



ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OPP-2025-0758; FRL-12948-01]

Ortho-phthalaldehyde; Receipt of Application for Emergency Exemption, Solicitation of Public Comment

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA is announcing a specific exemption request from the National Aeronautics and Space Administration (NASA) to use the pesticide ortho-phthalaldehyde (OPA, CAS No. 643-79-8) to treat the coolant fluid of the internal active thermal control system (IATCS) of the International Space Station (ISS) to control aerobic/microaerophilic bacteria in the aqueous coolant. The applicant proposes the use of a new chemical which has not been registered by EPA. Therefore, in accordance with the Code of Federal Regulations, EPA is soliciting public comment before making the decision whether to grant the exemption.

ADDRESSES: The docket for this action, identified by docket identification (ID) number EPA-HQ-OPP-2025-0758, is available online at <https://www.regulations.gov>. Additional information about dockets generally, is available at <https://www.epa.gov/dockets>.

FOR FURTHER INFORMATION CONTACT: Charles Smith, Director, Registration Division (7505T), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001; main telephone number: (202) 566-2875; email address: RDFRNotices@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Executive Summary

A. Does this action apply to me?

You may be potentially affected by this action if you are a pesticide manufacturer involved with the International Space Station. The following North American Industrial

Classification System (NAICS) code is not intended to be exhaustive but rather provides a guide to help readers determine whether this document applies to them. One potentially affected entity may include Pesticide manufacturing (NAICS code 32532). Other types of entities not listed could also be affected.

If you have any questions regarding the applicability of this proposed action to a particular entity, consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

B. What is EPA's authority for taking this action?

Under section 18 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 U.S.C. 136p), at the discretion of the EPA Administrator, a Federal or State agency may be exempted from any provision of FIFRA if the EPA Administrator determines that emergency conditions exist which require the exemption. EPA implementing regulations are set forth in 40 CFR part 166.

C. What action is the Agency taking?

EPA is announcing receipt of a request submitted to EPA under FIFRA section 18. This notice does not constitute a decision by EPA on the application itself. The regulations governing FIFRA section 18 require publication of a notice of receipt of an application for a specific exemption proposing use of a new chemical (*i.e.*, an active ingredient) which has not been registered by EPA.

II. Summary of the Request Received

NASA has requested that EPA issue a specific exemption for the use of OPA in the coolant of the internal active thermal control system (IATCS) of the ISS to control aerobic /microaerophilic bacteria in the aqueous coolant. Information in accordance with 40 CFR part 166 (<https://www.ecfr.gov/current/title-40/part-166>) was submitted as part of this request.

As part of this request, the applicant asserts that it has considered the registered biocide alternatives and concluded that OPA is the most effective biocide that meets the requisite criteria

including: The need for safe, non-intrusive implementation and operation in a functioning system; the ability to control existing planktonic and biofilm-residing microorganisms; a negligible impact on system wetted materials of construction; and a negligible reactivity with existing coolant additives. Without the use of OPA, the ISS would not have an adequate long-term solution for controlling these microorganisms in the IATCS coolant.

The OPA is incorporated into a porous resin material contained in a stainless-steel canister. The canister containing the OPA-incorporated resin is inserted into a coolant system loop, using flexible hose and quick disconnects, and is placed in line for 8 hours to deliver the OPA into the fluid. As the coolant fluid flows through the cannister, the OPA elutes from the resin material into the coolant fluid. The total volume of the circulatory loops of the IATCS is 829 liters. The maximum concentration would be 350 milligrams (mg) of OPA per liter of coolant fluid. A total of 290, 150 mg would be needed for the entire system. The OPA is incorporated into the resin at 210 mg of OPA per cm³ resin, resulting in potential total use of 1,382 cm³ of the OPA-containing resin. The level of OPA in the coolant is monitored periodically, and because OPA degrades over time, the concentration decreases to a level that is no longer effective in about 1 to 2 years. At this point, replenishment with new OPA-containing canisters is required.

EPA has authorized similar emergency exemptions for this use since 2011. With the decision to extend the mission of the ISS to 2030, the need for this use is expected to continue for the duration of the program.

This notice provides an opportunity for public comment on the application. The Agency will review and consider all comments received during the comment in determining whether to issue the specific exemption requested by NASA.

Authority: 7 U.S.C. 136 *et seq.*

Dated: August 26, 2025.

Charles Smith,

Director, Registration Division, Office of Pesticide Programs.

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