

India

Underweight (no change)

Highlighted Companies

SRF Limited

REDUCE, TP Rs1540, Rs2674 close

The much talked about recovery is nowhere to be seen, either in refrigerants or chemicals. In 3QFY25F, the EPS is likely to be lower than consensus estimates. Despite repeated disappointments, the stock price doesn't decline at all, but this phenomenon cannot continue in perpetuity. We retain our REDUCE rating on SRF with a target price of Rs1,540.

Gujarat Fluorochemicals Ltd REDUCE, TP Rs1946, Rs3947 close

Please note that the huge Chinese LiPF₆ capacity is leading to a 92% decline in LiPF₆ prices, resulting in negative EBITDA for LiPF₆ manufacturing. That said, the near-term earnings will be impacted by falling HFC demand and a deceleration in PFAS demand. We retain our REDUCE rating on Gujarat Fluorochemicals with a target price of Rs1,946.

Summary Valuation Metrics

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P/E (x)	Mar25-F	Mar26-F	Mar27-F		
SRF Limited	57.47	51.1	45.85		
Gujarat Fluorochemicals Ltd	81.66	61.2	52.31		
Navin Fluorine International Ltd	55.39	46.87			
P/BV (x)	Mar25-F	Mar26-F	Mar27-F		
SRF Limited	6.22	5.59	5.02		
Gujarat Fluorochemicals Ltd	6.7	6.04	5.42		
Navin Fluorine International Ltd	7	6.09			
Dividend Yield	Mar25-F	Mar26-F	Mar27-F		
SRF Limited	0.15%	0.15%	0.15%		
Gujarat Fluorochemicals Ltd	0%	0%	0%		
Navin Fluorine International Ltd	0.23%	0%			

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Chemicals - Overall

Refrigerant gases - Irrationality galore

- Based on the Linked-In post of a US-based company, investors got an irrational belief that Indian export price of refrigerants R32 & R125 will rise exponentially.
- Please note that Indian and Chinese capacity of R-32 alone is double the global demand. Also, US imports are falling, indicating lower demand
- Investors will do well selling on this irrational rally. EPS estimates of SRF and Gujarat Fluorochemicals (GFL) are extremely optimistic, to say the least.

Irrationality galore among Indian investors regarding refrigerant gas

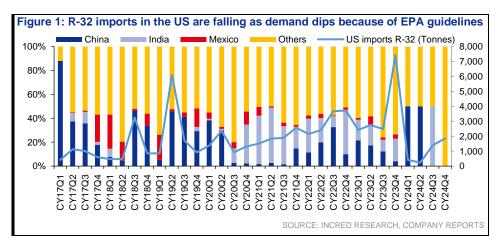
The market became very excited about the prospects of a rise in refrigerant gas prices, consequently leading to a significant rally in SRF, Navin Fluorine International, and GFL today. However, we haven't observed any price hike across the board in any refrigerant gas over the last two months. India's domestic refrigerant prices are falling, and US imports are falling (data available until Nov 2024) indicating a subdued demand. It seems highly unlikely that anything drastic occurred in Dec 2024 to cause sudden global tightness in refrigerant gases. Please note that as the US is phasing out highly pollutant gases like R-32, R-410A, and R-125, any supply chain tightness-driven rally is likely to be short-lived. Apart from a Linked-In post by a retailer in Florida, we haven't found any evidence of supply chain tightness in the US. Please click the link to the article that was posted on Linked-In (Link). Walmart has not increased the prices of R-410A, R-32, R-22, or any other refrigerant gas, for that matter. As of now, one can import R-125 or R-32 from China simply by sending a message on WhatsApp.

Global demand for R-32 is ~310kt and India+ China capacity is ~625kt

US imports of R-32 have decreased in CY24 and import prices are falling as global demand for R-32 is \sim 310kt and its capacity in India and Chin alone is at least 625kt. The amount of R-32 refrigerant used in each air-conditioning unit can vary depending on the type and size of the unit. On an average, typical air-conditioners use approximately:1) 0.5-1.0kg of R-32 for smaller residential split units (up to 1.5t), 2) 1.5-2.0kg of R-32 for larger residential or commercial split units (2-5t), and 3) 2.5-3.0kg of R-32 for larger commercial and industrial units. For simplification, we have assumed that on an average \sim 2kg of R-32 is used per unit. Now, R-32 demand will come from two sources: 1) refilling of old ACs, and 2) new AC sales. Based on the above, the calculation is as follows: 1) refilling in old ACs = 280m X 10% X 2= 56,000t is the refilling demand, and 2) new R-32 demand in CY25= 2,55,000t. Therefore, overall demand for R-32 gas = 310,000t.

Sell SRF, GFL – the rally is speculative

There is no evidence of a supply slowdown in the US as imports have declined significantly (till Nov 2024) vis-a-vis CY23. Unless there is another Covid-19 pandemic type supply chain crisis, refrigerant gas prices cannot rise much. REDUCE SRF and GFL. To say the least, we find it extremely irrational that stock prices can rise by 10-13% on the basis of a Linked-In post.





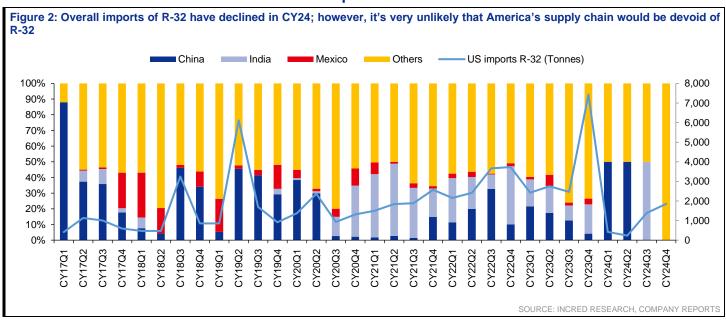
Refrigerant gases - Irrationality galore

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We don't find any evidence of supply chain tightness

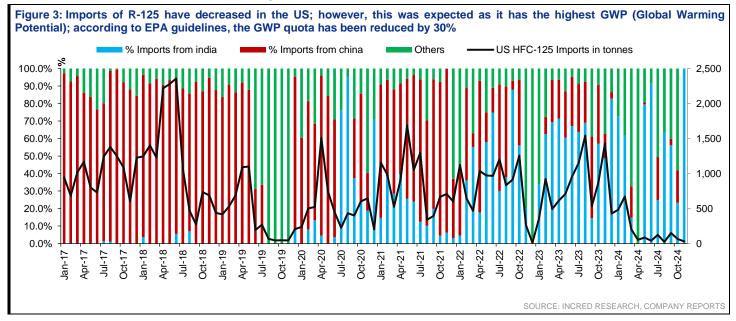
Apart from a Linked-In post by a retailer in Florida, we haven't found any evidence of supply chain tightness in the US. Please click the link to the article that was posted on Linked-In (https://www.linkedin.com/company/igasusa/).US imports are steady. Walmart has not increased the prices of either R-410A, R-32, R-22 or for that matter any refrigerant gas as such.

American imports of R-32 have declined in CY24 ➤





R-125 imports have dwindled; however, in the light of Environmental Protection Agency or EPA guidelines, it was expected >



Remember, that as per EPA guidelines, GWP quota has declined by 30% ➤

The Environmental Protection Agency (EPA) of the US has been gradually reducing the consumption of hydrofluorocarbons (HFCs), potent greenhouse gases used primarily in refrigeration & air-conditioning, and other industrial applications. This effort is a part of the global initiative under the Kigali Amendment to the Montreal Protocol, which aims to phase down HFCs due to their high global warming potential (GWP).

In Oct 2021, the EPA introduced a rule to reduce HFC production and consumption in the US by 85% by 2036. This phasedown started with a 10% reduction in 2022, followed by more significant cuts over the years. The reductions are based on a quota system, where each company involved in HFC production or import is allocated a limited quota, pushing the industry towards adopting lower-GWP alternatives, such as hydrofluoroolefins (HFOs) and natural refrigerants (e.g., ammonia, CO2).

The EPA has been assigning consumption and production allowances annually to companies, setting limits on how much HFCs they can produce or import. This quota system ensures compliance with the overall phasedown targets, with stricter quotas coming into effect periodically to drive further reductions.

The most recent reductions in the HFC consumption quota, enforced by the EPA, aim to accelerate the shift to environmentally-friendly refrigerants, support innovation in alternatives, and help the US meet its climate goals. The phasedown is expected to significantly contribute to reducing the impact of HFCs on climate change by lowering overall greenhouse gas emissions.



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 4: The table below shows the EPA HFC consumption quota Figure 5: As is evident, the bulk of refrigerant exports by GFL and for CY24-28 in the US

Table 2: HFC Phasedown Schedule and Consumption & Production Allowance Caps

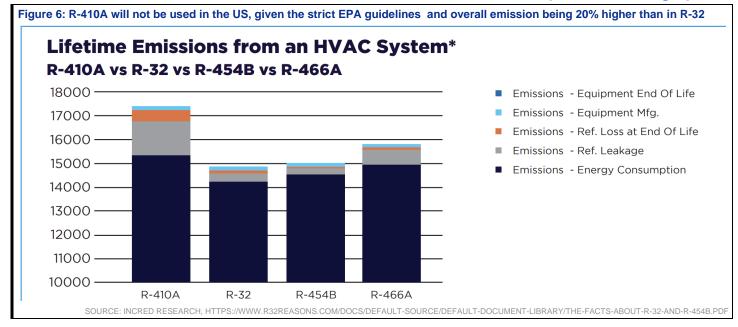
Year	Consumption & Production Allowance Caps as a Percentage of Baseline	Consumption and Production Allowance Caps in MMTEVe*	
Baseline	Consumption: 302.5 MMTEVe Production: 382.5 MMTEVe		
2020–2023	90 percent	Consumption: 273.5 Production: 344.3	
2024–2028	60 percent	Consumption: 181.5 Production: 229.5	
2029–2033	30 percent	Consumption: 90.8 Production: 114.8	
2034–2035	20 percent	Consumption: 60.5 Production: 76.5	
2036 & after	15 percent	Consumption: 45.4 Production: 57.4	

SRF (which generated substantial profits for them in FY23) have very high GWP; consequently, their exports are declining

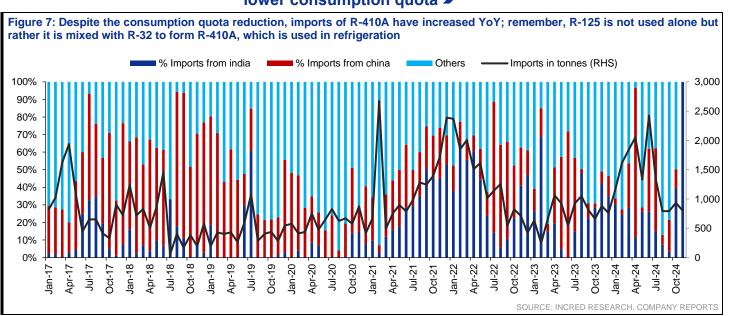
Table 1: 18 Individual HFCs Listed in the AIM Act				
Chemical Name	Common Name	Exchange Value*		
CHF2CHF2	HFC-134	1,100		
CH ₂ FCF ₃	HFC-134a	1,430		
CH ₂ FCHF ₂	HFC-143	353		
CHF ₂ CH ₂ CF ₃	HFC-245fa	1,030		
CF ₃ CH ₂ CF ₂ CH ₃	HFC-365mfc	794		
CF ₃ CHFCF ₃	HFC-227ea	3,220		
CH ₂ FCF ₂ CF ₃	HFC-236cb	1,340		
CHF2CHFCF3	HFC-236ea	1,370		
CF ₃ CH ₂ CF ₃	HFC-236fa	9,810		
CH ₂ FCF ₂ CHF ₂	HFC-245ca	693		
CF ₃ CHFCHFCF ₂ CF ₃	HFC-43-10mee	1,640		
CH ₂ F ₂	HFC-32	675		
CHF ₂ CF ₃	HFC-125	3,500		
CH ₃ CF ₃	HFC-143a	4,470		
CH₃F	HFC-41	92		
CH ₂ FCH ₂ F	HFC-152	53		
CH ₃ CHF ₂	HFC-152a	124		
OUE	LIEO OO	44.000		

SOURCE: INCRED RESEARCH, COMPANY REPORTS

The emission of CO2 is much better explained in this graph >

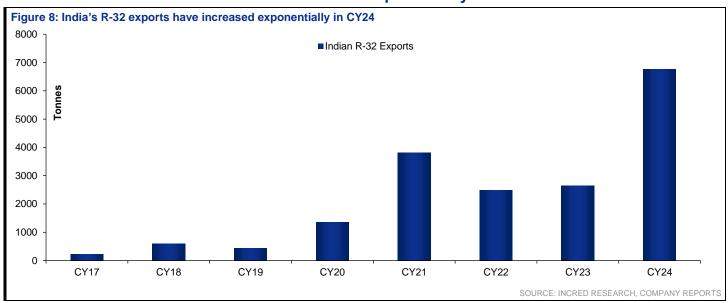


R-410A imports have also declined, but again, this is due to the lower consumption quota >

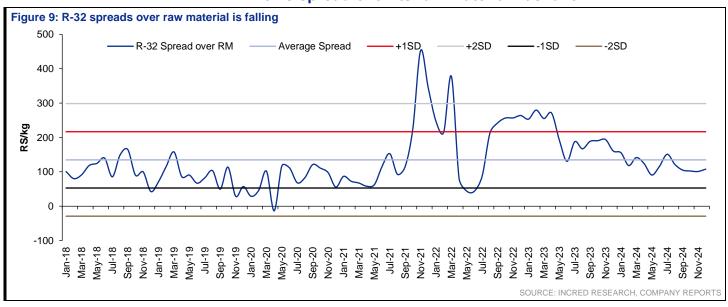




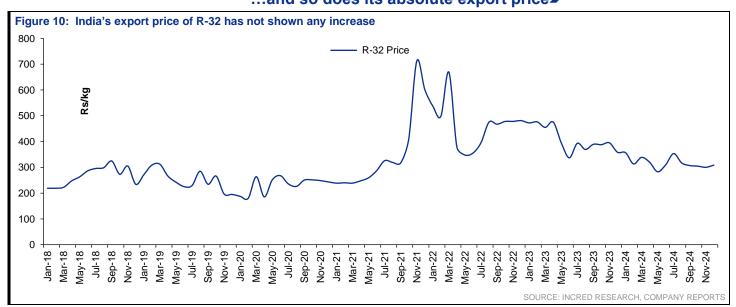
R-32 exports from India have also not decreased; rather, they have increased exponentially >



R-32's spread over its raw material has fallen...>



...and so does its absolute export price>





Estimating global demand and supply of R-32

There is no straightforward data for global demand of R-32. However, Daikin estimates that around 280m refrigeration units are in operation worldwide that use R-32 as the refrigerant. In 2023, global sales of ACs were 170m units, with China purchasing 90m units and Indian demand at 12m units. We have used the following framework for the calculation of R-32 demand:

- 1. Estimate overall new AC sales per year.
- 2. Assume 75% of new ACs sold will use R-32.
- 3. Based on replacement demand of 10% and incremental demand coming from 75% of the new ACs sold, we calculate the global demand for R-32.

Daikin estimated that at the end of 2023, the number of ACs that used R-32 as refrigerant was ~280m units ➤

Daikin estimated that at the end of 2023, approximately 280m air-conditioning (AC) used R-32 as the refrigerant. This highlights the growing adoption of R-32, a more environmentally-friendly refrigerant, compared to older ones like R-22 and R-410A, due to its lower global warming potential (GWP). The shift to R-32 reflects the industry's efforts to comply with global regulations aimed at reducing greenhouse gas emissions from HVAC systems.

We assume global sales of ACs will post a 4-5% CAGR over the next four-to-five years ➤

In 2023, 170m units of ACs were sold globally. Given the environmental concerns, almost 75% of the new ACs use R-32 as the base refrigerant. Assuming 3-4% growth in global AC sales, we are likely to see ~185m AC units being sold in in CY25F.

Hence, demand for R-32 in CY25F is likely to be around 310kt▶

The amount of R-32 refrigerant used in each air-conditioning unit can vary depending on the type and size of the unit. On an average, typical air-conditioners use approximately:

- 0.5-1.0kg of R-32 for smaller residential split units (up to 1.5t).
- 1.5-2.0kg of R-32 for larger residential or commercial split units (2-5t).
- 2.5-3.0kg of R-32 for larger commercial and industrial units.

The refrigerant charge depends on the design, cooling capacity, and efficiency of the air-conditioner. For example, a 1t unit may require around 0.7-1.0kg of R-32, while larger 5t units might need more. These figures are approximations, and the actual amount can vary across manufacturers and models.

For simplification, we have assumed that on an average ~2kg of R-32 is used per unit. Now, R-32 demand will come from two sources:

- Refilling of Old ACs.
- 2. New AC sales.

Based on the above, the calculation is as follows:

- 1. Refilling in old ACs = 280m X 10% X 2= 56,000t is the refilling demand.
- 2. New R-32 demand in CY25F= 2,55,000t.

Overall demand for R-32 = 3,10,000t.

However, China alone had 500kt of R-32 production capacity in CY21▶

As of 2021-end, China's R-32 refrigerant production capacity was approximately 500,000MT (metric tonne) per year. This capacity is distributed among several major manufacturers, including:

a. **Shandong Dongyue Chemical Co. Ltd.**: A leading producer of R-32 and other fluorinated refrigerants.



- b. **Zibo Feiyuan Chemical Co. Ltd.**: Established in 2004, this company produces R-32 and other refrigerant components, with an annual output of 20,000MT of R-32.
- c. **Qingdao Shingchem New Material Co. Ltd.**: Reports a production capacity of 7,000t per year for R-32.
- d. Henin Refrigerant Co. Ltd.: Claims a production capacity of 500,000MT for R-32.

Add to it is Indian capacity of more than 125kt ➤

- SRF, a leading Indian specialty chemicals manufacturer, has R-32 production capacity of approximately 29,000-30,000t per year. Additionally, SRF produces nearly 7,000t of R-125 refrigerant annually.
- b. Navin Fluorine International (NFIL) currently has an annual R-32 production capacity of approximately 4,500t. The company plans to double this capacity by Feb 2025F, aiming to meet the growing demand for R-32 refrigerant.
- c. Gujarat Fluorochemicals (GFL) has announced a capital expenditure of Rs1.25bn to expand its R-32 production capacity by 10,000t,
- d. Chemours India A subsidiary of The Chemours Company, it produces a range of refrigerants, including R-32, serving both domestic and international markets.
- e. Honeywell India Honeywell's Indian operations manufacture various refrigerants, with R-32 being a significant product in its portfolio.
- f. Arkema India Arkema's Indian facilities produce R-32 among other refrigerants, catering to the rising demand in the region.
- g. Zhejiang Juhua based in Vadodara, India A Chinese company with operations in India, it manufactures R-32 refrigerant, contributing to the local supply chain.
- h. Dongyue Group A Chinese enterprise, it has established production facilities in India for R-32, enhancing the domestic manufacturing capacity.

Hence, if there is a war somewhere there cannot be a shortage of R-32 ➤

Given the widespread global production capacity for R-32, particularly in key manufacturing hubs like India and China, there would likely be no major shortage of R-32 in the event of localized conflicts or disruption in certain regions. Many of the leading R-32 producers, such as SRF, Navin Fluorine International and Gujarat Fluorochemicals, have established production facilities with substantial output capacities to meet both domestic and international demand.

However, disruption to global supply chains due to geopolitical tensions or trade restrictions could still cause temporary fluctuations in availability, but these would be short-term and localized issues rather than a global shortage.



Chemicals | India Chemicals - Overall | January 10, 2025

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Chemicals | India

Chemicals - Overall | January 10, 2025

Recommendation Framework

Stock Ratings Definition:

Add The stock's total return is expected to exceed 10% over the next 12 months.

Hold The stock's total return is expected to be between 0% and positive 10% over the next 12 months.

Reduce The stock's total return is expected to fall below 0% or more over the next 12 months.

The total expected return of a stock is defined as the sum of the: (i) percentage difference between the target price and the current price and (ii) the forward net dividend yields of the stock. Stock price targets have an investment horizon of 12 months.

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Overweight An Overweight rating means stocks in the sector have, on a market cap-weighted basis, a positive absolute recommendation.

Neutral A Neutral rating means stocks in the sector have, on a market cap-weighted basis, a neutral absolute recommendation.

Underweight An Underweight rating means stocks in the sector have, on a market cap-weighted basis, a negative absolute recommendation.

Country Ratings Definition:

Overweight An Overweight rating means investors should be positioned with an above-market weight in this country relative to benchmark.

Neutral A Neutral rating means investors should be positioned with a neutral weight in this country relative to benchmark.

Underweight An Underweight rating means investors should be positioned with a below-market weight in this country relative to benchmark.