



Initiating Coverage

11th March 2025

# PAUSHAK

Your Strategic Source For Phosgene Derivatives

Paushak Ltd



SNM VALUE EDUCATOR RESEARCH  
SERVICES LLP:  
Emerging Titans

RA No: INH000019789



# Paushak Ltd | BUY

A business with high entry barriers

We initiate coverage on Paushak Ltd, India's largest manufacturer of phosgene, with a BUY. The stock has seen a major correction in the last 3 years and is currently trading at attractive valuations.

**PAUSHAK**  
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## INVESTMENT RATIONALE

**1) Margin expansion:** They are sitting on operating leverage which could lead to the improvement in margins and profitability going ahead.

**2) Entry into CSM:** Planning to enter the CSM business for pharmaceuticals and agrochemicals. The recent expansion is in line with this plan. They will leverage their expertise in phosgenation chemistry and explore other chemistry platforms as well.

**3) High entry barriers:** The company operates in a highly regulated environment where nobody can easily enter.

**4) China+1:** Global MNCs want to reduce their sourcing dependency on China and are therefore coming to India. This increase in demand will benefit players like the company going ahead.

Recommendation	BUY
Allocation	3%
CMP (at initiation)	₹4168
Market Cap (₹ Cr)	1279
52 Week High/Low	₹6,385/ ₹4,130
BSE code	532742

Shareholding pattern	
Promoter	66.97%
FII+DII	0.39%
Others	32.64.%

Financial Summary			
(₹ Cr)	FY22	FY23	FY24
Revenues	150	212	206
EBITDA (%)	36%	35%	31%
PAT	38	54	54
ROCE (%)	17%	21%	17%



## COMPANY OVERVIEW

The company was incorporated in 1972. They are a part of the Alembic group which is one of the oldest pharmaceutical companies in India. They operate from their plant at Halol in Gujarat.

## HISTORY OF PHOSGENE

The gas was first synthesized by a Cornish chemist John Davy in 1812 by exposing a mixture of carbon monoxide and chlorine to sunlight. Let us now understand the accidents caused by phosgene or its derivatives in the past:

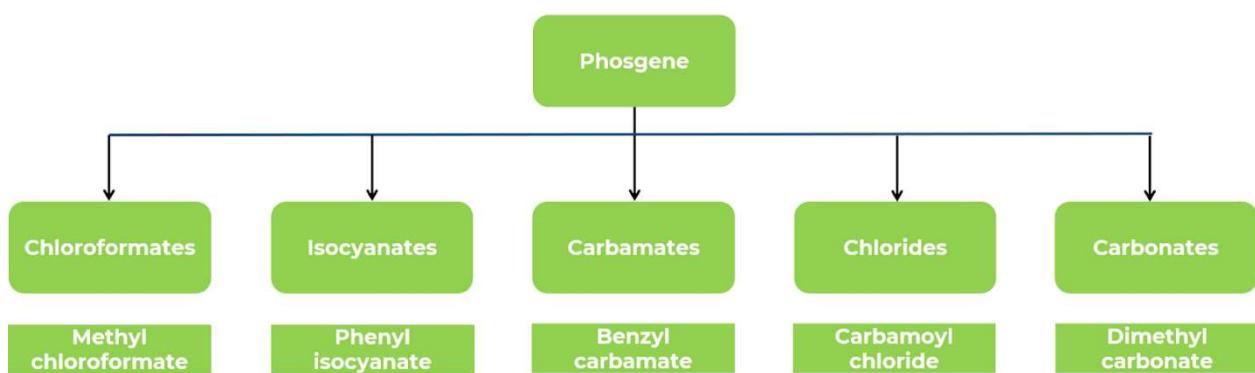
**1) WWI:** The gas was used in World War I where it resulted in 85,000 deaths.

**2) Bhopal gas tragedy:** It happened in December 1984 at the UCIL plant at Bhopal. The disaster was caused by the release of approximately 45 tons of MIC gas, which leaked from a storage tank at the plant. Investigations revealed that substandard operating and safety procedures, as well as an understaffed facility, were to blame for the leak. In 1989, UCC paid \$470 million as a fine to settle the litigation stemming from the disaster.

**3) Leaks at DuPont and BASF:** Due to phosgene leaks at a DuPont plant at West Virginia in 2010 and a BASF plant in 2016, The exposure led to the death of a few workers.

## BUSINESS OVERVIEW

The company is into the manufacturing and sale of phosgene and phosgene based derivatives. The major product groups for the company are as shown:





They find end applications in pharmaceuticals, agrochemicals, dyes and pigments. These products act as an intermediate for the end product of their clients.

Phosgene is one of the key reagents used in making Taxol which is an anti-cancer drug.

The company supplies methyl chloroformate to Chemcon Specialty Chemicals which uses it to make their intermediate CMIC. It is used to make Tenofovir which is a key anti-AIDS and anti-hepatitis B drug.

**Suresh Kumar:** Okay fair enough Sir. Sir then second is the methyl chloroformate which is the raw material for CMIC which we started procuring it from Paushak that has it been stabilized and we are regularly getting the supplies from there.

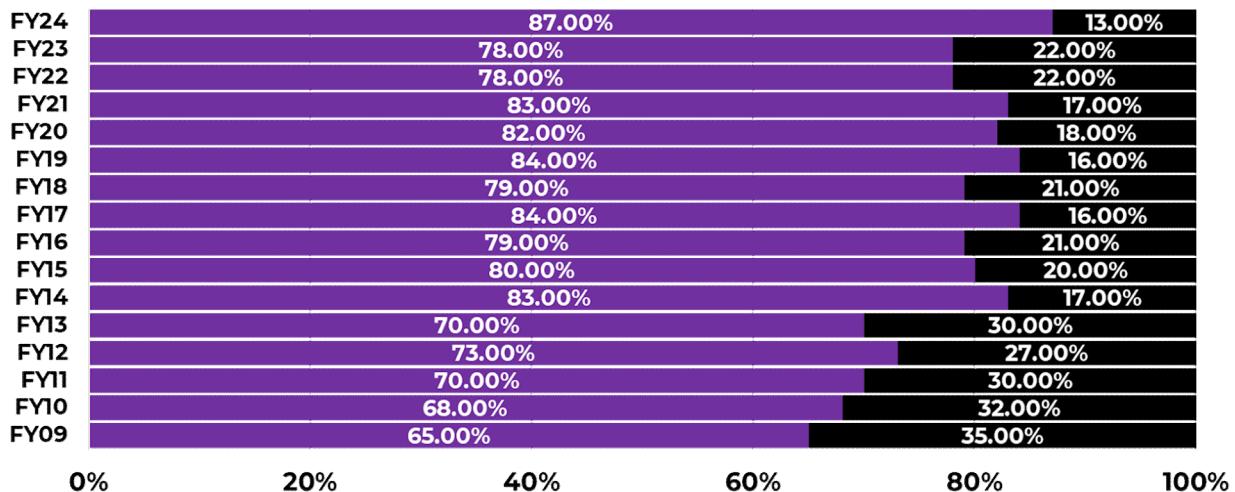
**Kamal Aggarwal:** Yes we are getting regular supplies from them and now most of this raw material we are procuring domestic only. The imports have been reduced drastically.

Methyl isocyanate(MIC) is a downstream derivative of phosgene. It is used to make carbamate pesticides such as carbaryl, carbofuran, methomyl and aldicarb. MIC was responsible for the disastrous Bhopal Gas Tragedy in December 1984.

The split between domestic and exports is as shown:

#### Revenue split by domestic and exports

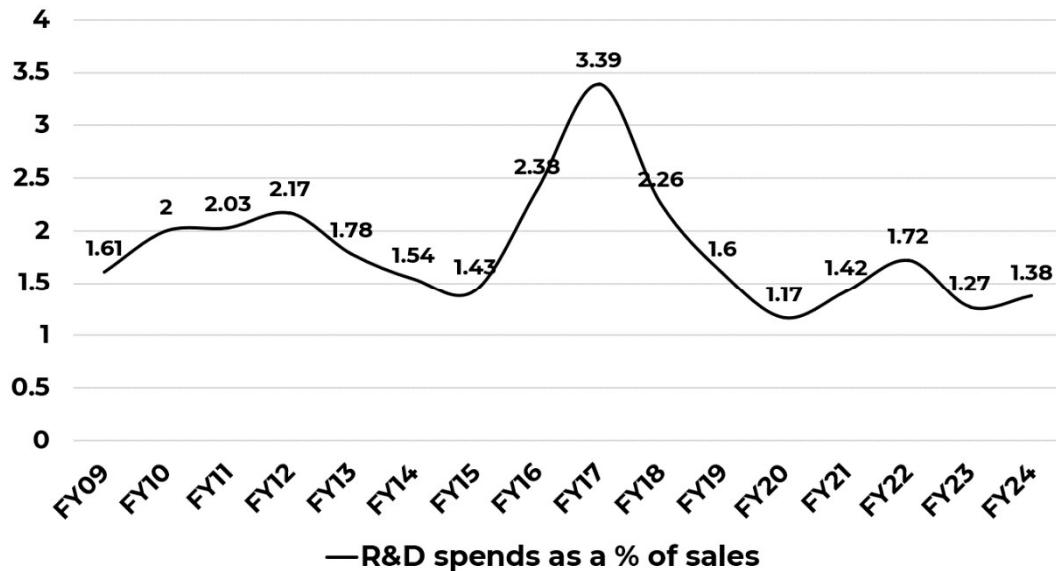
■ Domestic ■ Exports



Phosgene as a chemical is very hazardous and difficult to handle. Phosgene leaks can be quite lethal and have resulted in quite a few deaths in the past. Therefore, there are huge transport restrictions regarding phosgene hence, Paushak sells phosgene mostly in the domestic market with negligible exports. There are no such restrictions for downstream derivatives.



The historical R&D spends of the company are as shown:



The company has spent mostly above 1% in R&D which is quite unusual for an Indian company. The idea of spending so much on R&D was:

- 1) Development of continuous processes instead of batch processes
- 2) Developing a profitable product mix
- 3) Cost reduction
- 4) Process automation and upgradation of the plant to reduce the probability of gas leaks

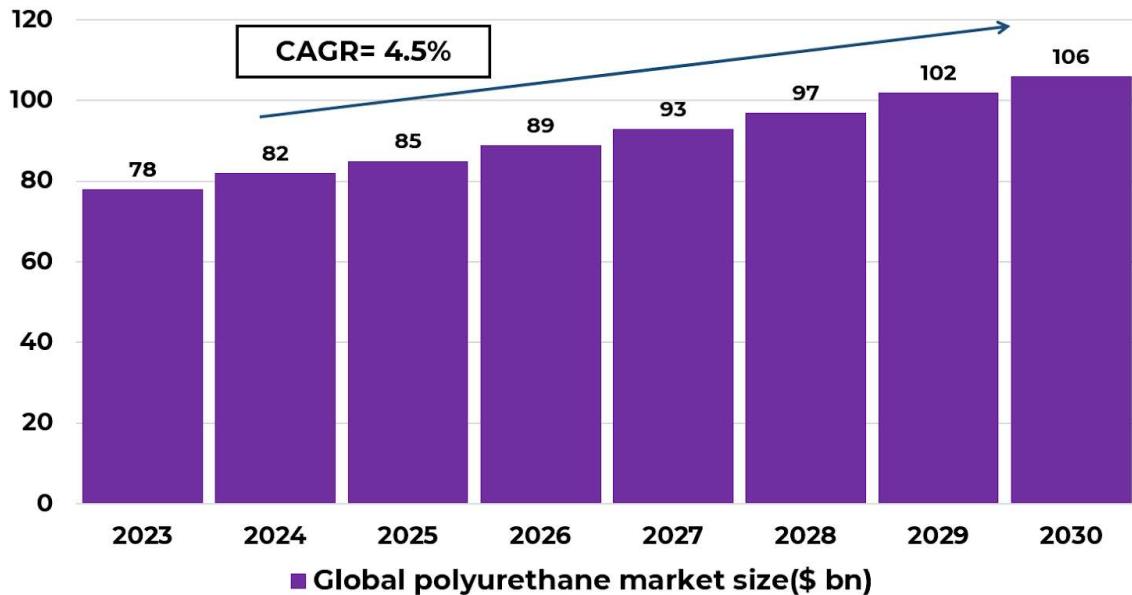
## INDUSTRY INSIGHTS

The major producers of phosgene in the world are the USA, Japan, Germany, South Korea and China. Some of the global players are Covestro, VanDeMark, WanHua, Dow Chemicals, BASF and others. The Indian players are Paushak Ltd, Atul Ltd, GNFC, UPL and others. The details of phosgene capacities are as shown:

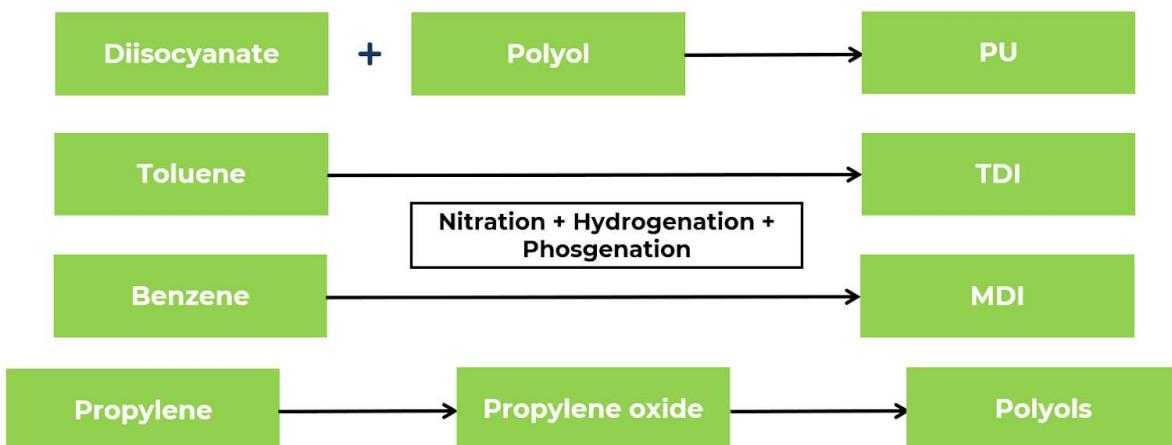
NAME OF THE COMPANY	HOME COUNTRY	CAPACITY(MTPA)
Paushak Ltd	India	14,400
Atul Ltd	India	10,000
Lianhe Technologies	China	20,000

Lianhe Technologies is a CRAMS based player in China. Except Paushak, the other Indian players use phosgene only for captive consumption. There are huge capacities in China. As per an industry report, around 40% of the phosgene production is done in China.

The global polyurethane market size is as shown:



Polyurethane finds end uses in industries such as automobile, construction, footwear, consumer and others. The reaction sequence for forming PU is as shown:



Generally polyurethanes are formed by a combination of diisocyanates and Polyols. The commonly used diisocyanates are Methylene diphenyl diisocyanate(MDI) and Toluene diisocyanate(TDI).

TDI is used in making flexible polyurethane foams and MDI is used in making rigid polyurethane foams. These foams have diverse applications due to their different physical properties.



The players in PU are as shown:

NAME OF THE COMPANY	HOME COUNTRY	BACKWARD INTEGRATION
BASF	Germany	Yes
Covestro	Germany	Yes
DuPont	USA	Yes
Huntsman Corporation	USA	Yes
Wanhua Chemical Co Ltd	China	Yes- They make MDI
Sheela Foam	India	No
Mayur Uniquoters	India	No

As seen in the table, except for Mayur Uniquoters and Sheela Foam, the other players are backward integrated.

Out of the total phosgene production in the world, around 55% is used for making MDI or polymeric MDI and 27% is used for making TDI. Therefore, around 80% of the phosgene production goes towards polyurethane. In India, there are no players working on MDI while for TDI, GNFC has a capacity of 64,000 MTPA.

Though Paushak is the largest producer of phosgene in India, they don't make either TDI or MDI (As per their EC). They are mostly focused on pharmaceuticals, agrochemicals, performance chemicals, dyes and pigments with not much focus on the polyurethane industry.

## ENTRY BARRIERS

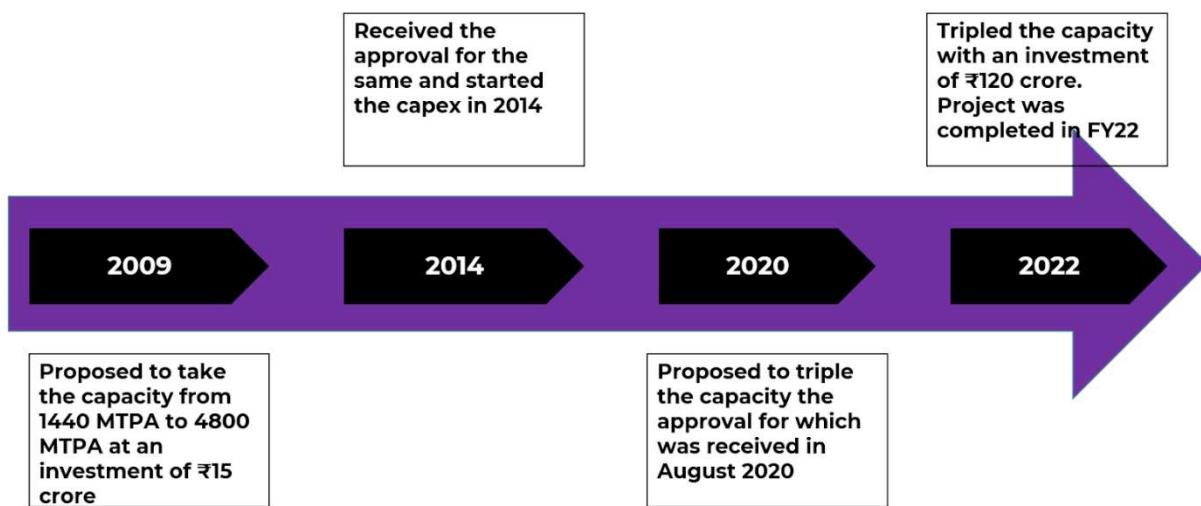
**1) Government regulation:** It takes around 5-7 years to get a license from the government to manufacture phosgene. A similar timeline is required if you have to expand your capacity as an existing player.

**2) Hazardous chemical:** Phosgene is a hazardous chemical which is very difficult to handle. In this report, we have covered some of the accidents that have happened in the past.



## CAPACITY EXPANSION

The historical capacity expansion done by the company is as shown:



Even though the company is an established player, they still had to wait for around 5 years to get approval for their capacity expansion projects. They recently tripled their phosgene capacity which was at 4800 MTPA. The details are as shown:

₹120 crore invested over FY20-FY22

HEADER	CURRENT CAPACITY(MTPA)	CAPACITY POST EXPANSION(MTPA)
Phosgene	4,800	14,400
Downstream derivatives	5,976	15,480

They also added a downstream derivatives plant which is a highly automated MPP built as per the global standards. This is in line with their plan to enter the CSM business. They expect a payback period of 5 years.

Some of the downstream derivatives will be also used in making APIs:

- 1) Nitrophenyl Chloroformate will be used to make Ritonavir which is an anti-HIV drug.
- 2) Phenyl ethyl isocyanate and Cyclohexyl isocyanate will be used to make Glimepiride which is used to treat type 2 diabetes.

The company is planning to do a capex of ₹50-60 crore on debottlenecking and corporate affairs.

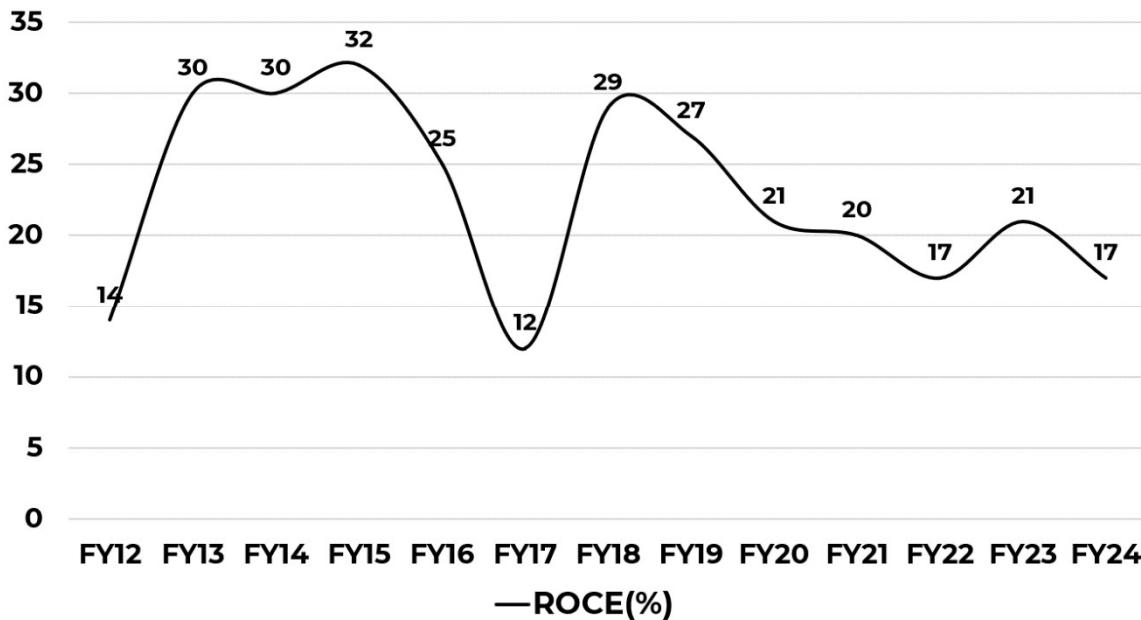
**FINANCIALS(All figures in ₹ crore, unless mentioned otherwise)****Profit & Loss Statement**

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Sales	69	78	72	105	140	138	141	150	212	206
Sales Growth %	27.58%	12.92%	-7.14%	44.82%	33.18%	-1.15%	2.24%	6.45%	41.47%	-2.87%
Expenses	52	61	60	75	99	95	91	96	137	142
Operating Profit	17	17	12	29	40	43	50	54	75	65
OPM %	25%	22%	17%	28%	29%	31%	36%	36%	35%	31%
Other Income	3	3	5	3	13	7	6	5	11	20
Interest	0	0	0	0	0	0	0	0	0	0
Depreciation	2	3	3	3	4	4	5	9	13	14
Profit before tax	18	17	14	29	49	45	52	50	72	71
Tax %	28%	25%	22%	26%	20%	23%	28%	25%	25%	23%
Net Profit +	13	12	11	21	39	35	37	38	54	54
EPS in Rs	40.50	38.73	34.11	66.95	126.41	113.27	121.02	122.03	175.24	176.34

**Balance Sheet**

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Equity Capital	3	3	3	3	3	3	3	3	3	3
Reserves	54	65	80	110	174	224	269	302	351	405
Borrowings	0	1	0	1	0	0	0	0	0	0
Other Liabilities	11	13	11	31	36	43	57	61	61	73
Total Liabilities	69	82	94	144	214	270	329	367	415	481
Fixed Assets	18	20	35	37	38	41	51	147	149	152
CWIP	1	12	0	1	6	16	68	8	7	29
Investments	19	18	33	53	116	163	154	151	182	223
Other Assets	30	31	26	54	54	50	56	61	78	77
Total Assets	69	82	94	144	214	270	329	367	415	481

The ROCE of the company is as shown:



The high ROCE and margins of the company are a reflection of the competitive advantage of the company as it operates in a regulated industry coupled with high entry barriers.

## FUTURE OUTLOOK

- 1) The company is planning an import substitution for some downstream derivatives which are otherwise imported from China.
- 2) The company is planning to enter the CSM business for pharmaceuticals and agrochemicals. Their plant has been visited by some global innovators for audit and compliance. They may get a contract from these innovators if everything goes well.
- 3) They are exploring other chemistry platforms as the innovators usually expect their CSM partner to have capabilities in handling multiple chemistry platforms.

## RISKS

- 1) Phosgene leaks:** Phosgene leaks can be lethal as it is a hazardous chemical and difficult to handle. Some past instances have been covered in this report.
- 2) Competition from China:** China is a major producer of phosgene. As China is slowly coming back into action, there will be a rise in the competitive intensity from China.



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