

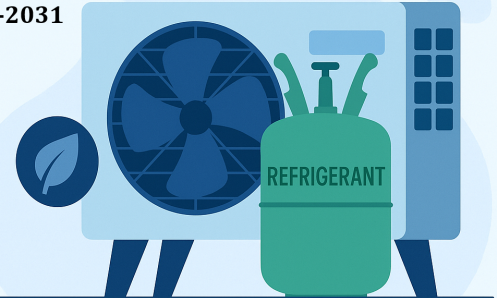
Global Refrigerant Market Surges Toward Sustainability, Innovation, and Clean Cooling Leadership | According to DataM

Global refrigerant market to hit US\$ 24.9B by 2032, driven by green tech, stricter regulations, and rising demand for sustainable, energy-efficient cooling.

AUSTIN, TX, UNITED STATES, July 21, 2025 /EINPresswire.com/ -- The global [refrigerant market](#), valued at US\$ 14.8 billion in 2024, is projected to reach US\$ 24.9 billion by 2032, expanding at a robust CAGR of 6.9% from 2025 to 2032. This dynamic growth is fueled by a wave of environmental regulations, rising global temperatures, and soaring demand for energy-efficient, climate-friendly cooling solutions.

Refrigerant Market

CAGR: 7.2% by 2025-2031
2024: 12.2 Billion
2031: 21.4 Billion



refrigerant market DataM

The refrigerant market is rapidly transitioning, shaped by influential policies such as the Kigali Amendment, the AIM Act in the United States, and the European Union's F-Gas Regulation. These frameworks are accelerating the shift from high-GWP synthetic refrigerants to sustainable, low-GWP and natural alternatives—prompting a surge of innovation, strategic investments, and supply chain adaptations across the industry.

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The refrigerant industry is rewriting its future—where compliance meets innovation, and green cooling is no longer optional but a strategic, sustainable imperative.”

DataM Intelligence

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Innovation and Strategic Investment Accelerate Market

Evolution

Key players are responding to this regulatory and market transformation with bold investments.

For instance, Chemplast Sanmar recently committed US\$ 40.8 million to a new facility for manufacturing R-32, an environmentally advanced refrigerant gaining traction for its lower climate impact and higher energy efficiency in HVAC systems. Despite industry profitability challenges from global competition, Chemplast's revenue rose 11% in FY25, underlining the growth potential of specialty refrigerants.

Innovation is also redefining market possibilities. Harvard spin-out Pascal secured US\$ 8 million to commercialize solid-state refrigerant technology that eliminates direct emissions and dramatically cuts energy use—compatible with existing HVAC infrastructure, this breakthrough could reshape the future of residential and commercial cooling.

Supply Security and Policy Response

The US Department of Defense has stockpiled US\$ 90 million in HFC refrigerants to guard against potential shortages from regulatory phase-downs—highlighting the strategic importance of refrigerant supply for critical applications. Meanwhile, refrigerant reclamation in the US continues to rise, with recovered HFC volumes up 40% in 2022 and another 20% in 2023, reinforcing a circular economy approach and supporting sustainability goals.

Emerging Markets: India's Pivotal Role in Clean Cooling

Emerging economies like India are driving exceptional growth. With annual air-conditioner adoption rising 10–15%, India's demand for cooling is set to grow eightfold over two decades. This rapid expansion is supported by the India Cooling Action Plan (ICAP) and ratification of the Kigali Amendment, with government targets aiming for a 25–30% reduction in refrigerant demand and aggressive efficiency improvements. India's air conditioner market has doubled in just four years, now installing 15 million units annually, signaling a booming market for next-generation refrigerants.

Research from iFOREST and Shakti Foundation shows that raising AC energy efficiency and switching to natural refrigerants could reduce India's cooling energy demand by 40%, avoiding up to 400 million tonnes of CO₂ emissions each year by 2030—an impact greater than installing 100 GW of solar power. Massive infrastructure development, policy incentives, and a US\$ 800 million government manufacturing boost are further accelerating the adoption of efficient, climate-resilient cooling solutions.

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Global Shift to Low-GWP and Natural Refrigerants

Tightening international regulations are accelerating the phase-down of high-GWP HFCs, especially across the EU and other major economies. The focus is now firmly on natural refrigerants like CO₂ (R-744), propane (R-290), and ammonia (R-717), which offer near-zero global warming and ozone depletion potential. Advances in technology have overcome historic barriers of safety and compatibility, enabling broad adoption in commercial, industrial, and

residential applications.

Leading industry bodies are updating certification standards for natural refrigerants, ensuring compliance and boosting confidence in these alternatives. As synthetic refrigerants become costlier and less available, low-GWP and natural solutions are emerging as both regulatory necessities and lucrative opportunities for manufacturers and end-users alike.

Global Refrigerant Market in Transition: Green Alternatives Surge as Legacy Products Decline

The global refrigerant industry is witnessing a pivotal transformation, driven by regulatory bans, climate commitments, and rapid adoption of sustainable technologies.

- Sharp Decline in Legacy Refrigerants:

The CFC segment, valued at USD 106.54 million in 2024, is set to plunge to USD 39.56 million by 2032 (CAGR -11.9%) due to international phase-outs under the Montreal Protocol. Similarly, the HCFC segment will drop from USD 1,075.30 million to USD 621.29 million (CAGR -6.8%), with countries like the US and India enforcing strict bans and phase-out schedules.

Both CFCs and HCFCs have been linked to significant ozone depletion and high global warming potential (GWP)—for instance, R-12 has a GWP of nearly 10,900. Their use has been tightly regulated since the 1980s, resulting in a dramatic shift toward alternative solutions.

- Surge in Green Alternatives:

In contrast, hydrocarbon refrigerants (such as R290 propane and R600a isobutane) are gaining strong traction, with the segment expected to soar from USD 1,789.02 million in 2024 to USD 4,863.18 million by 2032 (CAGR 13.6%). These natural refrigerants offer ultra-low GWP, high energy efficiency, and cost-effectiveness.

Hydrocarbon blends have delivered up to 38% improvements in energy efficiency over traditional systems, fueling adoption in domestic appliances, retail cooling, and small-format air conditioning across Asia and South America.

- New Generation Technologies Gaining Ground:

The market is also experiencing rapid uptake of hydrofluoroolefins (HFOs) like R-1234yf, now used in over 95% of new passenger vehicles for mobile air conditioning thanks to their ultra-low GWP and regulatory mandates in the US, EU, and Japan.

Meanwhile, natural refrigerants such as ammonia (R-717) and CO₂ (R-744) are being deployed in industrial refrigeration and cold storage, driven by their high efficiency and zero ozone depletion.

As regulatory frameworks like the Kigali Amendment and EU F-Gas Regulation drive the phase-out of harmful gases, the global refrigerant market is undergoing a fundamental realignment—putting climate-friendly alternatives and innovation at the center of future growth.

Asia-Pacific Refrigerant Market Fastest Growing; North America Sets Regulatory Benchmark
The global refrigerant market is undergoing a major transformation, led by surging demand for climate-friendly solutions in Asia-Pacific and bold regulatory action in North America.

Asia-Pacific: Fastest-Growing Market, Driven by Innovation

- The Asia-Pacific refrigerant market is projected to grow from US\$ 4.40 billion in 2024 to US\$ 8.45 billion by 2032 (CAGR 8.7%), making it the fastest-growing region globally.
- Growth is powered by strict national regulations in China, India, Japan, and South Korea, encouraging rapid phase-out of high-GWP refrigerants.
- The region is at the forefront of adopting low-GWP alternatives such as R-32, R-290 (propane), CO₂, and ammonia, with more than 40% of new Chinese AC units already using R-32 or propane.
- Major initiatives include large-scale commercial retrofits, the introduction of advanced smart cooling systems, and widespread investment in recovery and recycling infrastructure.
- New laws in India and Australia are driving mandatory use of next-generation refrigerants, while local manufacturers are launching innovative, energy-efficient products for homes and businesses.

North America: Largest Market, Shaping Industry Standards

- North America leads in market size, forecasted to grow from US\$ 4.98 billion in 2024 to US\$ 7.80 billion by 2032 (CAGR 5.9%).
- The US and Canada are setting industry standards through landmark policies like the AIM Act and Kigali Amendment, mandating an 85% reduction in HFCs by 2036.
- The EPA's new rules are accelerating the adoption of ultra-low GWP refrigerants such as R-454B, R-32, R-1234yf, and natural refrigerants in commercial and residential systems.
- Refrigerant reclamation is surging, with recovered and recycled HFC volumes up 20% in 2023, supporting circularity and sustainability.
- Industry leaders are investing heavily in digital controls, leak detection, and next-gen HVAC solutions, reinforcing North America's reputation for technological leadership and ESG commitment.

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Chemours and Honeywell Lead Global Refrigerants Market Amidst Fragmented Competition

The global refrigerants industry outlook is marked by intense competition and a highly diverse landscape. The Chemours Company stands as the market leader, leveraging its strong legacy and ongoing innovation in low-GWP refrigerant technologies. Honeywell follows closely, holding around 9% market share, driven by its focus on eco-friendly solutions and advanced product development.

Other notable players, such as Arkema Group, AGC Chemicals Americas (AGC Inc.), and

Shandong Dongyue Refrigerants Co., Ltd., are expanding their presence through broad product portfolios, high-performance materials, strategic regional growth, and cost-effective manufacturing.

Despite the influence of these leading companies, the market remains highly fragmented—with approximately 71% of the share held by smaller firms and regional producers. This decentralization underscores the significant role of local competition and the wide range of participants shaping the global refrigerants sector.

Conclusion

The global refrigerant industry transformation is shaped by strict regulatory mandates, disruptive innovation, and an urgent global push for sustainable cooling. While legacy segments like CFCs and HCFCs are shrinking rapidly declining by over 60% and 40% respectively and the demand for green solutions is soaring. Hydrocarbon refrigerants, for instance, are projected to achieve an impressive 13.6% CAGR. Meanwhile, next-gen HFOs and natural refrigerants are capturing new applications across industrial, commercial, and residential sectors.

Asia-Pacific is emerging as the fastest-growing region, propelled by large-scale retrofits, government action, and massive infrastructure growth. North America continues to set global standards with regulatory leadership and advanced technological adoption. The competitive landscape remains dynamic, with leaders like Chemours and Honeywell innovating at scale, yet 70% of the market still open to agile regional and niche players.

As sustainability becomes a business imperative, the global refrigerant market offers unprecedented opportunities for those who anticipate change and invest in the future of clean cooling.

Why Choose This Global Refrigerant Market Report?

- Latest Data & Forecasts: In-depth, up-to-date analysis through 2032
 - Regulatory Intelligence: Actionable insights on key policies (Kigali, AIM, F-Gas, ICAP)
 - Competitive Benchmarking: Evaluate strategies of Chemours, Honeywell, and emerging players
 - Emerging Market Coverage: Special focus on India, China, and high-growth APAC economies
 - Actionable Strategies: Identify opportunities, mitigate risk, and maximize ROI
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