

Chemical Portfolio

2025



Introduction

The Chatterjee Group (TCG), led by a visionary leader in strategic investments and industrial innovation, Dr. Purnendu Chatterjee, has established a commanding presence in the petrochemicals and advanced materials sector through its flagship enterprise, **Haldia Petrochemicals Ltd. (HPL)**. As one of India's premier petrochemical companies, HPL serves as the cornerstone of TCG's chemical portfolio, consistently delivering high-quality polymers and chemicals that power countless industries and applications worldwide.



Building on this foundation, TCG has strategically expanded its chemical ecosystem through specialized subsidiaries that address distinct market needs:

Haldia Petrochemicals Ltd. is a modern naphtha-based Petrochemical Complex located 125 km from Kolkata, at Haldia, West Bengal, India. HPL is a customer focused organization, recognized as a leading supplier of quality polymers and different chemicals.

Advanced Performance Materials Private Limited is a 100% subsidiary of HPL and located inside the HPL plant complex. It is integrated with HPL for the production of MTBE and Butene-1.

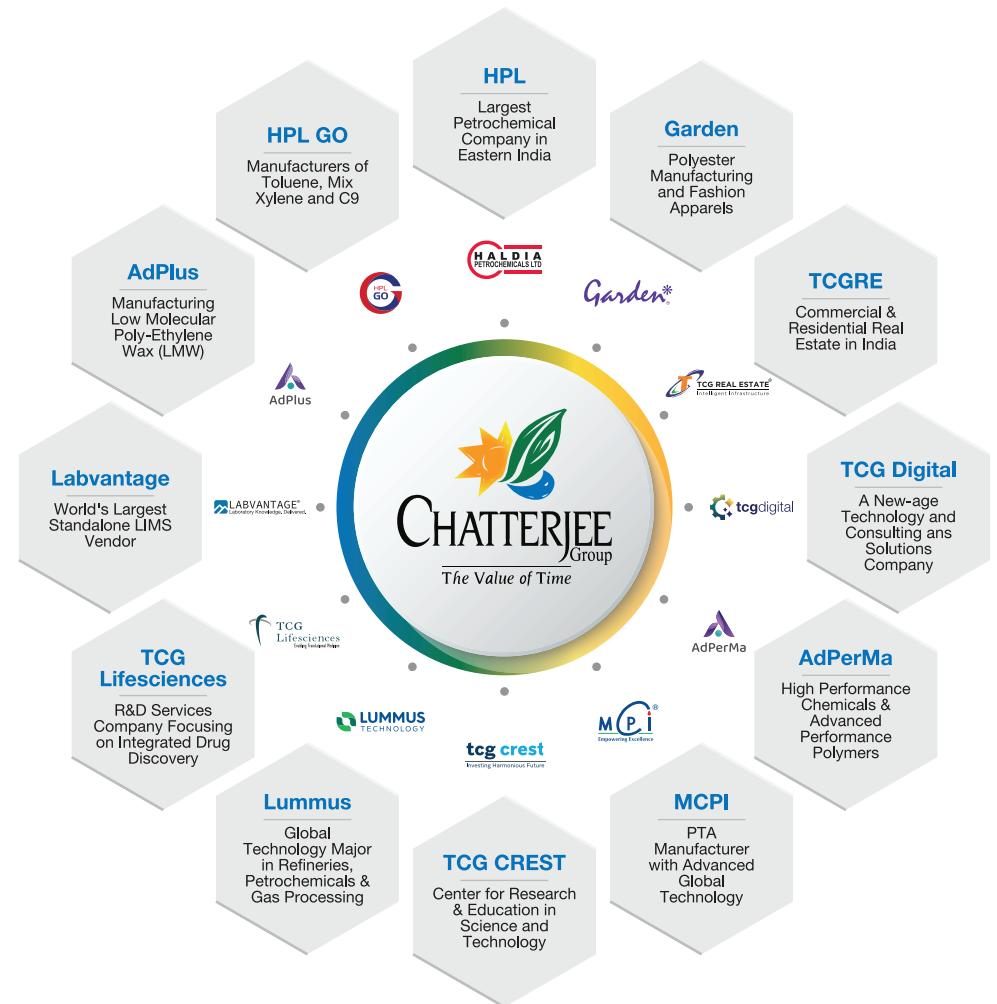
AdPlus Chemicals and Polymers Private Limited, a step-down subsidiary & an affiliate of HPL, is currently in the business of manufacturing Low Molecular Poly-Ethylene Wax (LMW) and is in the process of setting-up an upstream to downstream integration through the production of on-purpose Propylene and utilization of HPL's 100% Benzene to manufacture "Phenol" and "Acetone".

HPL Go Private Limited, a 100% subsidiary of HPL, is involved in manufacturing Toluene, mix-Xylene, and C9 by tolling arrangements from HPL's Pygas.

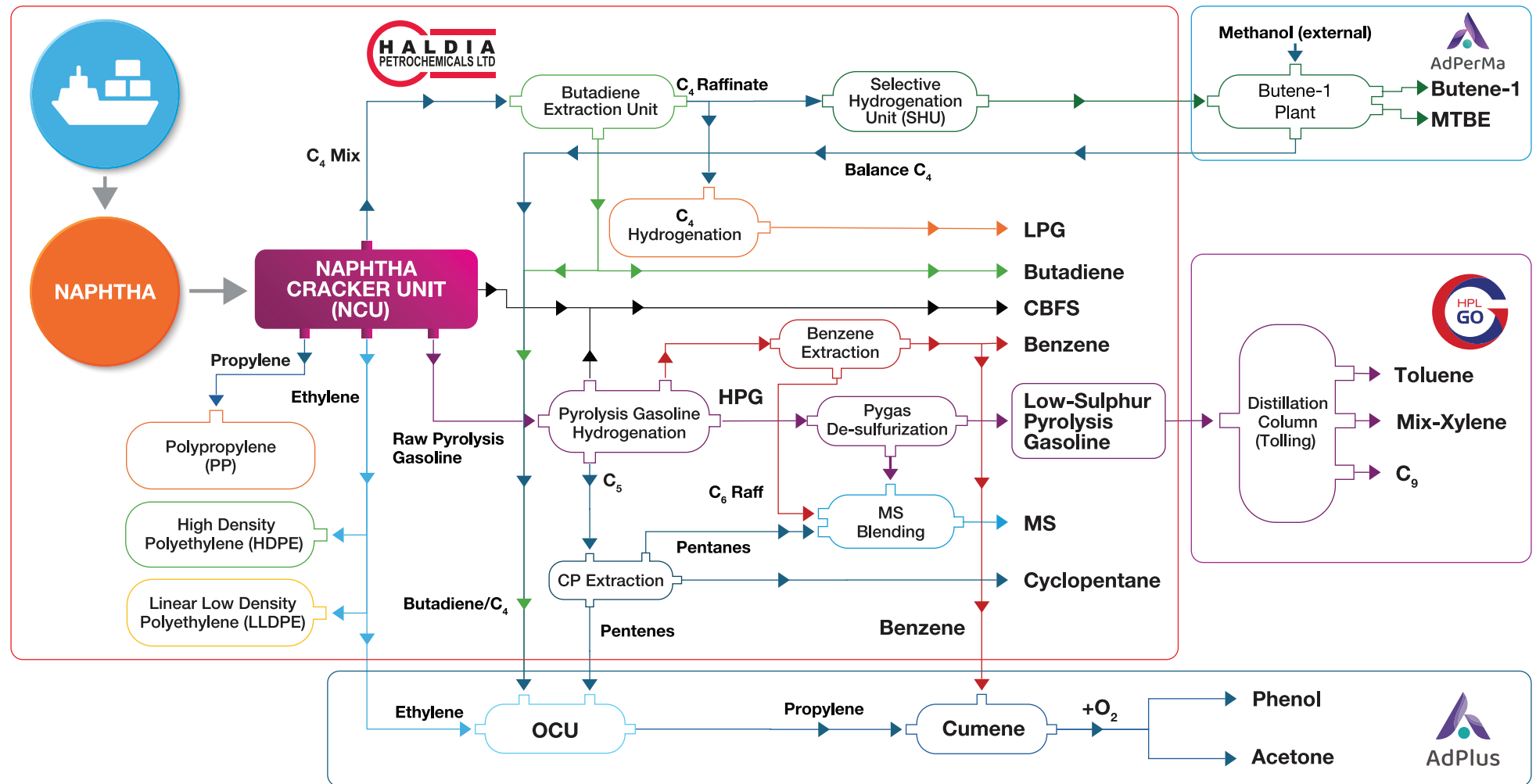
This integrated constellation of enterprises under The Chatterjee Group creates powerful synergies that drive technological advancement, sustainable growth, and market leadership throughout the chemical value chain. By combining manufacturing excellence with application-specific innovation, TCG's chemical portfolio stands at the forefront of addressing complex industrial challenges while creating enduring value for customers and stakeholders across the globe.



THE CHATTERJEE GROUP (TCG)



Integrated Petrochemical Complex





Best-in-class technology across products/processes

Plant	Capacity (KTA)	Technology Partner
Naphtha Cracker	700	Lummus, USA
High Density Polyethylene	334	Mitsui, Japan
Linear Low Density Polyethylene	386	Lyondell Basell, Netherlands
Polypropylene	341	
Butadiene	101	BASF, Germany
Benzene	132	Lurgi, Germany
Low Sulphur Pyrolysis Gasoline	130	Axens, France
Cyclopentane	6	
Butene-1 (AdPerMa)	30	
MTBE (AdPerMa)	98	
Motor Spirit/Gasoline (BS VI)	250	
C4 Raffinate/LPG	113	
Carbon Black Feed Stock (CBFS)	89	Lummus/Axens
Phenol (AdPlus)	345	Lummus, USA
Acetone (AdPlus)	215	Lummus, USA

Benzene



Properties	Test Method	Unit	Value
Appearance	Visual	—	Clear liquid, free of sediment or haze
Purity	ASTM-D-4492	Wt%	>99.9
Colour	ASTM-D-1209	APHA	20 max
Solidification point	ASTM-D-852	°C	5.40 min
Distillation range at 760mm Hg and including 80.1°C	ASTM-D-850	°C	1.0 max
Density @20°C	ASTM-D-4052	gm/ml	0.878-0.882
Moisture	ASTM-D-1744	wt. ppm	300 max
Total non-aromatics	ASTM-D-4492	wt. ppm	300 max
Toluene	ASTM-D-4492	wt. ppm	100 max
Acid wash colour	ASTM-D-848	—	1 max
Thiophene	ASTM-D-4735	wt. ppm	1 max
Total Sulphur	ASTM-D-3961	wt. ppm	1 max
Bromine Index	ASTM-D-5776	mg/100g	10 max
Acidity	ASTM-D-847	mg NaOH/100g	No free acid

Py-Gas (Low Sulphur)



Properties	Test Method	Unit	Value
Density(@15°C)	ASTM-D-4052	gm/ml	0.89 max
Distillation (IBP)*	ASTM-D-86	°C	35 min
Distillation (FBP)*	ASTM-D-86	°C	215 max
Potential gum	ASTM-D-873	mg/100ml	5 max
Benzene content	ASTM-D-6730	Wt%	1.0 max
RVP**@37.8°C	ASTM-D-323	Kg/cm ²	0.7 max
RON#	ASTM-D-2699		98-100
Sulphur	ASTM-D-5453	Wt ppm	<10

#Note: Typical operating range of Pygas RON (Research Octane Number) is 100-102.7

*IBP – Initial Boiling Point / FBP – Final Boiling Point

**RVP – Reid Vapor Pressure

Butadiene



Properties	Test Method	Unit	Value
1:3 Butadiene (Purity)	ASTM-D-2593	Wt. %	>99.5
Total acetylenes(MA+VA+EA)*	ASTM-D-2593	Wt. ppm	40 max
Carbonyl as acetaldehyde	ASTM-D-4423	Wt. ppm	20 max
Peroxide as H2O2	ASTM-D-5799	Wt. ppm	2 max
Solvent NMP #	GC***	Wt. ppm	10 max
1:2 Butadiene	ASTM-D-2593	Wt. ppm	20 max
Other C4s	ASTM-D-2593	Wt. %	0.5 max
C5 hydrocarbons	ASTM-D-2593	Wt. ppm	10 max
Butadiene Dimer	ASTM-D-2426	Wt. ppm	250 max (Ex Haldia Plant)
TBC** as loaded	ASTM-D-1157	Wt. ppm	(100-150) at the time of loading
Sulphur	ASTM-D-3246	Wt. ppm	10 max
Propadiene	ASTM-D-2593	Wt. ppm	10 max

*MA- Methyl Acetylene, VA- Vinyl Acetylene, EA- Ethyl Acetylene

#NMP – N-Methylpyrrolidone ***GC – Gas Chromatography

** TBC – Tertiary Butyl Catechol

Cyclopentane



Properties	Test Method	Unit	Value
Purity	GC*	Wt %	97 min
Colour	Visual	-	Water white
Density(@15°C)	ASTM-D-4052	gm/ml	0.740-0.755
Distillation Range	ASTM-D-1078	°C	46-50
Benzene	GC	Wt. ppm	2 max
Total Aromatics	GC	Wt. ppm	2 max
n-Hexane	GC	Wt. ppm	10 max
i-Hexane	GC	Wt%	2 max

*GC- Gas Chromatography



MTBE



Components	Test Method	Unit	Value
MTBE	ASTM-D-5441	wt % min	98
Total C4	ASTM-D-5441	wt% max	0.5
Methanol	ASTM-D-5441	wt% max	0.5
Di-isobutylene	ASTM-D-5441	wt% max	0.6
TBA	ASTM-D-5441	wt% max	0.6
Water	ASTM-D-1364	wt ppm max	to report
MSBE	ASTM-D-5441	wt%	to report
C5 content	ASTM-D-5441	wt%	to report
Carbonyls	ASTM-E411-92	wt ppm	to report
Sulphur	ASTM-D-5453	wt ppm	to report
Heavies	ASTM-D-5441	wt%	to report

BUTENE-1



Components	Test Method	Unit	Value
Butene 1 - Purity	ASTM-D-6159	Vol%	99.5
Other Butenes content	ASTM-D-6159	Vol% max	0.3
Butanes (nC4+iC4) content	ASTM-D-6159	Vol% max	0.4
Propadiene content	ASTM-D-6159	Vol ppm max	5
Butadiene content	ASTM-D-6159	Vol ppm max	50
Total Acetylene	ASTM-D-6159	Vol ppm max	5
Oxygen	ASTM-D-2504/ Teledyne	Vol ppm max	5
Carbon-di-Oxide	ASTM-D-2504	Vol ppm max	5
Carbon Monoxide	ASTM-D-2504	Vol ppm max	1
COS	PFPD	Vol ppm max	0.05
Total Sulphur	ASTM-D-6667	Wt ppm max	1
Alcohols (CH3OH)	ASTM-D-7423	Vol ppm max	5
Moisture	Shaw meter	Wt ppm max	10
Chloride	ASTM-D-4929	Wt ppm max	1

POLYFAST

POLYFAST
AN ADPLUS PRODUCT
LMW PE - PE WAX

Properties	Method	Specification
Appearance	AdPlus	White granular Particle
MFI@125° C, 325g	ASTM D1238	1000-2600
Apparent Viscosity, @140°C, cPS	ASTM D1986	10-200
Density, g/cm ³	ASTM D1505	0.94
Mettler Drop Point, °C	ASTM D3954	116-118
Penetration Hard- ness, dmm	ASTM 1321	<2
Flash Point °C	ASTM D93	>200
Average Particle Size, µ	AdPlus	~300 (<20 is also avail- able)

Acetone


AdPlus

Property	Specification	Unit	Test Method
Purity	99.95	Wt% min (dry basis)	ME 31002
Colour Pt-Co scale	5	Max	ASTM-D-1209
Distillation range @760 mm Hg	0.5	°C	ASTM-D-1078
Benzene	2	wt ppm max	ME 31002
Methanol	250	wt ppm max	GC
Acetaldehyde	20	wt ppm max	ME 31002
Total GC Impurity	100	wt ppm max	ME 31002
Acidity	20	wt ppm max	ASTM-D-1613
Non-volatiles	5	wt ppm max	ASTM-D-1353
Water	0.25	Wt.% max	ASTM-D-1364
Permanganate Time	4	Hrs min	ASTM-D-1363

Phenol


AdPlus

Property	Specification	Unit	Test Method
Purity	99.99	wt% dry basis	ASTM D-6142
Colour, APHA	5	max	ASTM D-6186
Total Carbonyls	15	wt ppm max.	ASTM E-411
2-Methyl Benzofuran	5	wt ppm max.	ASTM D-6142
Total Cresol	25	wt ppm max.	ASTM D-6142
Total GC Impurities excluding cresols	50	wt ppm max.	ASTM D-6142
Mesityl Oxide	5	wt ppm max.	ASTM D-6142
Water Content	200	wt ppm max.	ASTM D-1631
Freezing Point	40.85	C min.	ASTM D-1493
Iron	0.1	wt ppm max.	ASTM E-394
Evaporites	0.01	wt% max	ASTM D-1353





HALDIA PETROCHEMICALS LIMITED

Corporate Office

Tower 1, Bengal Eco Intelligent Park (Techna)
Block EM, Plot No 3, Sector V, Salt Lake, Kolkata - 700091
Tel: +91-33-71122334/71122445



Plant

PO Box No. - 12, P.O. Durgachak, Dist. Purba Mednipur, Pin - 721 602
Tel: 91-3224-274 007/877/876/400/882/384 | Fax: 91-3224-274 420

Regional Offices in India

North

UGF - 22 to 28, Ambadeep Building,
14 Kasturba Gandhi Marg,
New Delhi - 110001
Tel: +91-11-4608-4600

East

Tower - 1, Bengal Eco Intelligent Park (Techna)
Block - EM, Plot No. 3, Sector - V, Salt Lake
Kolkata - 700 091
Tel: +91-33-7112 2334/7112 2445

South

2A, Royal Court, 41 Venkata Narayana
Road, T Nagar, Chennai - 600017
Tel: +91-44-4951 8527

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

HPL Global Pte Ltd

1 Phillip Street, #05-03 Royal One Phillip, Singapore 048692
Tel: +65 6226 0376/6226 0379 | Fax: +65 6226 0396

www.haldiapetrochemicals.com