

**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER H4-25-007

**Variance from Prohibitions on Use of Certain Hydrofluorocarbons in
Stationary Refrigeration, Stationary Air-Conditioning, and Other End-Use
Requirements**

**Arrowhead Products
Rigid Polyurethane Low-Pressure Two-Component Spray Foam**

WHEREAS, pursuant to California Health and Safety Code sections 39730, 39730.5, and 39734, the California Air Resources Board (CARB) has established prohibitions on the use of certain hydrofluorocarbons (HFCs) in refrigeration, air-conditioning, and other end-uses, including foam end-uses, as described in California Code of Regulations, title 17, section 95371 et. seq. (HFC Regulation);

WHEREAS, under California Code of Regulations, title 17, sections 95374 subsection (b) and 95375 subsection (b) no person shall sell, install, use or otherwise enter into commerce in California HFC-245fa and blends thereof in rigid polyurethane low-pressure two-component spray foam as of January 1, 2025 for space- and aeronautics-related applications;

WHEREAS, California Code of Regulations, title 17, section 95378 allows an Applicant to submit a request for a variance from the requirements of sections 95374 and 95375;

WHEREAS, the Executive Officer may grant a variance if the Executive Officer determines that the Applicant has proven by clear and convincing evidence that the criteria for a variance specified in section 95378, subsection (b) has been met and that the Applicant has complied with all application requirements specified in section 95378, subsection (c);

WHEREAS, under section 95378, subsection (b)(1), the Executive Officer may grant a variance for impossibility if the Applicant cannot comply with the regulatory requirements, and the Applicant can demonstrate all of the following criteria: (1) A lower-risk substitute is not currently or potentially available; (2) An exemption will not increase the overall risk to human health or the environment; and (3) The Applicant has used best efforts to anticipate and address the impossibility and any potential noncompliance;

WHEREAS, on May 13, 2025, Arrowhead Products applied for a variance from the requirements under sections 95374 and 95375 of the HFC Regulation for rigid polyurethane low-pressure two-component spray foam until January 1, 2036;

WHEREAS, on August 14, 2025, a delegee of the Executive Officer determined that the Arrowhead Products variance application was complete;

WHEREAS, a delegee of the Executive Officer posted the Arrowhead Product variance

application for public comment beginning August 21, 2025, and ending September 22, 2025, during which time public comment was invited, and no comments were received;

WHEREAS, Arrowhead Products presented evidence that HFC-245fa is the only approved HFC by the National Aeronautics and Space Administration (NASA) for specialized aeronautical applications, a NASA-approved substitute for HFC-245fa currently does not exist, and the timeline for certifying alternative materials takes close to 8 years;

WHEREAS, Arrowhead Products has provided documentation demonstrating that they are contractually obligated to use qualified rigid polyurethane low-pressure two-component spray foam containing HFC-245fa, and that NASA has not yet identified or approved a technologically viable alternative to HFC-245fa for this application;

WHEREAS, Arrowhead Product stated that without a variance, Arrowhead Products would experience extraordinary economic loss due to the immediate cessation of manufacturing operations in California;

WHEREAS, a delegee of the Executive Officer did not dispute Arrowhead Products quantification of economic losses if a variance was not granted;

WHEREAS, Arrowhead Products proposed in its variance application to purchase and use 50-gallons of NASA-approved, i.e., qualified, HFC-245fa in rigid polyurethane low-pressure two-component spray foam to fulfill their NASA contract requirements, and to reduce excess greenhouse gas (GHG) emissions that will result from the granting of this variance through the purchase of equivalent carbon emission offsets;

WHEREAS, Arrowhead Products has demonstrated that in the absence of a variance they cannot comply with the HFC Regulation;

WHEREAS, Arrowhead Products has demonstrated that a lower-risk substitute is not currently or potentially available because they are contractually obligated to use rigid polyurethane low-pressure two-component spray foam containing qualified HFC-245fa, and that NASA has not yet identified or approved a technologically viable alternative to HFC-245fa for this application;

WHEREAS, Arrowhead Products has demonstrated that an exemption will not increase the overall risk to human health or the environment because they will reduce excess GHG emissions that may result from the granting of this variance through the purchase of equivalent carbon emission offsets;

WHEREAS, Arrowhead Products has demonstrated that it has used best efforts to anticipate and address the impossibility and any potential noncompliance;

NOW, THEREFORE, I, Michael FitzGibbon, based on materials submitted by Arrowhead Product, find that:

1. Arrowhead Products cannot meet the requirements of Table 2 in section 95374(b) of the HFC Regulation for reasons beyond its control;
2. Requiring Arrowhead Products to comply with the requirements of Table 2 in section 95374(b) of the HFC Regulation would result in extraordinary economic hardship;
3. Arrowhead Products will mitigate its HFC Regulation noncompliance to the maximum extent feasible by agreeing to purchase a quantity of carbon offsets equal to 64.33 metric tons of carbon dioxide equivalent (MTCO_{2e}) for the variance period from a reputable offset provider;
4. Arrowhead Products has committed to transition to using a lower risk substitute as part of its installation and use of rigid polyurethane low-pressure two-component spray foam as soon as a qualified substitute becomes available, which includes compliance with the HFC Regulation requirements by January 1, 2036; and

Based on the entire record, Arrowhead Products has proven by clear and convincing evidence that it has met the criteria for issuance of a variance, permitting the continued use of qualified HFC-245fa as part of its installation and use of rigid polyurethane low-pressure two-component spray foam through January 1, 2036, with the conditions specified below because: (a) A lower-risk substitute is not currently or potentially available; (b) An exemption will not increase the overall risk to human health or the environment; and (c) The Applicant has used best efforts to anticipate and address the impossibility and any potential noncompliance.

IT IS ORDERED AND RESOLVED that Arrowhead Products is granted a variance until December 31, 2035 to install and use HFC-245fa as part of its rigid polyurethane low-pressure two-component spray foam using no more than 50-gallons of qualified HFC-245fa (equivalent to 86 five-gallons kits of 503.2.5-45P-R.1) which does not otherwise comply with the HFC Regulation requirements for “rigid polyurethane low-pressure two-component spray foam” as described in California Code of Regulations, title 17, section 95734.

IT IS FURTHER ORDERED that this variance is granted subject to Arrowhead Products adherence with their plan to use a qualified lower-risk substitute by January 1, 2036. Arrowhead Products shall maintain records substantiating their adherence with this compliance plan. Records of the compliance plan shall be made available to the Executive Officer, or their delegee, upon request.

IT IS FURTHER ORDERED that Arrowhead Products will mitigate excess GHG emissions that may result from the granting of this variance by purchasing carbon offsets equal to 64.33 MTCO₂e. Arrowhead Products will complete this mitigation plan by March 1, 2026. Arrowhead Products shall maintain records substantiating adherence with this mitigation plan. Records of the mitigation plan must be made available to the Executive Officer, or their delegee, upon request.

IT IS FURTHER ORDERED that if Arrowhead Products is unable to transition the use of HFC-245fa in its installation and use of rigid polyurethane low-pressure two-component spray foam under this variance to a HFC Regulation compliant alternatives by January 1, 2036, then such non-compliant installation and use must be discontinued in California and will be subject to all the prohibitions for “rigid polyurethane low-pressure two-component spray foam” in California Code of Regulations, title 17, sections 95734 and 95375.

IT IS FURTHER ORDERED that the final date for this variance from HFC Regulation compliance will be allowed for Arrowhead Products by this variance is December 31, 2035.

IT IS FURTHER ORDERED that this variance is granted solely to Arrowhead Products and is not transferrable.

Executed in Sacramento, California November 17, 2025.



Michael FitzGibbon, Chief
Atmospheric Science and Climate Strategies Branch
Research Division
CALIFORNIA AIR RESOURCES BOARD