

POWERING PROGRESS



HALENE-H

HDPE High Density Polyethylene

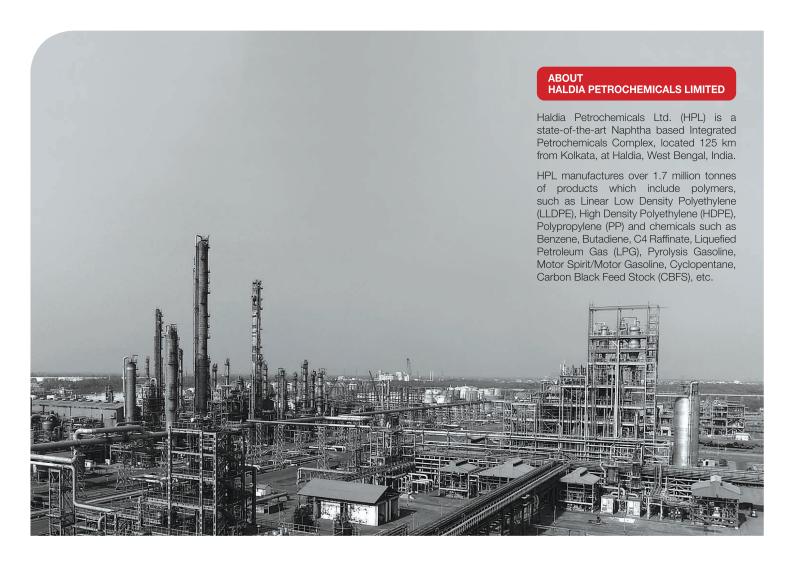
HALENE-P

PP Polypropylene

HALENE - L

LLDPE Linear Low Density
Polyethylene

www.haldiapetrochemicals.com





OUR VISION

To be a profitable, efficient and customer-focused organisation, recognised as a leading supplier of quality products and services.

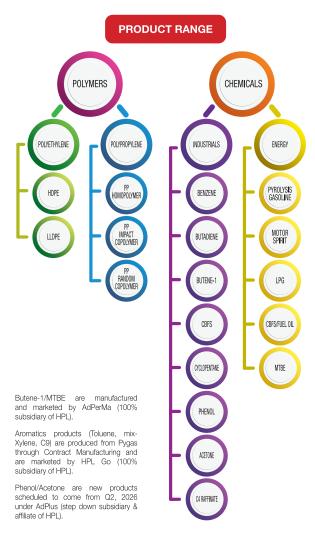
Delivering value to its shareholders

Dedicated to achieving customer satisfaction

Demanding yet a caring employer

Fair and courteous to its vendors

Striving to be a responsible corporate citizen



CUSTOMER FOCUS

We are a customer-focused organisation, valuing our customer needs the most and are committed to provide quality products and services to our customers.

Quality of our products and services are defined by our customers. We work as a partner to understand customers' businesses and expectations, so that we are able to meet their needs today and in the future.

We have established quality management systems to measure, monitor and control quality and facilitate improvements. We assess ourselves continually through SQC tools, external and internal customer surveys, auditing and self-assessments.



FULLY INTEGRATED NEW-AGE PLANT

The sprawling HPL plant in Haldia is a fully integrated naphtha cracker based petrochemicals complex that has adopted state-of-the-art technologies and advanced process control systems for safe and reliable operations. The complex is equipped with a captive power plant, extensive water storage and handling facilities, large hydrocarbon and polymer warehouses. The complex is linked to the Haldia port via a dedicated network of pipelines for both feedstock and liquid products.

MANUFACTURING UNITS

Plant	Capacity	Technology
Naphtha Cracker Unit	700 kTA	Lummus Technology, USA
Linear Low Density Polyethylene	386 kTA	LyondellBasell, Netherlands
High Density Polyethylene	334 kTA	MITSUI, Japan
Polypropylene	341 kTA	LyondellBasell, Netherlands
Benzene Extraction Unit	132 kTA	LURGI, Germany
Butadiene Extraction Unit	101 kTA	BASF, Germany
Pyrolysis Gasoline (Pygas)	130 kTA	AXENS, France
LPG/C4 Raffinate	113 kTA	AXENS, France
Cyclopentane	5 kTA	AXENS, France
Motor Spirit/(Motor Gasoline/Petrol)	250 kTA	HPL, India
Butene-1*	30 kTA	AXENS, France
MTBE*	98 kTA	AXENS, France
C4 Raffinate	108 kTA	AXENS, France
Carbon Black Feed Stock (CBFS)	89 kTA	Lummus/AXENS

kTA - Kilo tonnes per annum

^{*}Products are sold by AdPerMa (100% subsidiary of HPL)

SUPERIOR PRODUCTS

Every product of HPL is in sync with the highest international standards and is widely used by rigid and flexible packaging, consumer durables, automobiles, furniture, luggage, infrastructure and agricultural industries in India and in various other countries from EU, Southeast Asia and the USA.

Haldia Petrochemicals Limited (HPL) manufactures 700 kTA of High Density Polyethylene (HDPE) and Linear Low Density Polyethylene (LLDPE).

HPL's HDPE products include a wide range of narrow, medium and broad (bi-modal) molecular weight distribution grades using Spherilene Gas Phase Swing Process and Mitsui Slurry CX processes to suit a wide range of applications.

HPL has adopted Spherilene Gas Phase Swing Process from LyondellBasell to produce a wide array of LLDPE grades.

HPL manufactures 341 kTA of high quality polypropylene homopolymer and copolymer grades using Spheripol II Technology from LyondellBasell.

The Chemicals portfolio of HPL includes energy products like Motor Spirit, Hydrogenated C4 (LPG), Pyrolysis Gasoline and Carbon Black Feedstock (CBFS) and industrial intermediates and feedstocks like Benzene, Butadiene, Cyclopentane & CBFS.

CHEMICALS PRODUCT PROFILE

Products	Applications
Benzene	Styrene Phenol Linear Alkyl Benzene (LAB) Caprolactam Nitrobenzene/Aniline
Butadiene	Polybutadiene Rubber (PBR) Styrene – Butadiene Rubber (SBR) Acrylonitrile Butadiene Styrene (ABS)
Hydrogenated C4 Raffinate (LPG)	Domestic and Industrial Fuel Auto LPG
Butene-1*	Comonomer for polyethylene
Cyclopentane (High purity>97%)	Environment-friendly substitute for CFC/HCFC Blowing agent for PU Foams
Pyrolysis Gasoline Hydrogeneted (HPG)	MS Blending Aromatics Extraction
MTBE*	Raw material for isobutylene Octane Booster
Motor Spirit/Motor Gasoline	Fuel for Motor Cars
Carbon Black Feed Stock	Carbon Black Environment-friendly fuel for furnace

^{*}Products are sold by AdPerMa (100% subsidiary of HPL)

Grade	Properties	MFI [*]	Density*	Tensile Strength at Yield	Tensile Strength at Break	Elongation at Break	Izod Impact Strength	Flexural Modulus	ESCR F50 10% Igepal Soln.	OIT	BIS LICENSE No. CM/L - 5100208172	Applications	
	Test Method	ASTMD1238 IS 13360	ASTMD1505 IS 13360		ASTMD638	3	ASTMD256A	ASTMD790A	ASTMD1693B	ASTMD3895	BIS Code	Applications	
	Unit	g/10 min	g/cm³	MPa	MPa	%	J/m	MPa	Hr	min			
HDPE	Extrusion	Grades	- Film, Ra	affia, Yar	n, Mono	filament,	Pipe						
F5400		0.50(I ₅)	0.952	28	40	800	180	950	>500	-	IS 7328-3B-FB-FXTA	Carry Bags and Printed Shopping Bags	
P5300		0.25 (I ₅)	0.948 (27°C)	26	40	900	270	1000	>1000	>30	IS 7328-3B-PBK-EXTA	Pipes (PE 100 - Type Test Compliant)	
P5200		0.90 (I ₅)	0.948 (27°C)	25	38	900	175	1000	>1000	>30	IS 7328-3B-PB-EXTA	Pipes (PE 63 - Type Test Compliant)	
P5200L	JV	0.90 (I ₅)	0.948 (27°C)	25	38	900	175	1000	>1000	>30	IS 7328-3B-PD-EXTA	Pipes (PE 63 - Type Test Compliant) and Telecom ducts. UV Stabilized	
P5100		0.50 (I ₅)	0.948 (27°C)	25	35	900	200	1000	>500	>30	IS 7328-3B-PB-FXTA	Pipes (PE 80 - Type Test Compliant)	
R5801		0.5	0.960	32	38	800	200	1150	-	-	IS 7328-3P-TB-GXDA	Raffia for Woven Sacks and Tarpaulin	
HD T6		0.5	0.960	30	38	800	250	1150	-	-	IS 7328-3P-FB-GXDA	General Purpose Extrusion, Woven Fabrics and Lamination Film	
HD T9		1.1	0.950	26	38	1000	400	1100	-	-	IS 7328-3B-TB-EDA	Raffia for Woven Sacks and Tarpaulin	
HD T10		1.1	0.950	26	38	1100	400	1000	-	-	IS 7328-3B-LBO-EDA	Yarns and Monofilaments for Nets and Ropes	
HD T10	S	1.1	0.950	26	38	1100	400	1000	-	-	IS 7328-3B-LB-EDA	Monofilament for Nets, Twines and Ropes	

HDPE	Molding	Grades -	Blow & Ir	njection								
Grade	Properties	MFI [†]	Density [*]	Tensile Strength at Yield	Tensile Strength at Break	Elonga- tion at Break	Izod Impact Strength	Flexural Modulus	ESCR F50 10% Igepal Soln.	OIT	BIS LICENSE No. CM/L - 5100208172	
	Test Method	ASTM D1238 IS 13360	ASTM D1505 IS 13360		ASTM D638			ASTM D790A	ASTM D1693B	ASTM D3895	BIS Code	Applications
	Unit	g/10 min	g/cm³	MPa	MPa	%	J/m	MPa	Hr	min		
B5500		0.35 (I ₅)	0.952	27	40	900	500	1000	>1000		IS 7328-3B-BB-FXTA	Medium & Large Containers upto 120L & Blow Molded Tanks upto 1000L
B6401		0.40	0.960	32	40	1000	300	1300	<20	-	IS 7328-3P-BB-GXDA	General Purpose Blow Molding
E5201		0.35	0.950	25	34	900	120	1000	>600	-	IS 7328-3B-BB-EXDA	High ESCR Blow Molding and Extrusion
E5201S		0.35	0.954	25	36	900	100	1100	250	-	IS 7328-3B-BB-FXDA	General Purpose Blow Molding
M5002L	*	3.0	0.950	25	30	900	180	950	-	-	IS 7328-3B-CB-EDB	Injection Molded and Extrusion Compression Molded Caps
M5005L	*	4.5	0.950	22	31	900	100	850	-	-	IS 7328-3B-MB-EDC	Industrial Products, Crates, Bins
M6007L	*	7.5	0.950	24	-	750	50	850	-	-	IS 7328-3B-MB-EDD	Industrial Products, Crates, Bins
M6007L	_U*	8.0	0.950	24	-	750	50	850	-	-	IS 7328-3B-MD-EDD	Industrial Products, Crates, Bins-UV Stabilised
M5018L	*	20.0	0.950	22	-	450	35	800	-	-	IS 7328-3B-MB-EDE	General Purpose Injection Molding

MFI tested at 2.16 kg (unless otherwise mentioned) & 190°C. #Density measured at 23°C & for Pipe grades (P5300, P5200, P5200UV & P5100) are measured at 27°C as per IS 4984.

Physical Properties tested on Compression Molded Specimens

*Properties on Injection Molded Specimens

The above typical properties are not to be construed as Specifications and may change without any prior notice

The user will solely be responsible for any intended process / product usage and HPL does not guarantee or undertake any responsibility for any consequential damage or loss based on the information given above.

Grade	Properties	MFI [†]	Tensile Strength at Yield	Tensile Elongation at Yield	Flexural Modulus	Notched Izod Impact Strength	Heat Deflection Temperature	Vicat Softening Point	BIS LICENSE No. CM/L - 5100235074	Application
Grado	Test Method	ASTM D1238 IS 13360	ASTM D638		ASTM D790A	ASTM D256A	ASTM D648	ASTM D1525	BIS Code	Αρποαίοπ
	Unit	g/10 min	MPa	%	MPa	J/m	°C	°C		
PP Hon	nopolymer -	Extrusion G	rades							
F103		3	34	10	1450	40	95	152	IS 10951-1-FB-A	BOPP Film Grade - General Purpose, Lamination & Metallizable films
R103		3	34	9	1500	40	93	153	IS 10951-1-TB-A	Raffia Tapes for Woven Sacks for Packaging Cements & Fertilizers ,FIBC, Ropes & Yarns
T103		4	37	8	1700	45	95	154	IS 10951-1-DBL-A	Thermoformed Cups, Containers & Other disposable items
F110		11	34	9	1400	30	99	154	IS 10951-1-NBH-C	Tubular Quenched and Cast Films for General Purpose Packaging
F135		35	35	8	1350	45	105	150	IS 10951-1-HBV-E	Spunbonded Nonwoven Fabric and Extrusion Coating
PP Hon	nopolymer -	Injection Mo	olding Gra	des						
M103		3	32	7	1300	35	93	153	IS 10951-1-ZB-A	General Purpose Extrusion & Injection Molding
M106		6	32	7	1300	35	93	153	IS 10951-1-ZB-A	General Purpose Extrusion & Injection Molding
M108		8	30	7	1300	35	94	152	IS 10951-1-ZB-B	General Purpose Extrusion & Injection Molding
M110		11	34	9	1500	30	99	154	IS 10951-1-MB-C	General Purpose Injection Molding Furniture & Household items

	Properties	MFI [†]	Tensile Strength at Yield	Tensile Elongation at Yield	Flexural Modulus	Notched Izod Impact Strength	Heat Deflection Temperature	Vicat Softening Point			
Grade	Test Method	ASTM D1238 IS 13360	ASTM D638		ASTM D790A	ASTM D256A	ASTM D648	ASTM D1525	BIS Code	Application	
	Unit	g/10 min	MPa	%	MPa	J/m	°C	°C			
PP Imp	PP Impact Copolymer - Injection Molding Grades										
M304		3.5	25	7	1000	>150	90	145	IS 10951-3-MB-A	Automotive Components, Crates, Paint Pails & Furniture	
M307		7	23	6	950	80	88	145	IS 10951-3-ZB-B	General Purpose Injection Molding	
M310		10	24	6	1200	90	100	145	IS 10951-3-JB-C	Battery Boxes & Industrial Items	
M312		12	23	5	950	120	100	145	IS 10951-3-MB-C	Compounding, Industrial Components, Automotive Components, Luggage, Paint Pails	
M311T		10	21	7	900	500	85	142	IS 10951-3-MBJ-C	Compounding, Automotive Components, Luggage, Industrial Components	
M320		20	23	6	1150	100	105	145	IS 10951-3-MBV-D	Injection Molded Products, Automotive Components, Appliances	
M325		25	25	6	1150	60	84	140	IS 10951-3-ZB-D	Injection Molded Furniture, Compounds & Automotive Components, House wares, Appliance Parts, and Extrusion Coating	
M330		30	22	6	1100	100	100	145	IS 10951-3-MBV-D	Injection Molded Furniture, Compounds & Automotive Components, House wares, Appliance Parts, and Extrusion Coating	
M340		40	22	6	1050	90	100	145	IS 10951-3-MBV-E	Injection Molded Products, Automotive Parts and Compounds, Appliances	
M365		65	22	6	1200	75	95	148	IS 10951-3-MBV-F	Thin-Walled Injection Molded Products, Automotive Parts, Compounds and Appliances	
PP Rar	ndom Copo	olymer - Inj	ection Mo	olding Grad	les						
M212S	;	12	28	12	1050	50	75	128	IS 10951-2-MBL-C	High Clarity Containers & other Household items, Injection Syringe & High Clarity Medical / Laboratory products, ISBM Bottles	

[†]MFI tested at 2.16 kg & 230°C.

Mechanical properties tested on Injection Molded Test Specimens.

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LLDPE	Film Grad	es								
	Properties	MFI [†]	Density**	Tensile Strength at Break* (MD/TD)	Elongation at Break* (MD/TD)	Elmendorff Tear Strength* (MD/TD)	Dart Impact Strength*	BIS LICENSE No. CM/L - 5100208172		
Grade	Test Method	ASTM D1238 IS 13360	ASTM D1505 IS 13360	ASTM D882		ASTM D1922	ASTM D1709A	BIS Code	Applications	
	Unit	g/10min	g/cm ³	MPa	%	g/μm	g/μm			
71501S		1.0	0.922	25 / 16	650 / 750	6 / 16	4	IS 7328-2B-FBH-BDA	General Purpose Packaging Films - With Slip and Antiblock	
71601W		1.0	0.920	25 / 16	650 / 750	6/16	4	IS 7328-2B-FBE-BDA	Adhesive Lamination Films - No Slip and Antiblock	
71602S		2.0	0.920	19 / 14	700 / 750	4 / 12	3	IS 7328-2B-FBH-BDB	General Purpose Packaging Films - With Slip and Antiblock	
71602W		2.5	0.920	23 / 19	500 / 750	2.5 / 11	2	IS 7328-2B-FBE-BDB	Cast Film for Stretch Wrap Application, Adhesive Lamination Films - No Slip and Antiblock	
LLDPE	Grades fo	r Drip Late	ral, Extrusi	on Coating &	Rotomolding	J				
	Properties	MFI [†]	Density**	Tensile Strength at Yield	Elongation at Break	Izod Impact Strength	Flexural Modulus	BIS LICENSE No. CM/L - 5100208172		
Grade	Test Method	ASTMD1238 IS 13360	ASTMD1505 IS 13360	ASTMD638		ASTMD256	ASTMD790	BIS Code	Applications	
	Unit	g/10min	g/cm ³	MPa	%	J/m	MPa			
71601D##		1.0	0.920	-	1000	500	400	IS 7328-2B-NB-BDA	Drip Lateral Pipes	
LL T12##		3.7	0.926	-	500	500	550	IS 7328-2B-JO-CDC	Low Voltage Power Cable Insulation Using Silane - Crosslinking	
73204T#		5.0	0.932	17	850	500	400	IS 7328-2B-RBO- CDC	Rotomolded Tanks & Containers for Domestic & Industrial Water Storage, Sanitation & Agriculture	
73204TU#		5.0	0.932	17	900	500	400	IS 7328-2B-RDO- CDC	Rotomolded Tanks & Containers for Domestic & Industrial Water Storage, Sanitation & Agriculture - UV Stabilized	
73005T#		5.0	0.934	17	800	350	400	IS 7328-2B-RBJ-CDC	Rotomolded Tanks & Containers for Domestic & Industrial Water Storage, Sanitation & Agriculture	
73005TU#		5.0	0.934	17	800	350	400	IS 7328-2B-RDO- CDC	Rotomolded Tanks & Containers for Domestic & Industrial Water Storage, Sanitation & Agriculture - UV Stabilized	
72307E#		7.0	0.926	-	500	500	300	IS 7328-2B-HB-CDD	Extrusion Coating on Woven Fabric, Aluminium Foil, Jute, Paper & Allied Substrates	

 $^{\mbox{\scriptsize $^{$}$}}\mbox{MFI}$ tested at 2.16 kg & 190°C. $^{\mbox{\scriptsize *}}\mbox{Density}$ measured at 23°C .

*Film Properties tested on 25-micron films

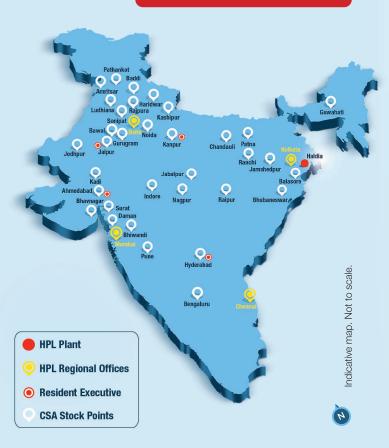
#Mechanical Properties tested on Injection Molded Specimens

##Mechanical Properties tested on Compression Molded Specimens

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WITH A PAN INDIA DISTRIBUTION NETWORK, 4 REGIONAL OFFICES, 48 WAREHOUSES, HALDIA PETROCHEMICALS LIMITED SERVES OVER 4000 CUSTOMERS AND EXPORTS TO OVER 60 COUNTRIES.



Corporate Office

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North

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West

TCG Financial Centre 11 & 12th Floor Plot No. C – 53, G – Block Bandra Kurla complex Bandra – East Mumbai – 400098 Tel: +91-22-6864 9700



East

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South

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Chemicals Exports

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LIST OF AGENTS

Eastern Region

- Goel Polymers
- Peekay Agencies Pvt. Ltd.
- Poddar Polyfab Pvt. Ltd.
- Puja Poly Plastic Pvt. Ltd.
- R.D Computech Pvt. Ltd.
- Rajami Barter Pvt. Ltd.
- Ratnajeet Polycorp Pvt. Ltd.
- Taparia Consultants Pvt. Ltd.

Western Region

- Chandantara Commercial Pvt. Ltd.
- Ganpati Petrochemicals
- Hariram Packaging & Polymers
- Labdhi International Pvt. Ltd.
- Patwa Steels Indore Pvt. Ltd.
- Plastchem Industries
- Twenty Six Trading LLP

Northern Region

- ABS Industries
- D.H Polymers Pvt. Ltd.
- Delhi Polymers Chemicals Pvt. Ltd.
- Ekam Plasto-Chem. Pvt. Ltd.
- Kashish Plastics Pvt. Ltd.
- Kothari Sales Agencies
- Kosmo Enterprises
- Lokesh Rani Poly Distributors (UK)
- Pallavi International Pvt. Ltd.
- Reliable Agencies
- Shine Polymers
- Shree Maru Tradelink Ltd.

Southern Region

- Amdiyala Enterprises
- Aparajeet Polymers Pvt. Ltd.
- Apsara Polymers Pvt. Ltd.
- Chandantara Commercial Pvt. Ltd.
- Chennai Polymers Pvt. Ltd. (H.O.)
- Fareed & Company
- Sanjay Dhruv Traders Pvt. Ltd.
- Shreeji Industries
- Vidhata Polymers Pvt. Ltd

List of Stock Points

East: Howrah, Bhubaneswar, Balasore, Guwahati, Jamshedpur, Patna, Ranchi, Raipur & Jabalpur | West: Bhiwandi, Nagpur, Kolhapur, Pune, Dhule, Ahmadnagar, Ahmedabad, Rajkot, Surat, Bhavnagar, Indore & Daman (3 Nos.) | North: New Delhi (5 Nos.), Noida, Chandauli, Kanpur, Jaipur, Jodhpur, Ludhiana, Rajpura, Amritsar, Baddi, Kashipur, Haridwar, Gurugram, Sonepat & Pathankot | South: Chennai, Hyderabad (4 Nos.) & Bengaluru

For complete details check website www.haldiapetrochemicals.com

APPLICATION RESEARCH & DEVELOPMENT CENTER (ARDC)

HPL invests substantially in Research and Development to meet the needs that may arise in the future and to be able to stay ahead of the times. It has a state-of-the-art Application Research and Development Center (ARDC) at Salt Lake Kolkata, for Product Research, Application Development and Technical Support to Polymer customers. NABL awarded Certificate of Accreditation to ARDC laboratory in January 2022. The laboratory is also recognised under the 'Laboratory Recognition Scheme' of Bureau of Indian Standards.

APPLICATION RESEARCH AND DEVELOPMENT



PRODUCT DEVELOPMENT AND TECHNICAL SERVICES (PDTS)

PDTS provides the following services to meet customer requirements

- Assisting Customers for HPL Grade Selection
- Extending Technical Support to Customers Including Assistance in Testing and Analysis
- Providing Processing Guidelines and Application Related Information
- Development of New Grades
- Quality Improvement of Existing Grades
- Product Stewardship and Compliance Certificates
- Product Customisation for Specific Market and Customer Needs

























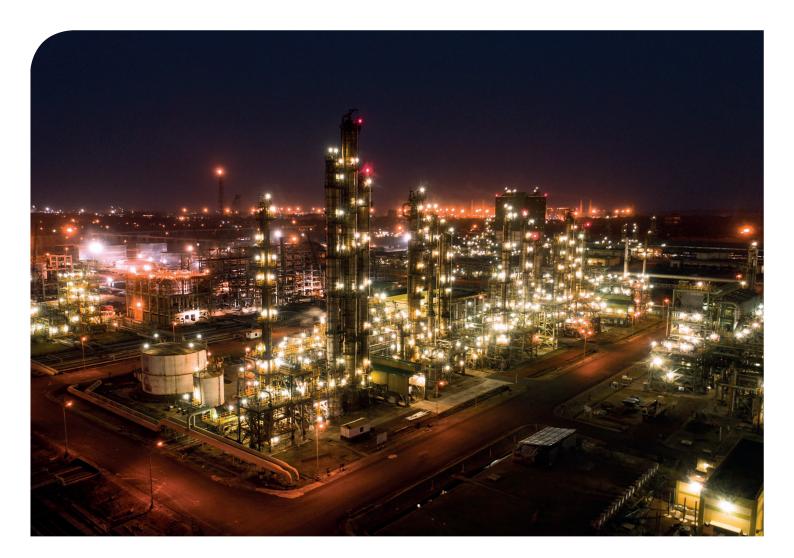


BUSINESS DEVELOPMENT

Our Business Development Group develops and facilitates new business opportunities and ensures that customers receive the best possible services and support

- Identification of new product opportunity
- Steer market development and entrepreneurship development in line with company's business strategy
- Partnership with customer for product promotion. Assist new business ventures/entrepreneurs in selection of raw materials, machinery and products in emerging markets

The Business Development Group also spearheads market development to increase polymer usage and promote awareness on environmental issues.



HPL AND THE ENVIRONMENT

A deeply caring attitude towards the environment sets HPL apart. Global practices have been adopted for environment management. Several measures have been taken for pollution control. Keeping the environment pollution-free and ensuring preservation of natural habitats are ongoing concerns. Process design measures have led to minimal waste generation.

A state-of-the-art waste water treatment plant and an incinerator have been installed to handle liquid and solid waste. A 50-100 m wide green belt developed along the periphery to control emissions is undoubtedly one of the best. The rich bio-diversity inside the plant acts as a catalyst to invigorate employees. Two major projects were launched to control greenhouse gas emissions. Most importantly, compliance with environmental norms is a top priority.



HALDIA PETROCHEMICALS LIMITED

Corporate Office

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Plant

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Application Research & Development Center

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