity, EISEC Research

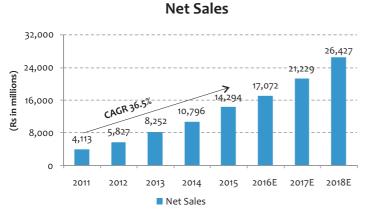
- There is huge margin gap between Astral and Pidilite, around 600 bps in Adhesive business.
- Astral's strategy is very clear Improve the Branding, Increase the capacity, Optimize costs, Launch new products and take gradual price hikes which will help bridge the market share as well as margin gap with the market leader Pidilite.
- Astral is executing a very well thought out and planned strategy and we believe that the company can easily increase the Adhesive business EBIDTA margin by ~400bps to 13%-14% in 4-5 years.

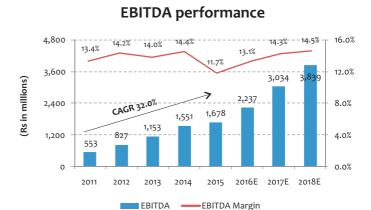
^{*} As on 15th March 2016



Stellar Financial Performance

Astral has exhibited a robust CAGR growth of 37% in revenues, 32% in EBITDA and 23% CAGR
in net income over the past 4 years.

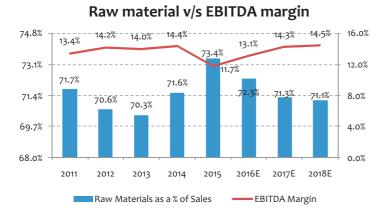


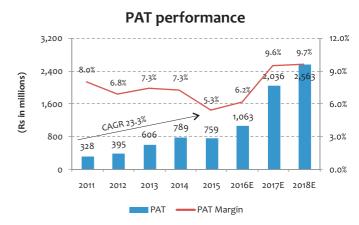


Source: Company, EISEC Research

Source: Company, EISEC Research

• The company has been able to maintain its margin despite volatile raw material costs. Lower margins in FY15 was mostly on account of inventory loss (steep fall in crude price).

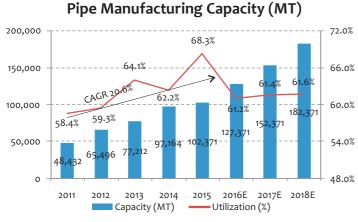


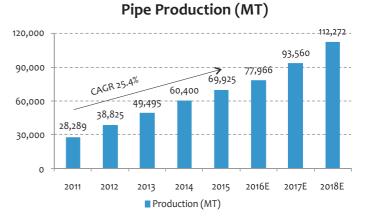


Source: Company, EISEC Research

Source: Company, EISEC Research

• The company has increased production of pipes and fittings by 25% CAGR in the same period while expanding its manufacturing capacity by almost 2X to meet the growing demand of the domestic piping industry.







Outlook and Valuation

- Astral pioneered the CPVC plumbing industry in India in 1999 as the first licensee of Lubrizol,
 USA to manufacture and market CPVC plumbing systems in India. Over the years, Astral
 developed strong brand equity and pan-India distribution channel of 750+ distributors and
 21,000+ dealers.
- Further Astral piping business is well balanced between CPVC and PVC, hence reducing the dependence only on CPVC pipes. The company is also planning to promote its new product Blazemaster Fire Sprinkler system aggressively since it has already got the ISI certification along with bendable pipes used for solar application, agriculture pipes, column pipes used in borewell, and conduit pipes for electrical applications.
- The company has also chalked up plans to set up a new pipe manufacturing facility in Ghilot near Neemrana in Rajasthan to cater to the North Indian market. With impeccable capex planning, the company will continue to have good growth in its pipe business as the Indian economy recovers.
- Lubrizol has set up its CPVC resin manufacturing plant at Dahej Gujarat, which is now operational and trial batches have been sent to Astral for manufacturing CPVC pipes. Astral will now be able to achieve substantial savings in raw material logistics costs, better inventory management and stay insulated from the effect of currency fluctuation as the raw materials will then be sourced locally from Lubrizol's facility in Dahej.
- Having acquired the leadership position the pipe business, Astral's has well timed its inorganic foray in adhesive business which incidentally has great synergies with the pipe business as both cater to a lot of common Industries / sectors.
- Dealers of pipes & building materials products like Adhesives are common hence there is a opportunity for Astral to leverage the much broader distribution network of Resinova to increase the reach and penetration of the pipe business as well. The vice versa also holds true. Dealers will be offered sealants, adhesives and pipes to be marketed under one Brand.
- Further Astral intends to establish synergies between Resinova and Seal It by sharing Seal It's technology with Resinova and pumping Seal It's products in the Resinova's distribution channel as well.
- Resinova's new plant at Santej will give geographical advantage to cater to the Western
 and Southern markets thereby saving on logistics cost it used to incur while serving from
 the Kanpur facility.
- With all the above factors Astral's adhesive business will be able to garner EBITDA margin of ~13-14% which will increase gradually in 3-4 years from current level of 10%.
- At CMP of Rs 400 the stock of the company trades at 18.6 XFY18 earnings.
- Considering a strong growth prospect in the coming years with improving margins and higher return ratios, we recommend to buy Astral with a SOTP based target price of Rs 500 (23.4x FY18E Consol. EPS) implying a 25% upside from CMP.



Financial Statement (Consolidated)

Income statement, Rs Mn	FY11	FY12	FY13	FY14	FY15	FY16E	FY17E	FY18E
Total revenues	4,113	5,827	8,252	10,796	14,294	17,072	21,229	26,427
% growth		42%	42%	31%	32%	19%	24%	24%
Operating expenses	-3,559	-5,000	-7,099	-9,245	-12,616	-14,834	-18,194	-22,587
EBITDA	553	827	1,153	1,551	1,678	2,237	3,034	3,839
Depreciation	-108	-138	-181	-219	-364	-437	-475	-518
EBIT	445	689	971	1,332	1,313	1,800	2,559	3,322
Interest	-44	-228	-192	-311	-255	-368	-217	-91
Other Income	13	38	19	24	36	119	158	141
PBT	414	500	798	1,045	1,095	1,552	2,500	3,372
Tax	-86	-105	-189	-252	-313	-435	-589	-891
Other Adjustment	-	-	-	-	-	-	161	121
PAT	328	395	610	793	782	1,117	2,072	2,602
Minority	-	0	-4	-4	-23	-54	-35	-39
PAT to Shareholders	328	395	606	789	759	1,063	2,036	2,563
EPS	2.7	3.3	5.1	6.6	6.3	8.9	17.0	21.4
% growth		20%	53%	30%	-4%	40%	91%	26%

Source: Company, EISEC Research

Balance Sheet, Rs Mn	FY11	FY12	FY13	FY14	FY15	FY16E	FY17E	FY18E
Share Capital	112	112	112	112	118	120	120	120
Reserves & Surplus	1,364	1,728	2,301	3,041	6,069	7,070	8,449	10,457
Minority	0	-0	3	7	165	219	254	293
Total Networth	1,476	1,840	2,417	3,160	6,353	7,409	8,823	10,870
Long term borrowings	319	648	644	806	1,213	563	319	132
Deferred tax liabilities	16	15	82	118	180	180	180	180
Other non-current liabilities	-	-	-	1	11	11	11	11
Current Liabilities & Prov	1,488	2,301	2,300	2,858	3,896	4,051	3,918	4,646
Total Liabilities and Equity	3,300	4,804	5,442	6,944	11,653	12,212	13,251	15,840
Gross Block	1,426	2,119	2,808	3,766	4,826	5,230	5,700	6,211
Net Fixed Assets	1,213	1,770	2,270	2,970	3,693	3,680	3,700	3,724
Investments	0	-	-	5	2,144	2,874	2,338	1,936
Other non-current assets	61	42	78	103	136	143	177	221
Total current assets	2,026	2,992	3,095	3,866	5,681	5,516	7,036	9,959
Total Assets	3,300	4,804	5,442	6,944	11,653	12,212	13,251	15,840



Cash flow, Rs Mn	FY11	FY12	FY13	FY14	FY15	FY16E	FY17E	FY18E
PBT	414	500	798	1,045	1,095	1,552	2,500	3,372
Adjustments	64	274	289	291	381	298	182	-288
Chg. W.C.	22	77	-440	-665	-306	183	-109	-553
OCF	501	851	648	672	1,170	2,033	2,573	2,530
Capex	-	-271	-693	-690	-958	-854	-425	-495
Investment	3	9	13	9	-2,588	-	536	402
CFI	-374	-680	-665	-909	-3,435	-1,184	-95	-281
Net Debt	26	278	-48	476	313	-488	-976	-243
Net Equity	-	-	-	-	2,359	55	35	39
Dividend Payout	-26	-29	-29	-36	-47	-63	-121	-153
CFF	-67	82	-223	131	2,371	-864	-1,815	-850
Increase/(Decrease) in Cash	59	253	-240	-106	106	-15	664	1,400
Opening Cash	43	102	355	115	10	115	100	764
Closing Cash	102	355	115	10	115	100	764	2,164

Source: Company, EISEC Research

Ratio analysis (%)	FY11	FY12	FY13	FY14	FY15	FY16E	FY17E	FY18E
EBIDTA margin	13.4%	14.2%	14.0%	14.4%	11.7%	13.1%	14.3%	14.5%
PAT	8.0%	6.8%	7.4%	7.3%	5.5%	6.5%	9.8%	9.8%
ROCE	45.5%	29.1%	31.7%	33.6%	20.3%	20.8%	27.9%	32.3%
ROE	22.2%	23.8%	28.6%	28.4%	16.4%	16.2%	25.5%	26.4%
Inventory (days)	108	95	87	82	80	75	65	65
Payable (days)	142	127	107	84	78	78	78	78
Receivables (days)	69	57	46	42	48	48	48	48
Debt to equity	0.3	0.5	0.4	0.4	0.3	0.2	0.1	0.0

Source: Company, EISEC Research

Valuation parameters	FY11	FY12	FY13	FY14	FY15	FY16E	FY17E	FY18E
EPS	2.7	3.3	5.1	6.6	6.3	8.9	17.0	21.4
P/E (x)	145.5	121.0	78.8	60.5	63.0	44.9	23.5	18.6
EV/ EBIDTA (x)	86.1	57.8	41.7	31.4	29.3	21.8	15.5	11.8
PBV	32.0	25.7	19.5	14.9	7.4	6.4	5.4	4.3





Stock rating (1 year target scale)

<0% - Sell

0-10% - Reduce

10-30% - Accumulate

>30% - Buy

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